



5TH ANNUAL GLOBAL MANAGEMENT CONFERENCE

MANAGING GLOBALIZATION
IN TIMES OF ECONOMIC CRISIS

ISCTE - INSTITUTO UNIVERSITÁRIO DE LISBOA
22 – 25 MAY 2013
Lisboa, Portugal

PROCEEDINGS



Proceeding of Fifth Global Management Conference on Managing Globalization in Times of Economic Crisis Lisboa-Portugal 22-25 May, 2013

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ISBN : 978-989-732-156-6

Link : <http://hdl.handle.net/10071/4927>

ISCTE-IUL publisher

2013

Proceeding of Fifth Global Management Conference on Managing Globalization in Times of Economic Crisis

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ISCTE-IUL Publisher
2013
ISBN : 978-989-732-156-6

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Proceeding of Fifth Global Management Conference on Managing Globalization in Times of Economic Crisis

The 5th Annual Global Management Conference explores the theme of managing globalization specifically in periods of economic crisis. Globalization has set into motion numerous trends that have created immense opportunities for organizations and economies around the world. As economic crisis emerges in one or more domains of the globally networked economic and business system, what are the managerial challenges that must be overcome to minimize risk for the organization and find future opportunities?

The questions we aim to explore focus on various manifestations of these challenges:

1. Gaining a better understanding of emerging contexts for leading and innovating in the process of Strategic Global Management.
2. Implications for managing of global partnerships
3. Evidence of sustainable and responsible business models and practices in the global context including social responsibility, green business, and sustainable energy.
4. The behavior of capital markets in relation to IPOs, venture capital and implications for regulation
5. Emerging trends in corporate governance and financial management including new forms of ownership, patterns in mergers and acquisitions, executive compensation practices and the constitution and behavior of corporate boards of directors.
6. Implications for supply chain and logistics management covering the legal framework, e-business models and reverse logistics
7. Trends in quality management across globalized contexts and the impact of lean management systems and practices.
8. Trends in marketing including brand, identity and corporate reputation, marketing communications and public relations, and entrepreneurial and small business marketing
9. The impact of globalization on evolving political and civic infrastructures from the perspectives of emerging modernity, consumption sociology, social and public policies and the organization of work and the professions.
10. The emerging Global Knowledge Society and the influence of information systems, knowledge management practices, online business and education models, Web 2.0 and social media.

Track

- General paper
- Accounting
- Economics
- Finance/Banking/Insurance
- Information Technology
- Marketing
- Management
- Law and Regulations
- Health Care Management
- Tourism and Hospitality Management
- Interdisciplinary Studies
- Debts and Development
- Micro Finance
- Result Based Management
- Global Warming and Energy
- Panels/Forums/Symposiums
- NGO Management

WELCOME NOTE

This Volume, the Proceedings of the Fifth Annual Global Management (GM) Conference held in Lisbon, Portugal, May 22 – May 25, 2013, contains the full papers and abstracts of papers presented during these meetings on the theme: “Managing Globalization in Times of Economic Crisis”. This annual international conference is part of the continuing efforts of Global Academic Network to disseminate current research findings to practitioners and academics.

The Global Management Conference (GM Conference) was launched five years ago by CISRO Institute of Management as a forum dedicated to fostering and promoting global management studies for sustainable economic development. The GM Conference, under the leadership of the Advisory Board and a program committee consisting of international scholars and practitioners, has become one of the recognized international forums for exchanges between academics and professionals. The conference aims:

- To promote **research** pertaining to global management issues across the full spectrum of organizations;
- To encourage **integration** and **exchange** of knowledge among academics and professionals worldwide;
- To develop **frameworks** for a better understanding of the dynamics of globalization in the process of sharing knowledge and technologies aimed at sustainable development.

The GM Conference continues to grow in scope and reputation thanks to the immense support provided by many dedicated individuals and institutions. The objectives and far-reaching visions of the GM Conference have generated interest and excitement among academics and practitioners around the world.

The GM Conference is indebted to all those responsible for this year’s program, particularly those who served as reviewers and track chairs. Among members of the organizing committee, those representing ISCTE – University Institute of Lisbon, are acknowledged for the excellent work coordinating arrangements for the conference venue. Special thanks are extended to Dr. Raul Laureano, Dr. Alvaro A. Rosa from ISCTE – IUL, Dr. Hotnir Siringoringo from Gunadarma University, Dr. Maurice Grzeda from Laurentian University, Dr. Sébastien Azondékon from University of Québec in Outaouais (UQO), Dr. Komlan Sedzro from University of Quebec in Montreal (UQAM), Dr. Karl William Viehe from University of the District of Columbia, Ms. Lisa Sanchez from Szent Istvan University. Thanks to all members of the GM Conference Advisory Board and Organizing Team.

Our appreciation also extends to the authors of papers presented in the conference. The quality of papers submitted attests to the growing reputation of the GM Conference.

We would like to extend our personal thanks to Prof. Dr. E.S. Margianti, President of Gunadarma University, Prof. Suryadi, Vice- President of Gunadarma University and to Dr. Peter Luk, Dean of Faculty of Management, Laurentian University for their support. Special acknowledgement and thanks to our esteemed sponsor Hillson Information Network for its support and making the Hillson Achievement Award available to us.

Dr. Tov Assogbavi, GM Conference Chair,
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EDITORIAL

It's an appreciation for us to edit the proceeding of the Fifth Global Management conference on managing globalization in times of economic crisis held on 22-25 May 2013 at Instituto Universitário de Lisboa (ISCTE-IUL), Lisboa Portugal. We are glad to see variety of articles on general paper up to NGO management as track offered by the conference organizer.

We are delighted by the fact that the articles and participants are getting more international year by year since the first, which is an indicator that it is getting worldwide known and recognized. Scholars from 12 countries contributed to this issue of the proceeding. Special thanks are to all the reviewers, organizing committee, Faculty of Economy Instituto Universitário de Lisboa, and those involved in technical processes.

We trust that you will enjoy the conference and we do hope that you will enjoy as well reading the papers. We are expecting also your contribution on next Global Management Conference which will be organized in Wuhan China, 09-14 May 2014.

Editors

Keynote speakers

Soumodip Sarkar



Bio Note - Soumodip Sarkar is a professor at the Department of Management, University of Evora, Portugal, and researcher at CEFAGE-UE. He received his PhD in Economics from Northeastern University, Boston in 1995. He previously worked at the Harvard Institute for International Development (HIID) and later CID, Kennedy School, Harvard University.

Professor Sarkar is currently the Dean of Doctoral School (IIFA), of the University of Évora where he is also the coordinator of the Program in Entrepreneurship and Innovation. His research interests are innovation, entrepreneurship and international business. He has published papers in many scientific journals and is in the editorial board of four international scientific journals. He is a project leader in many Portuguese and European projects and has been a consultant to the USAID and Nathan Associates. He holds copyrights to the integrated innovation model developed by him along with simulation software.

He was a Visiting Fellow at the Asia Center, Harvard University, in 2006. His book on innovation entitled: *Innovation, Market Archetypes and Outcome* was published in 2007, published by Springer-Verlag. Another book on entrepreneurship and innovation *Empreendedorismo e Inovação*, published in Portuguese, by Escolar Editora, has been released in September of 2007. In 2008 was published his third book on the *Entrepreneurial Innovator*, published by Elsevier-Campus in Brazil. He has given diverse talks and workshops all over the world, and has been invited to speak among other places including at the Helsinki School of Economics, Harvard University, University of Massachusetts, Indian School of Management etc. He is also a sought after speaker on innovation for senior managers and organizations all over the world as well as advising firms on innovation management and growth.

Among the many recognitions that he has received are the following. Over the last two years alone, he has been invited to give ten keynote speeches in highly attended international conferences all over the world. He was also invited as a keynote speaker in the German Presidency of Eureka, on innovation. Very recently, the Webster's Online Dictionary has included his definition of innovation, connecting innovation to market outcome and sustainability, appearing under "extended definition". In celebration of 20 years of the European Union, in October of 2012, he was one of the four invited key speakers in a Europe wide online debate on the Future of Europe, hosted in the EC in Brussels by Intelligence Squared. Professor Sarkar has also featured in both national media as well as internationally including the BBC, on matters regarding entrepreneurship. In 2008, he was considered one of the top 100 experts internationally by the World Economic Forum (WEF Innovation 100).

THE ELEPHANT IN THE ROOM: TOWARDS AN INTEGRATED VISION OF SOCIAL INNOVATION

Soumodip **Sarkar**

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Abstract. Social Entrepreneurship, and its sister concept social innovation, have found an increasingly important place in the academic research agenda. However, the field remains far too confusing, with the very definition of social entrepreneurship often called to question. First we do a literature review to extract some principal dimensions of analysis of the twin concepts of social entrepreneurship and innovation. In the second stage we present an integrated framework of analysis of social entrepreneurship and innovation. The framework also attempts to create an archetype of the types of social innovations, and the role of technology in promoting effectiveness of social ventures. The model permits a more analytical study of the different issues involved in social entrepreneurship and innovation, and goes beyond the generalities and case studies that have characterized so far the literature in this area. For the practitioner in this field, it permits a diagnostic of the different types of activities in which the social activist is involved, as well as permitting a framework of analysis of some of the most important questions in social entrepreneurship, including the very important question of financial sustainability.

Keywords: Social entrepreneurship, Bibliometric analysis, Integrated model, Diagnostics.

Christian Wolf



Bio Note - Christian Wolf is the founding director of the Lupcon Center for Business Research, a German research institute with the mission to enhance the collaboration between business and academia. Besides organizing conferences and editing books, the research center publishes the peer-reviewed Journal of Business and Economics in Times of Crisis, of which Wolf serves as managing editor. Wolf also serves on the boards of external organizations, for example through his presence on the editorial board of "Wealth - International Journal of Money, Banking and Finance" of the India-based Institute for Technology and Management in Mumbai.

Christian Wolf has also been working as an independent consultant for small and mid-sized companies since the 2008 financial crisis, helping his German business clients in the areas of strategic management, pricing, and marketing.

He conducted his graduate studies at the Nova School of Business and Economics in Lisbon, Portugal. Wolf also graduated summa cum laude from Siena College - a small liberal arts college in New York - where he studied business and philosophy.

MAKING THE MOST OUT OF A CRISIS THROUGH INNOVATION AND INTERNATIONALIZATION - INSPIRING EXAMPLES FROM PORTUGAL

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Abstract. The dimension of the economic crisis in Portugal is tremendous, which is severely impacting individual companies in that country. But some Portuguese companies are seizing opportunities created by the crisis by proactively building on their individual strengths while strategically making use of the power of innovation and internationalization. A brief review of existing research emphasizes that exercising both innovation and internationalization jointly is particularly fruitful for companies. The presentation then portrays some specific interesting and inspiring examples of how innovative Portuguese companies are applying successful strategies while exploring high growth markets in the Lusophone world and beyond.

Keywords: Economic crisis, Innovation, Strategies, Internationalization.

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A DECISION SUPPORT TOOL FOR RETAIL PRODUCT ASSORTMENT

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ABSTRACT

The assortment planning is one of the most important areas for retail and for category managers. The creation of a single assortment requires the analysis of an enormous amount of variables and products. Therefore, for managers, the development of informatics tools to create product assortments is crucial. In this sense, it was developed a simulation model based on a mixed integer nonlinear programming problem to create a proposal to the product assortment at a big Portuguese retailer network. The model uses the customer segmentation to direct the assortment, and also applies the demand substitution parameter in order to determine a more realistic solution. In general terms the tool produces a feasible solution within 2 minutes, and the results compared with the currently adopted solution, show a significant improvement in profit performance category, while maintaining the sales levels. The discrepancy between results is greater the larger the number of assortment possibilities, which increases as the available space on the shelves decreases. Since the increase in the number of assortments leads to an increase in possibilities that the manager needs to analyze, the probability that the solution proposed is not optimal tends to augment.

INTRODUCTION

Assortment planning is the management of which product to stock, and how much shelf space to allocate to them, in order to monetize the retail selling space (Borin *et al*, 1994). In this sense, assortment planning deals with what products to expose, the number of facings to allocate, the ordering levels and the assortment review periods that maximizes a measure (e.g., sales or gross margin) subject to various constraints, such as limited budget for purchase products, limited shelf space for displaying products, and a variety of other miscellaneous constraints (Kök & Fisher, 2009).

Besides, retailers need to revise their assortment due to seasons, new products or changes on customers' tastes.

The majority of retailers cluster stock keeping units (SKU) into groups, entitled categories (Kök and Fisher, 2009). These categories are a strategically managed product group, where products are put into groups that are carefully defined according to consumer behavior and can be managed

using a strategy specially formulated for that group of products (Varley, 2006).

Moreover, products in the same category should be reasonable substitutes, although they might have some degree of complementary, and some categories might be broken down to subcategories, which are categories by definition (Varley, 2006).

In this context, we propose an assortment tool for the fishery category at a Portuguese retailer network, hereafter called World Retailing. The aim of the tool is to help managers decide which products of the category should be displayed in each store, of World Retailing, in order to maximizing the profit or sales volume.

Product selection and product range are key decision for retail product management. When selecting the products to offer to costumers, retailers should take account to a numerous range of variables. According to Varley (2006), there are mainly five types of variables: corporate objectives, category strategy, the role of the SKU within the product category, product life-cycle and product performance. Besides of analyzing each

variable per se, it is also important to analysis the relations between them, for instance a product may have the highest sales but also the highest waste or the lowest margin, complicating even more the assortment analysis and decision. To overcome this last problem, managers usually create a KPI (key performance indicator) for each product, giving a pre-determined weight to each variable accordingly to the category strategy, for instance, one manager may want to have the best products in terms of volume sales and waste, and other may want to have the best products in every variables, but may give 40% importance to sales, 10% to margin and so on. This approach highly simplifies the product analysis from n variables to just one. However the extent of the weights given to each variable can be a matter of dispute, why give 30% to sales and not 31% or 55% or 20%. And sometimes it can even hide some really bad performance in some variables that should be address, for example a product may have the highest amount of sales but can also create profit losses, and in categories with an enormous amount of products and stores or clusters to create the assortments, this issue can go unnoticed. Obviously the manager should be attentive to this kind of issue, however due to the complexity of creating assortment it may hard to keep a high focus all the time.

After the product selection, the next step is to allocate shelf space for each product selected, based on historical sales data and external information from a variety of sources, such as industry shows, vendors and competitor moves. As exposed by Kök and Fisher (2009), the allocation shelf space requires a trade-off between three elements: retailer's breadth (that is, the number of different categories that the retailer carries), number of SKUs that the retailer carries in each category (called depth), and the inventory that the retailer provides of each SKU. Despite the shelf space decision is highly correlated to

stock-out issues, at World Retailing the category managers should only be concerned with the trade-off at the category level, i.e., the number of different products displayed by the category (breadth) and the quantity of each product to offer (depth).

In the Word Retailing, each store is divided into categories of products by the similarity of products that can share shelf space, transportation, usage method or even type of customers. In turn, each category has its own managers, denominated category manager, and its own strategy, for instance one category may aim to have the highest profit, called profit generator, and others aim to have the highest volume sales or to attract the highest amount of customers, entitled traffic generators.

In recent decades, the allocation of shelf space has gained more importance since the number of products in the market place has increased at a rate higher than the rate of growth of shelf space (Quelch & Kenny, 1994; Kök & Fisher, 2009). With this trend shelf space as become the retailer's scarcest resource (Ramaseshan, 2008).

On a different perspective, retailers are always trying to enhance their profitability by increasing their sales and/or decreasing costs, using, between others, product assortment as a tool to achieve that goal. However an important trade-off comes to mind. The way to increase sales and customer satisfaction is usually trough the increase in variety of products presented to the customer, and that usually means the increase in costs (Yücel *et al.*, 2009).

Other studies are pointing to the direction to the marketing variable that has most impact over retailers' performance. Take for instance the work from Waller *et al.* (2010), where the findings suggest that there is a direct impact of the number of facing and price on the sales. However the impact depends on the retail price strategy,

weather it is EDLP (Everyday low price) or HiLo (High-Low Strategy).

This way, assortment planning has become more important for retailers' strategy, making them to adopt efficient assortment strategies, seeking to improve their profit by eliminating low-selling products (Kök & Fisher, 2009).

Before the work of Cortjens and Doyle (1981) there were two trends to study the product assortment problem: the academic approach, based on the demand and space elasticity, and the commercial approach, focused on minimizing operating costs or on maximizing product margins. The model aforementioned was one of the first to incorporate both views of the retailers' objective function. Again, according to Cortjens and Doyle (1981), a product assortment tool should consider the following topics to create an efficient assortment recommendation: the use of real product data, relating to its characteristics, financial and logistic data; include shelf-space, cross-elasticity between products and substitution rates; and the consumer loyalty to a product.

Most of the tools developed in the literature present recommendations on which products to expose and how much space to allocate to those products (Borin *et al.* 1994; Cortjens & Doyle, 1981; Ramaseshan 2008; Kök & Fisher, 2009) which are the core decisions to be made on the product assortment management.

The mathematical formulation developed in a product assortment model is usually nonlinear, which makes the optimization process much harder because of the inexistence of a closed solution. Thus, the main difference between models resides also on the method applied to solve the product assortment problem.

Proceeding in the mathematical formulation field, a second major difference appears in the type of estimation for the parameters, such as shelf-space elasticity, substitution, and consumer preferences (Borin & Farris,

1995). Therefore different levels of error may appear in different models, but the main issue comes from the practicability of some parameters estimation.

Consequently, a wide range of product assortment models face two main problems. First because of their complexity most of the models need to be simplified to be applied, and secondly there are a large number of parameters to be estimated, which gives error on the estimations, and gave origin to a reluctance to employ mathematical models to assortment selection and space allocation. Still on the estimation errors, Borin and Farris (1995) claim that judgmental errors on estimates of parameters can vary by as much as 50 percent and still make sense applying the model. This reveals the flexibility and performance of such models, even in rough environments.

Most of the product assortment models are based on three main factors, the demand, the substitution and the space elasticity.

The demand factor can be divided into several parts, such as unmodified demand, modified demand, acquired demand, and stock-out demand (Borin & Farris, 1995).

Substitution happens when a consumer doesn't find the product that he was looking for, and two possibilities occur: the consumer chooses another product, and substitution happens, or the consumer leaves without buying anything, and a lost sale happens (Kök & Fisher, 2007).

According to Varley (2006), space elasticity is the relationship between the amount of space and the rate of sales of a product, and it refers to the extent to which the sales of a product will change in response to the amount of space allocated to that product. This value is affected by the extent to which a product is bought on impulse. Moreover, some authors (e.g., see McGoldrick (2002) and Varley (2006)) suggest that space elasticity is not

uniform amongst products or across stores or departmental locations.

Taking the work of Kök and Fisher (2007) there are three major models to estimate demand and substitution: Multinomial Logit model, Exogenous model and Locational Choice model.

In the Multinomial Logit model, demand is predicted as a utility-based, i.e., each customer tries to maximize his utility by purchasing the product with higher utility to him. When that product is not available, he chooses the next product with the higher utility. This model is widely used in Marketing and Economics.

Regarding the Exogenous model, the individual product demand and the substitution patterns are directly specified. This method is commonly used in inventory management literature for substitutable products. Whereas in the Locational Choice model, each product is seen by a group of attributes, and is represented in a characteristics space. The client's preferences are also a point in the characteristics space, which corresponds to his most preferred combination of attributes. However, in this method the substitution can only occur on product with characteristics near the primary option, which differs from Multinomial Logit model, where substitution can happen between any products.

In literature exist different ways to approach the product assortment problem. For example, the work of Yücel *et al.* (2009) presents a model classification, taking into account the type of consumer choice model and the nature of demand substitution. The main differences are the use of the Multinomial Logit or the exogenous demand to model consumer choice and the availability of stock-out substitution. Nevertheless, as said by Kök and Fisher (2007), there are a great surge of increasingly complicated models, but with limited evidence towards their validity and not even a clue about how to estimate their parameters.

In this sense, the model proposed by Kök and Fisher (2007) gives a pragmatic and practical model to help the product assortment management. It explains and gives a real example, associated to a chain of retail stores in The Netherlands, on how to estimate demand and substitution parameters, by applying a novel methodology that uses cross-sectional data. Another difference in their model is the demand separation in just two types, instead of the usual four, by joining together the Acquired, Modified and Stock-out based demand. The issue here is that the impact of some variables is so low or their estimation is too costly that can be neglected to present a reliable decision on product assortment. Therefore the model is based on the initial demand (similar to the unmodified demand) that can be estimated from stores that present all the assortment available, and the after-substitution demand, that is the one that can be seen from the store sales data. The mathematical model is solved as a set of separated nonlinear knapsack problems. According to the authors, the main drawback of the model is the inability to account the relationship between assortment variety and demand.

In the same line of thought, Ramaseshan (2008) provides a model able to be set to practice using a widely spread commercial tool as the Office Excel. In this case, the assortment problem is formulated as a nonlinear integer problem that could be solved by the Solver tool that is provided freely with Office Excel, and with some knowledge in Office Excel VBA, a programming tool for excel, an automatic program can be easily design to help managers.

From here, a computer tool to help managers simplifying the process of assortment planning in the World Retailing, or at least making it more reliable and faster, is the normal path to follow, and this is the goal of this work.

In the tool developed, the mathematical formulation of the product assortment problem is an adaptation of the nonlinear integer programming model proposed by Ramaseshan (2008). However, in this model the demand and substitution estimates, are based on the methodology developed by Borin and Farris (1994) which requires panel data. As this type of data is not available at World Retailing, the estimates will be obtained through the exogenous demand model developed by Kök and Fisher (2007), which specifies the individual demand for each product and substitution patterns.

The tool will never substitute managers' decisions or should not ever decide alone which assortment select. However, the tool should support managers' decisions, by displaying the products that had the best performance on the near past to prevent them to leave behind any important product. Besides, the tool should also conglomerate a large number of variables to decide if each products' performance is acceptable or not, and this is the process that will most enhance and benefit managers. Since this type of analysis is time consuming the main contribution of this tool is to concede time to managers, helping them with the analytical part of the decision of reviewing the past data.

Through store segmentation it is possible predict the behavior of a category which allows to direct the assortment to the segments that will generate higher revenues or profit. The market dynamics and the social-economic trends are not autonomously predicted by the decision tool however they can be added into the tool by the inputs of managers, which are deeply from their knowledge and belief. Therefore the tool is like a simulator, as the future can be modeled by the managers and the tool will present different solutions towards different sets.

In order to ensure that every store of the World Retailing should share the same assortment with similar stores across the entire country, the stores are organized in clusters. This operation simplifies the process of assortment creation as it decreases widely the number of assortments to obtain from the number of store to the number of clusters.

The rest of the paper is organized as follows. Next section is devoted to the Assortment optimization model. After that, computational issues and results are shown. And, finally conclusions, remarks and future work are presented.

Assortment optimization model

The assortment tool proposed to World Retailing involves the development of a mixed integer nonlinear programming problem, the parameters' estimation procedures and the creation of a simulator.

Mixed Integer Nonlinear Programming Problem

The model developed was based on the one proposed by Ramaseshan (2008) with adaptations from the model developed by Kök and Fisher (2007) to be able to be used by World Retailing due to information access and availability issues.

Assuming that N represented the set of products that can be sorted, and S the product assortment, we present a mathematical mixed integer nonlinear programming (MINLP) formulation of the assortment problem at the World Retailing.

The model was built in order to use two types of decision variables: S_j , which represents the number of fronts for each product $j \in N$, and BB_j is the amount of warehouse capacity, in kg, allocated to each product $j \in N$.

Additionally, the model needs the following two types of auxiliary variables to help the decision process: $Z_j = 1$ if

product $j \in N$ is in the assortment S , and 0 otherwise; and $N_j=1$ if capacity for product $j \in N$ overcomes its demand, and 0 otherwise.

The parameters of the model are presented in table 1.

Table 1. Definition of Parameters

Acronym	Definition
k_j	Shelf capacity of product j , in kg, per front
D'_j	After Substitution demand of product j in kg per custom
Pr_j	Price, in Euro, per kg of product j
M_j	Margin of product j in percentage of sales
W_j	Waste of product j in percentage of sales
MR	Maximum rotation permitted per product between order periods
BPW_j	Width of product j
BSW_h	Shelf width available in store or cluster h
O_h	Warehouse capacity, in kg, at store or cluster h
PF	Minimum profit allowed, in Euro
MS	Minimum sales allowed, in Euro

Attending the variables and parameters aforementioned, the assortment problem of the store or cluster h can be formulated as a MINLP as follows:

$$\text{Max } \sum_{j \in N} (k_j \times S_j + BB_j - (k_j \times S_j + BB_j - D'_j)N_j)Pr_j(M_j + W_j) \quad (1)$$

Subject to:

$$\sum_{j \in N} (k_j \times S_j + BB_j - (k_j \times S_j + BB_j - D'_j)N_j)Pr_j \geq PF \quad (2)$$

$$\sum_{j \in N} (BPW_j \times S_j) \leq BSW_h \quad (3)$$

$$\sum_{j \in N} BB_j \leq O_h \quad (4)$$

$$-k_j \times S_j \times MR + BB_j \leq 0, \quad j \in N \quad (5)$$

$$S_j(1 - Z_j) = 0, \quad j \in N \quad (6)$$

$$Z_j \leq S_j, \quad j \in N \quad (7)$$

$$(k_j \times S_j + BB_j) - D'_j \leq M \times N_j, \quad j \in N \quad (8)$$

$$D'_j - (k_j \times S_j + BB_j) \leq M \times (1 - N_j), \quad j \in N \quad (9)$$

$$Z_j \in \{0,1\}, \quad j \in N \quad (10)$$

$$S_j \geq 0, \text{ and integer } j \in N \quad (11)$$

$$N_j \in \{0,1\}, \quad j \in N, \quad (12)$$

$$BB_j \geq 0, \quad j \in N \quad (13)$$

where M is a random positive large number.

The objective is maximizing the sales. Note that the margin percentages as well waste percentages already carry the product cost, transportation, backroom

inventory costs and shelf space costs. The thinking behind the objective function expression is the total demand of a product that can be satisfied, i.e., the total capacity presented for each product $(k_j \times S_j + BB_j)$ less the capacity that cannot be sold due to lack of demand $(k_j \times S_j + BB_j - D'_j)$. With respect to D'_j , the demand for each product j can be separated into two parts, the average demand of each product j $((PQ)_j)$, and the substitution demand coming from other products that are not in the assortment $(\sum_{k \in N \setminus S} \alpha_{kj}(PQ)_k)$:

$$D'_j = (PQ)_j + \sum_{k \in N \setminus S} \alpha_{kj}(PQ)_k \quad (14),$$

where α_{kj} is the substitution rate from product k to product j . $(PQ)_j$ and the substitution rate will be further explained in the section on parameters estimation.

Instead of sales maximization, the objective may be to maximize profit. In this case, the objective function will be

$$\text{Max } \sum_{j \in N} (k_j \times S_j + BB_j - (k_j \times S_j + BB_j - D'_j)N_j)Pr_j \quad (15).$$

If maximize sales is chosen then constrain (2) should be added to the formulation in order to ensure at least PF Euros of profit. In the other hand, if profit maximization is chosen, then the constraint that can be included in the model is

$$\sum_{j \in N} (k_j \times S_j + BB_j - (k_j \times S_j + BB_j - D'_j)N_j)Pr_j (M_j + W_j) \geq MS \quad (16).$$

The constraint (3) guarantees that the sum of the widths of the selected products not exceeds the width of the shelf of store or cluster h . Similarly to the shelf space constraint, the constraint (4) claims that the total warehouse capacity occupied with all products cannot be above the warehouse capacity of store or cluster h .

Store keeping also impose that the number of product repositions cannot exceed MR , therefore constraint (5) states that the warehouse capacity of each product $j \in N$ cannot overcome by more than MR times the shelf space capacity assigned to product $j \in N$.

Constraints (6) and (7) ensure that variable $S_j, j \in N$, assumes a positive value if the product j is in the assortment (i.e., if $Z_j=1$). Whereas constraints (8) and (9) guarantee that if the capacity for product $j \in N$ exceeds its demand then the variable $N_j, j \in N$, takes the value 1. To end up, constraints (10) to (13) are the sign constraints.

To optimize this mixed integer nonlinear programming problem we will use the Solver of Office Excel.

Parameters Estimation

In this section, the estimation of model parameters will be addressed, along with a brief explanation of new variables added to the literature.

Customer Segmentation

The majority of customers analyzed (90%) use a personal loyalty card and with this tool it is possible to segment the customer population into several groups accordingly to their buying behavior. Moreover, it is possible to understand the behavior that each segment has regarding each SKU from a category. Therefore is now possible to match different product assortments across different stores as each one of them

has its unique customer segmentation that needs to be satisfied and have different strategies for each segment.

There are two types of segments, the ones that buy from a given category (actual sales) and the ones that enter the store (potential sales).

An additional work was made to further understand the customer behavior per segment by adding a new variable: region. The premise is: the customer behavior (types and quantities of products bought) of a determined segment changes with the region that is in, this happens due to differences is culture or even in buying-power.

Demand Estimation

Due to the data type available and applicability at World Retailing instead of using the demand modeling of Borin *et al.* (1994) to estimate the demand as Ramaseshan (2008) proposes, it will be used the exogenous demand model from Kök and Fisher (2007). Considering N the set of products that can be sorted, and S the product assortment, the Kök and Fisher (2007) model is described as follows, starting by the demand equation for the product j (D_j):

$$D_j = K(PQ)_j = K\pi p_j q_j, \quad j \in N \quad (17)$$

where K is the number of customers who visit the store at given day, $(PQ)_j$ is the average demand for product j per customer, π is the probability of purchase incidence, p_j is the choice probability of product j , and q_j is the average quantity that a customer buys given purchase incidence and choice of product j .

At World Retailing, and having in mind the usability of the model for managers, the type of data available is sales summary transactions with the same specifications as the ones Kök and Fisher (2007) used, without store specific promotions and weather data. However, instead of using daily store data and applying log-linear regressions to estimate

all variables it will be used the summary data of every variable.

Using the method developed by Kök and Fisher (2007) the demand is estimated using two models, the *Original Demand Estimation* (ODE) model and the *After-Substitution Demand Estimation* (ASDE) model.

The basic thought is that in full-assortment stores, substitution cannot happen, as every product is available. Therefore, the demand rates per customer are the original demand rates. Then comparing these rates with the ones existing in stores without full-assortment, and obviously where substitution happens, it is possible to presume the amount of substitution that occurred from one demand rate to the other demand rate.

ODE model

The main point is that the estimates from ODE model are common to all stores, and the equation for each product j in each store h is (Kök & Fisher, 2007):

$$(PQ)_{jh}^0 = \pi^0 p_{jh}^0 q_{jh}^0, \quad j \in N, h: S_h = N \quad (18)$$

The superscript 0 indicates that these estimates come from the ODE model and S_h is the assortment at store h .

Moreover, there is the possibility to add new explanatory variables to describe store differences to the ODE model. In the World Retailing case, the region of each store and the customer segmentation for the category were used.

Assuming that at stores with full-assortment the strategy is not directed to any specific segment, the parameter $(PQ)_{jh}^0$ can be view as the quantity that each customer that visits the store h buys from product j . This value is equal for every segment in every store from the same region. This value can be also seen as the potential demand of a given product on a full-assortment basis.

The estimation of $(PQ)_{jh}^0$ for each item is a weighted average of the amount of customers that buys an item from full-

assortment stores on a region. This is a much more profound solution that the one that just uses the total demand per product, and it can help to direct an assortment towards one particular segment.

ASDE model

The ASDE model is similar to the ODE, but is store specific. The demand per customer for product j at store h is estimated by (Kök & Fisher, 2007):

$$(PQ)_{jh} = \pi p_{jh} q_{jh}, \quad j \in S_h \forall h \quad (19)$$

where S_h is the assortment at store h .

Note that this estimation is for the effective demand rates, i.e., $D_j = K_h(PQ)_{jh}$, because they might include substitution demand if $N/S_h \neq \emptyset$ (Kök & Fisher, 2007).

Substitution rate

As the name suggests, substitution occurs when a customer does not find his chosen product and chooses another one. In this sense two types of substitution exist, stock-out based and assortment based. Due to the low stock-out on the company study and the nonexistence of data about this issue, we will only analyze the assortment based substitution.

Substitution Rate Estimation

The main question now is how the substitution occurs among different products?

The solution used was the approach presented by Kök and Fisher (2007), where a single parameter is estimated and a substitution matrix is used to distribute the substitution among products. The model used in the simulator at World Retailing is the proportional substitution matrix, as it made more sense to category managers, and they believe it is more close to reality.

The estimation of the substitution rate δ holds in three assumptions. These

assumptions allow us to properly estimate the parameter without compromising the substitution rate applicability.

The procedure to estimate the substitution rate consists of the following steps:

- 1) Compute the Base Demand (Full assortment) – No substitution takes place;
- 2) Predict each store' demand for each product – Without substitution;
- 3) Determine the Real Demand per store (which has the real substitution);
- 4) Predict each store' demand for each product – Now with a substitution rate;
- 5) Calculate the substitution rate that minimizes the difference between the Potential Demand (step 4) and the Real Demand (step 3).

Considering the variables $y_h = \sum_{j \in S_h} (PQ)_{jh}$, $X_h = \sum_{j \in S_h} (PQ)_{jh}^0$ and $Z_h = \sum_{j \in N} (PQ)_{jh}^0$, and after gathering these estimations, one should adapt it to each single store, regarding the type of customers that the store has (store segmentation), the region and the total number of customers (store size). In this case the store still keeps the full-assortment, do not existing therefore substitution among products. This is the estimation Z_h .

At step 4 the products that are not in the real assortment are taken out, and their base demand is transferred to other products using a substitution rate δ and the proportional Substitution Matrix. This is represented by:

$$\hat{y}_h(\delta) = X_h + \delta X_h \sum_{k \in N \setminus S_h} \frac{(PQ)_{kh}^0}{Z_h - (PQ)_{kh}^0} \quad (20)$$

On the last step, the difference between the real demand and the potential demand is calculated using as variable the substitution rate that is related to the potential demand. By varying the substitution rate one can estimate the substitution rate that minimizes the total squared estimation error, for stores h :

$$\delta^* = \arg \min \sum_h (\hat{y}_h(\delta) - y_h)^2, \quad 0 \leq \delta \leq 1 \quad (21)$$

Information gathering, application and adjustments

Two main data sources are available at World Retailing, loyalty card summary data, and sales data from the stores. The existing variables are: Number of customer per store and per segment; Number of customers that purchased each product, by segment; Sales per store, per category and per product; Waste and profit, by store, category and product.

These variables should be updated every time the user wants to study a different period. For instance, the manager may want to analyze just the Christmas, or Easter, or any other moment. This means that the ODE model will come from the loyalty card information, and the ASDE model will come from the sales information.

To estimate the demand of each product j , the following equation was used:

$$D_j = K(PQ)_j = K\pi p_j q_j, \quad j \in N \quad (17)$$

where K was gather by simply accounting the number of customer from each store, π was obtained by comparing the rate of customers that bought anything from the category with the number of customers that entered the store, and p_j and q_j were estimated using full-assortment stores and divided by regions.

Denoting p_j^s as the p_j by segment s , the value of p_j in store h is given by the equation:

$$p_j = \sum_{s=1}^c p_j^s \times K_s, \quad j \in N \quad (22)$$

where, K_s is the number of customers of segment s , c is the total number of segments and the value of p_j^s was calculated with a weighted average of the number of customers who purchased each product across the entire region' full-

assortment stores divided by the respective amount of costumers who bought anything from the category, weighted by the number of customers from the category of each store.

Kök and Fisher (2007) assume that every customer chooses her favorite variant from the set N , thus $\sum_{j \in N \cup \{0\}} p_j = 1$ (23). However, at World Retailing the belief is that each customer may choose more than one product, which happened more than one time. This means that the previous formula should be adapted to:

$$\sum_{j \in N \cup \{0\}} p_j \geq 1 \text{ (24)}$$

The value of q_j is calculated with the same approach, firstly dividing the product' sales by the number of customers who purchased it by segment, then calculate the weighted average for all full-assortments stores over each region, and finally dividing the result by the average price the result is q_j the average quantity bought by each customer by segment.

Once more, these are the ODE model estimations from full-assortment stores. To adjust the values to each store, the approach presented in equation (22) was also used to the value q_j . The final value of consumption propensity of product j is made by the multiplication of p_j , q_j and π .

The final demand of each product is calculated using the ASDE model when the product is in current the assortment and the ODE estimations if the product is not in the assortment.

The ASDE model estimations are calculated by using the real demand rates of each product, using the historic sales at each store.

Computational Issues and Results

In order to create a real impact with this method a simulator was developed to help category managers take advantage of the method potentialities.

Interface

The simulator was designed with Excel VBA in order to simplify the process of entering the right variables and to enclose future errors due to a misleading handle of the model. Therefore the process is very straight forward and does not allow many deviations from the model structure. However this does not take any flexibility from the model as it is very easy to include new restrictions or variables. Moreover the greatest flexibility enhancement (also required by managers) was the ability to review any possible period in any possible moment, using historical sales data.

The Simulator is divided in three stages. At the first one the user is prompt to decide which objective function to use, as well to enter the values for the parameters PF or MS , define the period of analysis and future trends.

Future trends are nothing more than speculation from the manager based on his believes or market data that can contribute to differences in the final assortment, e.g., the manager may want to see which the best assortment is if the market retracts or the best assortment if the market expands. This is why this assortment tool is a simulator, because it can handle many different environments to give the best solution to any one of them, but the final decision is in the manager's hands.

The second stage is to have the solution per se. The solution presentation gives an overview about the expected performance of the assortment, comparing it to the previous assortment. In this case, to enhance the comparability of both assortments, the simulator uses its own values for sales and margin instead of using history data or any other source. Therefore the previous assortment is inserted in the model and the results are taken out.

On the last stage, there is the possibility to modify the final solution and

see the impact that the modification will produce in the final results.

The assumed value for the substitution rate was 0.6. This means that 60% of the times when a product is not available, the customers change their purchase behavior towards another product.

This value is also in accord with the conclusions from the paper of Woensel *et al* (2007), which conclude that the substitution is high when the customer is purchasing perishable products. For instance, for European consumers the substitution rate in the bread category was near 50%.

Optimization of the assortment problem

The process of finding the feasible solution that maximizes the objective function is repeated three times, because Solver's solution will depend highly on the starting point. This happens with the algorithms used to solve nonlinear problems, and can be found in any other algorithm (Winston, 1993). The main idea is that there are several feasible solutions that can satisfy all restrictions and be considered a good solution. Using an example, and considering the problem as a bundle of mountains, the possible solutions are the top of the mountains. However the best possible solution resides on the highest mountain. The problem is to find this mountain, but starting from different places the probability of finding the highest mountain increases, even so if it is not found at least the almost highest mountain will be found, which presents a near-optimal solution to the problem. This approach is also used by Ramaseshan (2008).

The algorithm used in Solver to solve the model is the *branch-and-bound*, as this is a mixed integer nonlinear problem (MINLP). This algorithm has a spread use in linear programming.

Primary tests and results

The simulator was applied to cod fish category of the World Retailing. Depending on the cluster, on average it takes as much as two minutes to have the final assortment solution in a problem with around eleven products. Sometimes it may take more time when the restrictions enclose too much the possible solution. For example, for a determined cluster the goal is to maximize the profit, and the restrictions are: minimum sales of €2,000 and 10 meters of available space. After inserting these restrictions into the model, the simulator starts to allocate space to the products that maximize profit, with integer numbers, i.e., the space designated is 1, 2, 3 and so on, number of shelf fronts. The issue is that the €2,000 sales may require having all the products for sale, but the available space may prevent the determination of a feasible solution. Thus, Solver will take much more time to find a feasible solution, or to realize that no solution is possible.

The assortments proposed by the tool were compared with the current assortments applied at the World Retailing. When the objective is maximizing profit, the proposed assortment is always better than the actual assortment in terms of profit and in some cases is also better in sales values. If the goal is to maximize sales, the assortment proposed is usually worse than the current assortment. One reason for this performance is linked to the constraint that requires a minimum profit (see constraint (2)): due to the need of achieve the profit constraint, the products that have good sales but decrease the profit are usually left outside.

CONCLUSIONS

Managers face now-a-days a constant mutable environment and are forced to adapt towards the new customers trends, otherwise the drawbacks will be extremely negative to the entire organization performance and image. This changing environment, forces managers to decide on a short period of time and taking into account a wide range of variables that influence the final outcome of those decisions. Therefore, there is a growing need to create computer tools to help managers on their day to day decisions, which integrate all variables and allow a fast but accurate decision.

Under this perspective, we create a computer based tool to help managers, of the World Retailing, on the product assortment decisions, incorporating the principal variables to the assortment management, sales, profit and space. With this tool, managers should make more informed decisions in a short period of time, giving them more time to care about other important issues.

The application of simulator to cod fish category resulted in improvements on the operational level of revenues or profit for each cluster. However this improvement is easily seen in smaller stores than in larger ones, since the number of assortment possibilities increases as the space available decreases. This is the variable that has the higher impact on the final outcome, i.e., stores with a large space can have the full-assortment, therefore only one assortment is possible, whereas in stores with space for only a few products, the combinations of products is very high and therefore the number of possible assortments is also high. Typically in large stores the operational improvement is small and in some cases inexistent, whereas for small stores, the improvement in the profit can be as much as 1000%, but the usual improvements range between 50% and 100%. In terms of

volume sales, with profit maximization, the improvements are limited to 1% and, in some cases there were decreases up to 1%. These values are returned after comparing the proposed solutions with the current assortments.

In normal conditions, as the goal is to maximize the profit it should result in reducing the sales, since sales generating products are changed with profit generators. However in some cases it happens that both dimensions are improved.

In the sales maximization goal the improvements are on the 2% level on the sales volume, and vary in the interval [30%, 75%] for the profit. There are also rare cases where the improvement in the profit reached 1000%.

The recommendation is to use both methods, and in the end decide which assortment to use.

However at the managers' point of view the greatest gain is not on the operational level, but more at the tactical level, with the high flexibility of the simulator and the automation of the assortment decisions which can be taken now within a short period of time. This means that the manager can predict the best assortment for each case with a systematic approach, using a various amount of variables and factors such as market growth, targeting segmentations, products importance and space and so on, which alone it would be very difficult to assess. Therefore this is a faster and effective way to enable the manager to decide the best decision for each cluster, and this is the most important benefit from the simulator. Either way, the simulator is only a tool to help managers decide, for each cluster, what is the best assortment. After the assortment being proposed by the simulator, the manager should comprehensively and critically evaluate the results and decide upon the final solution. This tool should give the manager the ability to not leave any

variable unseen, and any product forgotten.

There are several limitations of using this tool, ones coming from the tool itself others from outside. The main external factor is the accuracy and reliability of data associated with some products. As internal limitations we have the connection to other systems, market data and forecasting ability, and assortments comparison.

The current simulator treats each single assortment at each time. For instance, if from product A the manager only has 10 ton of product, and in each cluster the product is in the assortment, it will need 4 tons, in this case it is easily seen that in some point there will be no product available for all assortments. Therefore the next simulator generation should be more powerful and consolidate every assortment in one time. This leads to the need for optimization software more powerful than the Solver, in order to handle a large number of decision variables.

In terms of data, it was not possible to consider the variable of promotion, which is very important in this industry. Therefore, for the future the simulator should be able to introduce the impacts of this variable to the assortment planning.

REFERENCES

- Borin, N., Farris, P.& Freeland, J. (1994). A model for determining retail product category assortment and shelf space allocation. *Decision Sciences*,25(3),359-384.
- Borin, N.& Farris, P. (1995). A sensitivity analysis of retailer shelf management models. *Journal of Retailing*, 71, 153-171.
- Cortjens, P.&Doyle, P. (1981). A model for optimizing retail space allocation. *Management Science*, 27(7), 822-833.
- Kök, A.& Fisher, M. (2009). Assortment planning: review of literature and industry practice. In: Agrawal, N. & Smith, S. (eds.). *Retail Supply Chain Management*, Springer. Santa Clara, USA.
- Kök, A.& Fisher, M. (2007). Demand estimation and assortment optimization under substitution: methodology and application. *Operations Research*,55(6), 1001-1020.
- McGoldrick, P. J. (2002). *Retail Marketing*. McGraw-Hill, London.
- Quelch, J.A.& Kenny, D. (1994). Extend profits, not product lines. *Harvard Business Review*, 72(Sept./Oct.) 153-160.
- Ramaseshan, B., Achuthan N. & Collinson, R. (2008). Decision support tool for retail shelf space optimization. *International Journal of Information Technology & Decision Making*,7(3), 547-565.
- Varley, R. (2006). *Retail Product Management. Buying and Merchandising*. Second Edition, Routledge. New York, USA.
- Waller, M., Williams, B., Tangari, A.& Burton, S. (2010). Marketing at the retail shelf: an examination of moderating effects of logistics on SKU market share. *Academy of Marketing Science*, 38, 105-117.
- Winston, W. L. (1993). *Operations Research: Applications and Algorithms*. Duxbury Press.
- Woensel, T., Dondelaa, K., Brokmeulen, R. & Fransoo, J.(2007). Consumer responses to shelf out-of-stocks of perishable products. *International Journal of Physical Distribution & Logistics Management*, 37, 704-718.
- Yücel, E., Karaesmen, F., Salman, F.& Türkay, M.(2009). Optimizing product assortment under customer-driven demand substitution. *European Journal of Operational Research*,199, 759-768.

ACCOUNTING STUDENTS PERCEPTION AND MOTIVATION ON INTEREST OF PROFESSION OF INTERNAL AUDITORS

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ABSTRACT

According to globalization, accounting is developing very well and very important in the development of the world today. And the global economic crisis arising from fraud exists. It means that the role of accountant is needed to deliver accounting information transparently. The need for professional accountants entities most needed in the labor market in Indonesia. One of the professions is internal auditors, but the needs of internal auditors are still not attract the attention of the students in Indonesia. The research was aim to determine the factors that influence accounting students interest to be an internal auditor. And to see how big perceptions and motivations influence the accounting student interest to work as an internal auditor. This paper is using quantitative analysis method by analyzing a problem that is manifested by quantitatively and using questionnaire. The population is accounting students at Faculty of Economics in Indonesia and the sampling technique is purposive sampling method. The result shows that perception and motivation are influence the accounting student interest to be an internal auditor. If perception and motivation on internal auditor increase, it will increase the interest to be an internal auditor.

Keyword: Perception, Motivation, Interest, Internal Auditor

INTRODUCTION

According to globalization, accounting is developing very well. The role of accounting is important in the development of the world today. Even the need for professional accountants entities most needed in the labor market in Indonesia. One of the professions is internal auditors, there are so many companies who are looking for this profession to be recruited and joined the company. Accounting major itself is one of the majors in the Faculty of Economics which the most popular, and also in Indonesia. The results of research

conducted Warrick and friends said that job opportunities abound for accounting majors, it's about 1.2 million jobs held by the accountant in 2014. The estimates also show that the growth in the number of accounting positions is 386.000 (U.S. Department of Labor).

Actually, the choice of accounting students to become internal auditors is begin in the college to find out information and consider career alternatives. In fact, in the college students also helped to identify the nature of accounting careers by providing the knowledge and skills necessary for success in the accounting profession. It

Proceedings of the 5th Global Management Conference, 2013,

Global Academic Network & ISCTE-IUL;

ISBN: 978-989-732-156-6; © Instituto Universitário de Lisboa (ISCTE-IUL), Portugal

also should help them to decide the profession according to the background information. The selection of careers supported not only by the available information, but also some various factors.

In fact, the needs of internal auditors are still not attract the attention of the students in Indonesia. The number of accounting graduates scattered in various provinces is still a bit of accounting students and graduates who work in specific fields. According to Diktia (2010), the number of S1-Accounting students in Indonesia was registered only 9.073 students. Nowadays, the proportion of S1-Accounting students was still not able to answer the needs of accountants in the job vacancies, especially in Indonesia. Meanwhile, according to Ikatan Akuntansi Indonesia (IAI) since 1957 till now, only 6.713 accountants were registered. If you compare the number of accounting graduates existing auditor, is not balanced. Though, the need of internal auditors is very high and open to any graduate accounting.

According to Chief Financial and Development Supervisory Agency (BPK), Mardiasmo, stated that Indonesia still needs further 4.000 internal auditors. This is consistent with the statement of the Vice President, Boediono, who stated that the number of internal auditors is still only at 8.000 and still requires 4.000 internal auditors more.

The research was motivated by the phenomenon exists, so will do research on the effects of students perception and

motivation on interest of profession of internal auditors. With the aim to determine the factors that influence accounting students interest to be an internal auditor. And this research also to see how big perceptions and motivations influence the accounting student interest to work as an internal auditor.

Perception

According to the Oxford English Dictionary, definition of perception is the ability to see, hear, or become aware of something through the senses, or the way in which something is regarded, understood, or interpreted.

Someone who is motivated will be ready to react. How that person acts is influenced by the perception of the situation. Two people in same motivation and goals condition may act differently, because of their different perceptions of that situation. Perception by Kotler defined as the process which person choosing, formulating and interpreting input of information to create a description of the world. Therefore, the perception able to influence a person's behavior towards what he wanted. According to Schiffman and Kanuk (2000) "Perception is process by which an individual selects, organizes, and interprets stimuli into the meaningful and coherent picture of the world". More or less that perception is a process to makes someone to choosing, organizing, and interpreting impulses are accepted into a description about the world.

Like most concepts within the social science disciplines, perception (or what other scholars refer to as social perception) has been defined in a variety of ways since its first usage. From the lay man's perspective, perception is defined as an act of being aware of "one's environment through physical sensation, which denotes an individual's ability to understand" (Chambers Dictionary). However, many social psychologists have tended to develop the concept around one of its most essential characteristics that the world around us is not psychologically uniform to all individuals. This is the fact, in all probability, that accounts for the difference in the opinions and actions of individuals/groups that are exposed to the same social phenomenon. At this point, it is important for you to take a look at some of these definitions in order to better appreciate the point being made here:

According to Nelson and Quick (1997), "social perception is the process of interpreting information about another person." What this definition has clearly highlighted for your attention is that the opinions you form about another person depends on the amount of information available to you and the extent to which you are able to correctly interpret the information you have acquired. In other words, you may be in possession of the same set of information that other people have on a particular situation, person or group but still arrive at different conclusions due to individual differences in the capacity to interpret the information that you all have.

Rao and Narayan (1998) obviously share the main characteristics of the above definition. However, they pressure that perception ranks among the "important cognitive factors of human behavior" or psychological mechanism that enable people to understand their environment. In their own words, "perception is the process whereby people select, organize, and interpret sensory stimulations into meaningful information about their work environment." They argue that perception is the single most important determinant of human behavior, stating further that "there can be no behavior without perception." Though focusing on managers in work settings, Rao and Narayan draw attention to the fact that since there are no specific strategies for understanding the perception of others, everyone appears to be "left with his own inventiveness, innovative ability, sensitiveness and introspective skills to deal with perception."

In order to shed more light on this concept it is important for you to pay attention to the following elements of the above definitions of perception listed by Rao and Narayan (1998):

1. Our attention, feelings and the way we act are influenced by our environment,
2. Perception helps you to gather data from your surroundings process the data and make sense out of it,
3. In perception it is sometimes difficult to separate the information from the action,

4. It is basically a process of gaining mental understanding, and
5. Perception guides the perceiver in harnessing, processing and channeling relevant information towards fulfilling the perceiver's requirements.

The Perceptual Process: Generally, the quality of input that a process attracts determines the quality of output that the process gives out. Correspondingly, "the perceptual inputs are first received, and then processed by the perceiver and the resultant output becomes the lease of the behavior". Variables in the perceptual process are inputs, process, outputs and behavior. Ghani et al. (2002) doing research on differences perception of a career as a public accountant between first-year students with a final year student at Malaysian Universities. From the results of these studies are known, there are three significant factors that influence the choice of a career as a public accountant that a starting salary, job responsibilities, and interests towards public accounting profession.

Motivation

According to the Oxford English Dictionary, definition of motivation in Oxford Dictionary is a reason or reasons for acting behaving in a particular way; desire or willingness to do something.

Motivation is the impulse that arises in a person consciously or not, to do an act with a purpose. Or Motivation is a business that can cause a person or group

of people which moved to do something because they want to achieve the goals she wants or gets satisfaction with actions (Kamus Besar Bahasa Indonesia, 2008).

Motivation comes from the Latin, *move* which means moving (Winardi, 2001) Motivation is an explanatory concept which is used to understand the behaviors in everyday life. Measuring motivation not directly but manipulate certain conditions after observing how a behavior can be changed (Petri, 1979).

Motivation is the driving force of a person heart to do or achieve something objective, or can be regarded as a plan or a desire for success and avoid failure of life. In other words, motivation is a process to achieve a goal. Someone who has motivation means he/she already has the power to gain success in life.

Motivational theories advanced by the experts intended to provide a description of what exactly is leading to humans and humans will be able to be like. Landy and Becker (1987) classifies this motivation theory approach into 5 categories, namely the theory of needs by Abraham H. Maslow (1943 - 1970), reinforcement theory by Herzberg (1966), the theory of justice by Douglas McGregor, expectancy theory by Vroom (1964), the theory of goal setting by McClelland (1961).

Widyastuti, (2004) divided motivation as three types, there are:

- Career Motivation. Career motivation is the impetus that arises from within oneself to improve personal skills in order to

achieve a better career than before.

- **Quality of Motivation.** Quality of motivation is an impulse that arises from within oneself to have and improve the quality or ability to perform the task properly.
- **Economic Motivation.** Economic motivation is the impetus that arises from within oneself to improve personal skills in order to achieve desired financial rewards.

Previous research conducted by Widyastuti, et al (2004) and Benny and Yuskar (2006). In Widyastuti, et al (2004), examined the effect of motivation on student interest in accounting to follow Accounting Profession Education (PPAk) there are quality of motivation, career motivation, and economic motivations, conducted at six colleges that UPN, STIEYKPN, UII, UAJY, Sanata Dharma and UGM. The results showed that career motivation is a significant factor affecting the interest of accounting students to follow PPAk, and the difference between the interest to follow PPAk beginning students and students at the end.

According to the theory of reasoned action, the intention of an individual is influenced by personal attitudes, the social norms and weighing of these two considerations. These motivational factors emanate from the self (personal identity), the environment and the interaction of the two. Within organizational settings, the self could be studied using needs theory, while the

environment can be studied using leadership theory.

Interest

According to the Oxford English Dictionary, definition of interest in Oxford Dictionary is the feeling of wanting to know or learn about something or someone; an activity or subject which one enjoys doing or studying.

Indonesian Dictionary defines interest as tendency of heart elevated towards something; attention; favorite. According to Widyastuti, et al (2004) interest is desire driven by a desire after seeing, observing, comparing and considering the needs.

Simple ways, interest means the strong tendency and relevance, other internal factors on students such as attention, curiosity, motivation and need for something (WRI team, 2001). And then, based on Muhibbin Shah (2008) in simple way, interest means the high of tendency and enthusiasm or a great desire for something.

Interest is an important issue in education, moreover associated with the activities of a person in everyday life. Interest inside someone will give an idea for an activity to achieve the goal. Knowing the person's interest will determine what activities they choose and will do it with pleasure.

According to Holland, interest can be an indicator of person's strength in a certain place where he will be motivated

to learn and show their best performance. Talent will be difficult to develop if there's no preceded by any interest. Without interest of calculate, a person will not develop into a mathematician. Talents in a particular field such as art, music, arithmetic calculation, language, etc. are the result of the interaction between heredity and environmental factors talents and supported by a factors of person's personality and work attitude.

There are few things to notice on this interest, that is:

- a. Interest is considered as intermediary motivational factors that have an impact on behavior.
- b. Interests show how hard a person dares to try to do something.
- c. Interests show how much effort is planned by someone to do something.

According to Siti Rahayu Haditono in Dwi Subekti Day (2007) interest is influenced by two factors:

- a. Intrinsic factor means that an action is desirable because someone is happy to do it. In this case, interest comes from within oneself. People like to do something for that act, such as: joy, have more attention, enthusiasm, motivation, and emotion.
- b. External factors that an act done at the instigation / execution from the outside. People do it because it encouraged / forced from the outside. Such as: Environment, parents, and teachers.

Internal Auditors

According to International Federation of Accountants (Regar, 2003) accounting profession is all occupations that use accounting expertise, including the areas of public accountants; internal accountant who works in industry, finance or trade; accountant who works in the government, and accountant as a teacher.

In simple definition, the accounting profession is the scope of work performed by accountant as a public accountant; commonly consist of audit, accounting, tax and management consulting.

The International Professional Practices Framework (IPPF), which was released by The Institute of Internal Auditors (The IIA), dated January 1, 2009. **Internal auditing** is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

Standar Internasional untuk Praktik Profesional Auditor Internal (SIPPPI)

Standards are principles that provide a framework for the implementation of internal audit. Standards are mandatory requirements, which is consists of the Statement and Interpretation. The

statement is the basic or minimum requirements for the professional practice of internal auditing as well as to evaluate the effectiveness of its performance.

This requirement applies both at the level of international organizations and individuals. While, interpretation can explain further term or concept in a related statement. Statements and Interpretations must be used together to understand and implement the standards correctly. The standard term that has been given specific meanings that are included in the Glossary.

Felton et al. (1994) examined the factors that influence decision making for business school students while choosing public accounting profession. In a study of business school students at seven universities in Ontario states that students choose a career in public accounting is influenced by five factors :intrinsic factors, long-term income and short-term income, labor market considerations, educational background in Senior High School(SHS), and student's perceptions about the advantages and disadvantages of being a public accountant.

Kunartinah and Widiatmoko (2003), conducted a study on the behavior of accounting students in STIE Stikubank Semarang and the factors which influence the choice of a career as a public accountant. From these studies are known, there are five factors that influence the career choices students are intrinsic factors, first a high income, labor market considerations, perceptions of

excess public accounting profession, and the perception of weakness as a public accountant.

METHODOLOGY

In doing research is always needed population and the sample used to analyze the existing problems. According Sugiyono (2004), the population is an area that consisting of generalization objects or subjects which have certain qualities and characteristics are determined by the investigator to be studied and then make the conclusions. So in this research, the unit analysis population is accounting students in the Faculty of Economics, Gunadarma University.

While sample is apart of the population who relatively has similar characteristics and can be considered representative of the population. Using sampling techniques through non probability sampling approach that is purposive sampling, has been able to provide the information needed from a particular target group. Samples that have been taken also has information as expected and they passed the criteria determined by the researchers.

The variables used consist of two types. First, the dependent variable is interest of accounting students to work as an internal auditor. The second is the independent variables; they are all factors that affect student interest to work as an internal auditor. These factors are student perception and motivation to be an internal auditor. The variables of this

paper are measured using the ratio scale and 5-point Likert scale (5-point Likert scale). Respondents who "totally disagree" represented by point 1, which means that these factors did not significantly affect students' interest to be an internal auditors. While respondents who "totally agree" is represented by point 5, which means that these factors significantly affect students' interest to be an internal auditors.

This paper is using quantitative analysis method by analyzing a problem that is manifested by quantitatively. There are five stages in the quantitative analysis, the first test of the descriptive analysis to describe the variables in the fieldwork. Both test analysis to determine legal validity or not the questionnaire. Reliability of the third test is used to measure the reliability of the questions in the questionnaire. While the fourth is a classic assumption test is required prior to order multiple regression analysis of samples processed in order to truly be representative of the population as a whole. The latter is a data processing using linear regression analysis to determine the future of independent variables which significantly influence the dependent variable. The equation used is:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

Explanation:

Y = Interest to be an internal auditor

a = Constant

X₁= Career motivation

X₂= Quality motivation

X₃= Economic motivation

X₄= Perception of advantages of internal auditor

X₅= Perception of sacrifice of internal auditor

e = error

From the regression results obtained and tested to determine whether the existing regression coefficients have a positive effect or not, either simultaneously or partially and know how big influence. To perform regression testing is necessary to have three, simultaneous hypothesis testing (Test F), partial hypothesis test (t test), and test the coefficient of determination (R²). F test aims to demonstrate whether all the independent variables included in the model simultaneously or jointly have an influence on the dependent variable (Ghozali, 2006). While the t-test conducted to determine the significance of the partial effect of the independent variable on the dependent variable or individual. Lastly, the coefficient of determination (R²) was essentially used to measure how far the regression model's ability to explain variation in the dependent variable (Ghozali, 2006). The hypotheses in this study are:

H₀ : there is no perception and motivation influence on accounting students interest to be an internal auditor

H₁ : There is perception and motivation influence on accounting students interest to be an internal auditor

RESULTS

This research aimed to 100 accounting students in Indonesia. The respondents consisted of 63% women and 37% men. They are in between semester 2 to semester 10, the majority of respondents 72% were in semester 6. Meanwhile, based on age, the average respondent was 21 years old at the age range between 18 to 27 years. The validity and reliability of the test showed that the questionnaire has passed the test.

According to the statistics, the data were distributed normally and have passed classical assumptions test. The hypotheses testing by linear regression analysis, with equation is:

$$Y = -3.773 + 0.579_1 X_1 + 0.93X_2 + 0.22X_3 + 0.117X_4 + 0.147X_5 + e$$

Linear equation above explains that the constant coefficient value -3.773, which means assuming the absence of career motivations, quality motivations, economic motivations, perception of advantages of internal auditor, and the

perception of sacrifices of internal auditor variable make decline the interest to be an internal auditors.

In the career motivation variable (X₁) has a coefficient of 0.579 which means that this variable has a positive influence on accounting students interest into an internal auditor (Y). If the accounting students pursue a career as an internal auditor with work hard and deal with all the obstacles in achieving success, it will increase accounting student interest to be an internal auditor.

In the quality motivation variable (X₂) has a coefficient of 0.930, which means that this variable has a positive influence on accounting students interest into an internal auditor (Y). If the accounting students improve capacity, quality, knowledge, and often look for information in the accounting field, it will increase accounting student interest to be an internal auditor.

In economic motivation variable (X₃) has a value of 0.220 which means that the coefficient of this variable also has a positive influence on accounting students interest into an internal auditor (Y). If the accounting students think that being an internal auditor will have a great starting salaries, bonuses, and have the opportunity of rapid salary increases, it will increase accounting student interest to be an internal auditor.

In perception of advantages of internal auditor variables (X₄) has a coefficient of 0.117 which means that this variable has a positive influence on

accounting students interest into an internal auditor (Y). If students have a perception about the advantages accounting profession of internal auditors who have job security, a pleasant working environment, and income according to the degree of difficulty that made, it will increase accounting student interest to be an internal auditor.

In this perception of sacrifices of internal auditor variable (X_5) has a coefficient of -0.147 which means that this variable has a negative influence on accounting students interest into an internal auditor (Y). Although the perception of the internal auditor increased, the accounting student interest to internal auditors will be reduced.

After performing linear regression test, then test of hypotheses simultaneously (F-test), the value of F table with df: 5; 94 and the significant level (α) of 5% is 2.31. While for the value of F calculation from the data processed obtained is equal to 52.846. By comparing the value of F calculated by F table, note that F calculation is greater than F table or $52.846 > 2.31$ (sig. below 0.05), it is concluded that the independent variables (motivation and perception) as a whole has a significant influence on the variable dependent or interest to be an internal auditor.

In partial hypothesis testing (t test), t table for the data of 100 respondents, the number of variables is 6 variables, and the significant level of 5% was used is 1.986.

Table 1. Partial Hypothesis Analysis

t-table	t-test		Information
1.986	X_1	7.654	Significant
	X_2	1.249	Insignificant
	X_3	3.187	Significant
	X_4	1.748	Insignificant
	X_5	-2.727	Significant

The results of the data processing is known that t-test for career motivation variable X_1 , X_3 , X_5 , is in the region of rejection H_0 , it can be concluded that H_1 is accepted, which means that there is a significant effect partially on the three variables. While for variable X_2 and X_4 t values are counted in H_0 reception area. It can be concluded that H_1 is rejected, which means that there is no significant effect on these variables partially.

While the coefficient of determination value or R-square of the data processing is 0.738 or 73.8%. This value means that the independent variable (the variable motivation and perception) influence the fluctuations of dependent variable (interest to be an internal auditors) of 73.8% and 26.2% are other variables that are not included in the model (not examined) and incorporated in the confounding variables (e) in the linear regression model.

The five independent variables tested individually, the results showed that the variables most dominant influence in the interest of accounting students become

internal auditor is career motivation. Then a second variable influence for accounting students interest become internal auditors is economic motivation. As for the letter, a third variable has a negative effect on student interest in accounting of internal auditors is perception of sacrifice of internal auditor. In the variables X_2 and X_4 are located in the H_0 reception area, which mean that quality motivation variable and perception of advantages of internal auditor variables there are no significant affect on student interest in accounting of internal auditors.

DISCUSSION

Students have a high intent in choosing a career as an internal auditor because they have the ability and skills in the field of accounting. By knowing the factors that affect the interest of accounting students in choosing a career, it can help accounting students to the world of work. So that can helped students in adjusting to the demands of its ability in job profession of internal auditors in the future, and face more severe challenges. Capabilities and skills of accounting students at graduation are absolutely necessary to support the professionalism as an internal auditor.

A further factor, the students themselves are encouraged to seek financial or economic Awards increasing interest of accounting students become an internal auditor. Internal auditor profession that allows salary increases

and bonuses are big and fast, encouraging economic motivation, the interest to be internal auditors. In addition, the profession of internal auditors who have an increased chance of a big position also influential.

In the perception of sacrifices internal auditor profession, negatively affect the interest of accounting students to become internal auditors. Perceptions of sacrifices internal auditor profession, which has a heavy work demands, working hours are irregular, large professional responsibility require a long time to achieve the perfect work, and has a difficulty level professional exam to become an internal auditor exert a negative accounting students to become internal auditors.

The plan that raised, to be an internal auditor, not supported by the motivation or the desire from the students in order to increase the quality of their selves to do the best. The students disposed to lazy to increase the skills and the quality in accounting, which could be a guide to become an internal auditor. Beside that, the laziness of the students to increase their confident.

The last, the perception of advantages of internal auditor profession, not supported the interest of the accounting students to become an internal auditor. The one of the factors that influence is a big and hard challenge for the students as an internal auditor. Beside that, the salary is not enough or not appropriate with the hardness of the work to do.

CONCLUSIONS

Based on the test and analysis we did, we can make a conclusion that the students, who have career and academic motivation, have a high interest to be an internal auditor. While, the students who have high quality motivation, doesn't make the students to choose career as internal auditor. The perception of advantages of internal auditor professions also has no effects on interest of accounting students to be an internal auditor. While the perception of sacrifice internal auditor professions has negative effect on interest of accounting students to be an internal auditor.

Limitations of this study, limited to an internal auditor profession alone. In addition, the sample used is limited only to the level of student. Variables used only motivation and perceptions of students' interest in becoming an internal auditor.

Suggestions for further research is to extend the area of research, so the results more representative. Samples can extend not only to the level of students, but can be started from high school or vocational school. In addition, it can also add variables that may affect interest to be an internal auditor.

REFERENCES

- Andersen, William.(2012). Analisis Persepsi Mahasiswa Akuntansi dalam Memilih Profesi Sebagai Akuntan (Studi Empiris pada Mahasiswa Akuntansi Undip, Unika, Unnes, Unissula, Udinus, Unisbank, STIE Totalwin dan Mahasiswa PPA Undip). Diponegoro University.
- Aprianto, Aan. Pengaruh Motivasi Terhadap Minat Mahasiswa Akuntansi di Upn “Veteran” Jawa Timur untuk Mengikuti Pendidikan Profesi Akuntansi (Ppak). Nasional University.
- Ariputra, Rizal. (2009). Pengaruh Motivasi Terhadap Minat Mahasiswa Jurusan Akuntansi dalam Merencanakan Karir untuk Bekerja di Kantor Akuntan Publik (KAP). State University of Malang.
- Benny, Ellya. Pengaruh Motivasi Terhadap Minat Mahasiswa Akuntansi untuk Mengikuti Pendidikan Profesi Akuntansi (Ppak) (Studi Empiris pada Perguruan Tinggi Di Padang). *Simposium Nasional Akuntansi 9*.
- Davies, Marlene (2001). The Changing Face of Internal Audit in Local Government. *Journal of Finance and Management in Public Services*. Volume 1 Summer 2001. University of Glamorgan.
- Hayati, Rahman Nur. (2007). Pengaruh Pengetahuan, Sikap dan Motivasi Terhadap Minat Bidan Mengikuti Uji Kompetensi di Kota Semarang Tahun 2007. Diponegoro University.
- Kamus Pusat Bahasa. (2008). Kamus Besar Bahasa Indonesia. Pusat Bahasa: Jakarta.

- Koumbiadis and Okpara.(2008). Ethics and Accounting Profession: An Exploratory Study of Accounting Students in Post Secondary Institutions.*International Review of Business Research Papers Vol. 4 No.5.* October-November2008 Pp.147-156.
- Lisnasari and Fitriany. (2008). Faktor-Faktor yang Mempengaruhi Minat Mahasiswa Akuntansi untuk Mengikuti Pendidikan Profesi Akuntansi (Ppak) (Studi Empiris di Universitas Indonesia).University of Indonesia.
- Liu and Woodbine (2010). Leadership Styles and the Moral Choice of Internal Auditors.*EJBO Electronic Journal of Business Ethics and Organization Studies Vol. 15 No. 1.*
- Noviyana, Syntha .(2012). Niat, Motivasi, dan Persepsi Mahasiswa Memilih Profesi Akuntan. Gunadarma University.
- Rao and Narayana. Organization Theory and Behavior.
- Setyaningrum, Betty Yuli. Pengaruh Pendidikan Profesi Akuntansi Terhadap Minat dan Persepsi Mahasiswa Jurusan Akuntansi pada Karir Sebagai Akuntan Public.
- Warrick, et al. Accounting Students' Perceptions On Employment Opportunities. Jackson State University.

AN ANALYSIS OF IPO UNDERPRICING IN SOUTH AFRICA

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ABSTRACT

This paper provides evidence of the existence of IPO underpricing on the JSE between 2000 and 2008. Average underpricing over the period was found to be 17.1% (median: 9.4%). In line with the general global decline in first day returns following the end of the internet bubble period, average underpricing on the JSE has decreased relative to previous studies. Hot and cold periods were found to exist and initial returns in the hot period (26.5%) were significantly higher than in the cold period (5%).

INTRODUCTION

Firms go public for a number of reasons, including raising of capital, facilitating merger and acquisition activity, creating an opportunity for insiders to cash out and building a public profile for the company. Generally companies going public offer the shares to subscribers at a price below the economic value of the shares resulting in the closing price on the first day of trading being higher than the offer price. The phenomenon is known as underpricing and often results in substantial price increases on the first day of trading. The average first day return (percentage increase from the offer price to closing price at the end of the first day of trading) for IPOs in the United States between 1960 and 2006 was 18% (Loughran, Ritter and Rydqvist, 2007).

This represents a transfer of value from issuing shareholders to subscribing investors and between 1990 and 2008 a total of \$122.41bn was foregone by shareholders in this way, or “left on the table”. Loughran and Ritter (2002) define *money left on the table* as the difference between the issue price and the closing price on the first day of trading multiplied by the number of shares offered; or the amount by which the proceeds would have been higher had the shares been offered at the first day closing price.

The so-called ‘underpricing puzzle’ (the extent of underpricing and the willingness of shareholders to give up

such significant value) has attracted substantial research attention and a significant body of research exists. Strong evidence of underpricing has been found in numerous markets worldwide (United States – Ibbotson, 1975; Ritter, 1984; United Kingdom – Levis, 1993; Latin America – Aggarwal, Leal and Hernandez, 1993; Finland – Keloharju, 1993) including the Johannesburg Securities Exchange (Barlow and Sparks, 1986; Bradfield and Hampton, 1988; Page and Reyneke, 1997).

Possible reasons for underpricing include enticing investors into the market when information asymmetry exists, creating confidence in investors for future equity offerings, decreasing the marketing effort required for the IPO and reducing potential legal liability. The internet bubble period of the late 1990’s saw an unprecedented increase in underpricing with average first day returns in the United States (a country historically exhibiting amongst the lowest levels of underpricing internationally) rising to 71% in 1999 (Loughran, Ritter and Rydqvist, 2009). On the JSE the average initial premium for 1998 was 109% (M’kombe and Ward, 2002). Following the excesses of the late 1990’s, the first half of the subsequent decade saw a complete turnaround and some of the lowest levels of underpricing to date. Between 1999 and 2000 investors in the United States left \$66.64bn *on the table*; an average of \$33bn per annum. From 2001 to 2009, the total amount left

on the table was \$27.60bn; an average of \$3.06bn per annum (Loughran, Ritter and Rydqvist, 2009). The aggregate proceeds and the number of IPOs were greater in the latter period, however, the average first day return for 1999 and 2000 was 64.4% compared to 11.9% in the subsequent nine years (Loughran, Ritter and Rydqvist, 2009).

To date, no study of initial premia on the main board of the JSE in the post internet bubble period has been published. This research is of particular importance given the time periods of previous studies on the JSE. Prior studies on the JSE included the years 1985-1987 in which underpricing in South Africa was exceptionally high. Furthermore, the listing volumes in this period were particularly high, serving to increase the weighting of those years in the total sample averages in all existing JSE studies. The objective of the paper is to test for the existence of underpricing on the JSE for the period January 2000 to December 2008. The main objectives of this research were formulated into the following research questions:

- Does underpricing exist on the JSE in the period under examination, and if so, what is the extent of the underpricing?
- Has underpricing on the JSE changed over time?

The study examines previous research including evidence of underpricing. The data and methodology section describes the sample of IPOs used in the study and explains research methods used. The average underpricing for the sample period will be analysed in aggregate and by time period.

LITERATURE REVIEW

Substantial evidence has accumulated globally over the past half century to suggest that on average IPOs are priced at a discount from their true economic value.

Stoll and Curly (1970), Logue (1973) and Ibbotson (1975) first documented evidence of the systematic underpricing of IPOs. Ibbotson and Jaffe (1975) conducted the first study over an extended time period covering all 2885 US IPOs between 1960 and 1970. They found the average initial premium to be 17%. Early studies in the United Kingdom revealed a similar phenomenon (Vaughn, Grinyer and Birley: 1977).

Subsequent to these studies, there have been numerous investigations worldwide on the initial premia on IPOs. Average first day returns in the US and UK over the preceding 50 years have been 18% and 16.8 % respectively. Loughran, Ritter and Rydqvist (2007) have maintained a summary listing of international IPO findings. This is presented in Figure 1.

It is clear that the degree of underpricing varies considerably between countries. Initial returns in Asia are notably higher than South America. These differences are likely to be partly due to regulatory differences around the IPO process (Ljungqvist, 2005). In general, developed markets like the United States, United Kingdom, Australia, Canada, Germany and the Netherlands tend to have lower levels of underpricing than emerging markets. There are 13 emerging markets, as defined by MSCI (2011), in the chart above. The average initial premium among these countries of 56.1 % is substantially greater than that of the developed nations (18.1%). Even when China and Malaysia, both with underpricing greater than 100%, are removed the average of 41.9% is still more than double that of developed nations. Similarly, the median of 37.2% is considerably greater than the 17.2% found in developed nations. 11 out of 13 emerging market countries (85% of the group) experienced underpricing of more than 20%. Early evidence of underpricing in emerging markets was obtained from Latin America by Aggarwal, Leal and

Hernandez (1993) in a study including Brazil, Chile and Mexico. In Brazil, 62 new stock issues were studied between 1980 and 1990. The mean first day return was 78.5% and the median was 36.5%; both considerably higher than results obtained in developed markets. Data for Chile were collected for the period 1982 to

1990 and included 36 IPOs. Average initial returns over that period were 16.3%. Chile makes use of the auction pricing method which has been shown to result in lower initial returns (Aggarwal, Leal and Hernandez, 1993).

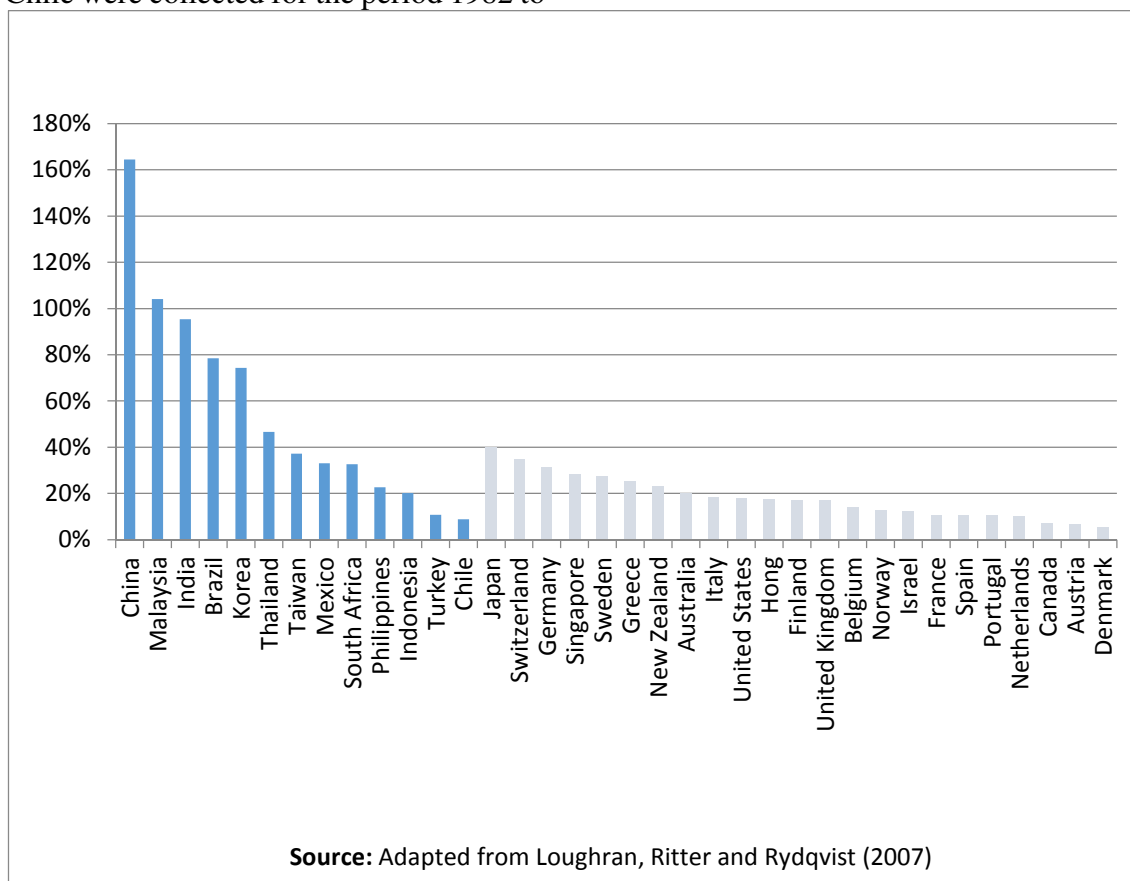


Figure 1 Average Initial Return for 36 Countries

Note: results presented in the chart above represent combinations of numerous studies to show an average across all years that have been examined in that particular country. As such, the time periods of different countries will not match exactly.

Classification of Emerging and Developed Markets is from MSCI (2011).

Chen, Choi and Jiang (2007) found that for 1,213 IPOs in China between 1990 and 2006, the average first day return was 213%. This number is well in excess of any observed in other countries. This is partly due to the fact that the sample was limited to IPOs of state owned firms, and partly due to the unique regulatory environment in China. In Nigeria, average underpricing was found to be 19.1% across a mixed sample of IPOs and PIPOs between 1989 and 1993 (Ikoku, *s.a.*).

In India, Marisetty and Subrahmanyam (2006) examined 2,713 IPOs between 1990 and 2004, finding the average first day return to be 95.4%. Comparisons of the results displayed in Figure 1 above must be made with caution. If one compares the average underpricing found in the UK as reported in Loughran, Ritter and Rydqvist in 1994 of 12% (as measure from 1959-1990) to that reported by the same authors in 2007 one will note an increase to 16.8% as a result of the

extension of the measurement period up to 2006. In an examination of trends in IPOs, Ritter and Welch (2002) note that averages over long periods hide the variations in levels of underpricing that are observed from year to year. Underpricing grew from 7.4% before the 1990's to 11.2% in the early 1990's and then to 18.1% in the mid nineties, peaking at 65% in 1999 and 2000 before coming down to 14% in 2001.

Ibbotson and Jaffe (1975) describe 'hot issue' markets as periods where the average initial performance of new issues is abnormally high. Hot issue markets are characterized by high volumes of IPOs and high levels of underpricing. Internationally there is overwhelming evidence to support the existence of hot and cold issue periods (Ibbotson and Jaffe, 1975; Ritter, 1984 and Bradfield and Hampton, 1988). Underpricing has not consistently increased but has exhibited a cyclical nature. Whilst post-issue performance of the IPO firms is not the focus of this paper, the level of underpricing has been shown to have a significant relationship with longer term performance of the firm.

Post-issue IPO firms tend to underperform the market (Ibbotson, 1975; Ritter, 1991; and Aggarwal, Leal and Hernandez, 1993) and this possibly contributes to the extent of underpricing as issuing firms offer the shares at a lower

price in order to compensate for future poor performance. Lock-up provisions prevent investors from cashing out after the first day of trading and high initial premia are necessary to attract investors in light of the risk of poor aftermarket performance. In the 1990's, however, Ritter (1991), and Loughran and Ritter (1995) examined more than 3,500 IPOs in the United States and all three studies showed that new issues underperformed significantly.

Evidence from the JSE – Initial Premia

There have been six major studies of underpricing on the JSE covering the period 1972 to 1998. Of the six studies, only one (Barlow and Sparks, 1986) was focused on initial premia. The remaining five were focused on the aftermarket performance of IPO firms; but some did include limited analyses of initial premia, which are discussed below. All five studies did measure the average initial premium over the period of study and in every case average initial returns were found to be significantly different from zero. The previous studies were conducted across all boards of the JSE and thus results quoted include the main board, the DCM and the VCM. Results are summarized in Table 1.

Table 1. Average Initial Premia on the JSE

Author	Date	Data Period	No IPOs	Initial Premium	
				Mean	Median
Barlow and Sparks	1986	1972 – 1986	105	32.1%	23.9%
Bradfield and Hampton	1988	1975 – 1986	77	27.0%	-
Bhana	1989	1985 – 1987	80	65.6% ^a	-
Page and Reyneke	1997	1980 – 1991	118	32.7%	-
Lawson and Ward	1998	1986 – 1995	424	27.2%	15%
M'kombe and Ward	2002	1980 – 1998	541	26.8%	-
Average				29.4% ^b	

^a(69.7% for one week, as is often quoted for this study)

^b(Bhana is considered to be an outlier and this study has been excluded from the calculation of average. Refer to discussion below for further detail.)

Barlow and Sparks (1986) performed a comprehensive study of underpricing on the JSE. For 105 IPOs over the period 1972 to 1986 they found the average first day premium to be 32.1% and measured the median initial return at 23.9%. The observation that the mean is considerably larger than the median is evidence of a common phenomenon in IPO underpricing; the distributions of initial returns tend to be heavily right-skewed (Ritter, 1998). This is the result of a relatively small number of IPOs earning substantial first day returns. Lawson and Ward (1998) find even greater evidence of skewness with the median (15%) approximately half of the mean (27.2%). No other studies on the JSE quote the median return. The average initial returns found by Bradfield and Hampton (1988), Page and Reyneke (1997), Lawson and Ward (1998) and M'kombe and Ward (2002) were all similar to those of Barlow and Sparks (1986); all within 3% of the average across the JSE studies. Bhana (1989) measured underpricing substantially higher at 65.6%. However that study is limited to a 'hot' period in the late 1980's. Lawson and Ward's (1998) sample included 294 listings over the three years from 1985 to 1987 and they measured annual average underpricing at 56%, 36% and 34% for those three years, which could be considered a more accurate reflection of underpricing over that period.

The most extensive study, covering the longest period and largest number of listings, was conducted by M'kombe and Ward (2002) and the average initial return of 26.8% is perhaps the most appropriate measure of historic underpricing on the JSE. This is lower than the average across all countries listed in Figure 1 above (32%), but is above the median of

20%. South Africa has the fifth lowest average underpricing of all the emerging markets in Figure 1 and is also considerably lower than the emerging market median of 37%. Barlow and Sparks (1986) found that hot and cold issue periods exist and that premia are higher in rising markets than in declining markets (all significant at the 1% level). When stratified into groups of 3 years, it was found that clear variation existed across the period of study. First day returns ranged from 5% (1975-1977) to 54% (1984-1986). It is also interesting to consider that whilst the average premium is 32.1%, only one of the five tranches (1984-1986) had an average greater than 27%. The average underpricing outside of the hot period was only 18.6%. This evidence indicates that average underpricing over time is skewed by short periods of high underpricing.

The above results are very similar to those of Bradfield and Hampton (1988) who studied a closely corresponding period. They found that the average initial premium in the hot period of 48% was significantly greater than that of the cold period at 25%. Over the period examined in the above two studies, underpricing was consistently on the rise. However, M'kombe and Ward (2002) and Lawson and Ward (1998) examined the period immediately following it and found that from 1988 to 1993 there was not a single year in which the average underpricing exceeded 20% and there were in fact only two years above 10%. In the beginning of the internet boom of 1997 and 1998 (the final two years of their study) average initial premia exceeded 50% and 100% respectively (M'kombe and Ward, 2002). Figure 2 below shows the yearly average initial premia on the JSE for all years for which annual data were available.

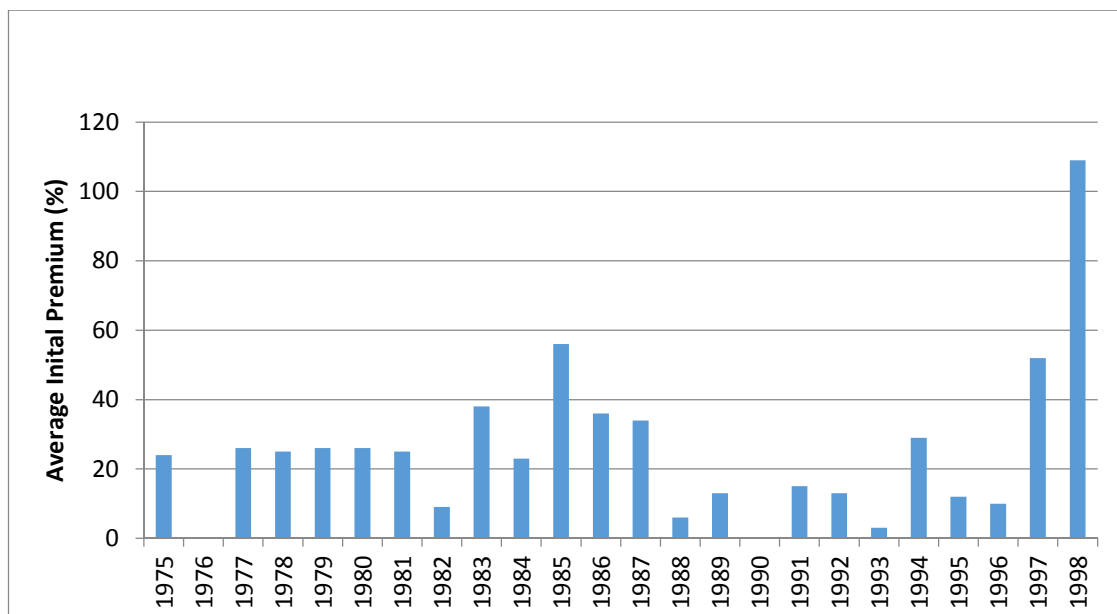


Figure 2 Yearly Average Initial Premium* 1975 to 1998

*Annual averages have been obtained from Barlow and Sparks (1975 to 1985), Lawson and Ward (1986 to 1995), M'kombe and Ward (1996 to 1998). There were no listings in 1976 and underpricing in 1990 was 0%.

Underpricing in the mid seventies to early eighties was fairly consistent around 25%. This is followed by the visibly higher levels of the hot period in the mid 1980's. Subsequent to this underpricing went through a period of low underpricing until the internet boom of the late 1990's. 1998 saw the highest level of first day returns ever observed on the JSE. An analysis of underpricing and post-issue performance on the Alternative Exchange was performed by Correia and Holman (2008). They examined 42 listings between October 2003 and September 2007 and found that average underpricing was 29%. The median underpricing over that period was 18%. No evidence regarding the existence and extent of underpricing on the Main Board of the JSE after the year 1998 has been published. Evidence from this period is of particular importance given that all previous studies on the JSE include the high levels of underpricing experienced between 1985 and 1987. Globally, there have been substantial changes in the levels of underpricing after internet boom period. To date there is no evidence from the JSE

to determine whether the South African market has been subject to these changes. Furthermore, due to the aftermarket focus of previous studies, there has been almost no cross-sectional analysis of initial premia on the JSE since 1986. Also, no research has been performed on the main board in a corresponding time period to the Correia and Holman (2008) study on the AltX. This paper will examine the years immediately following the 'hot issue' period of the 1990's and determine whether it was followed by a cold period with low listing volumes and low levels of underpricing.

DATA AND METHODOLOGY

In the period from 1 January 2000 to 31 December 2008 there were a total of 184 of new listings as published in the JSE handbook. Of these new listings 69 were on the AltX and these are excluded from the sample as this study is focused solely on the main board. The JSE handbook also included listings in the form of rights issues and follow-on offerings which are outside the scope of this study. Only 46

listings met the definition of an initial public offering. Initial offer prices and number of shares offered were obtained from three data sources: Bloomberg, Reuters and the JSE. Unfortunately there was a degree of incongruity between them. It is believed that inclusion of questionable data would undermine the reliability of the study significantly and it was considered more appropriate to use a smaller sample of higher integrity. For this reason, only data that could be cross-checked between two of the three sources were used. After removing all IPOs for which listing data were not available or could not be cross-checked, there were 37 firms remaining in the sample. Bloomberg, Data stream and INET were used to obtain first day closing price and prices were cross-checked in the same manner as described above. In some cases where discrepancies existed or where data were missing, individual prices were further checked against McGregor BFA. Three IPOs were excluded from the sample at this point because no reliable closing price could be found due to lack of data, dual listing issues and timing difficulties.

The sample used in testing consists of a total of 34 IPOs over the 9 year period, with the largest concentration of listings being in 2007 (14 IPOs) as shown in Figure 3. The number of firms listing has decreased considerably partly due to the popularity (at the time) of the (AltX), specifically amongst the small-cap firms. From the period 2003 to 2007, 42 companies listed on the AltX (Correia and Holman, 2008). The AltX essentially replaced the Development Capital Market and the Venture Capital Market and the previous studies of underpricing on the JSE have included both the main board and the DCM and VCM. Barlow and Sparks (1986), Bhana (1989) and Lawson and Ward (1998) performed separate analyses of the main board and the DCM (the VCM is considered too small to be analysed separately), finding underpricing on the DCM to be significantly higher than on the main board. As such, the results of this study are most comparable to these analyses of the main board.

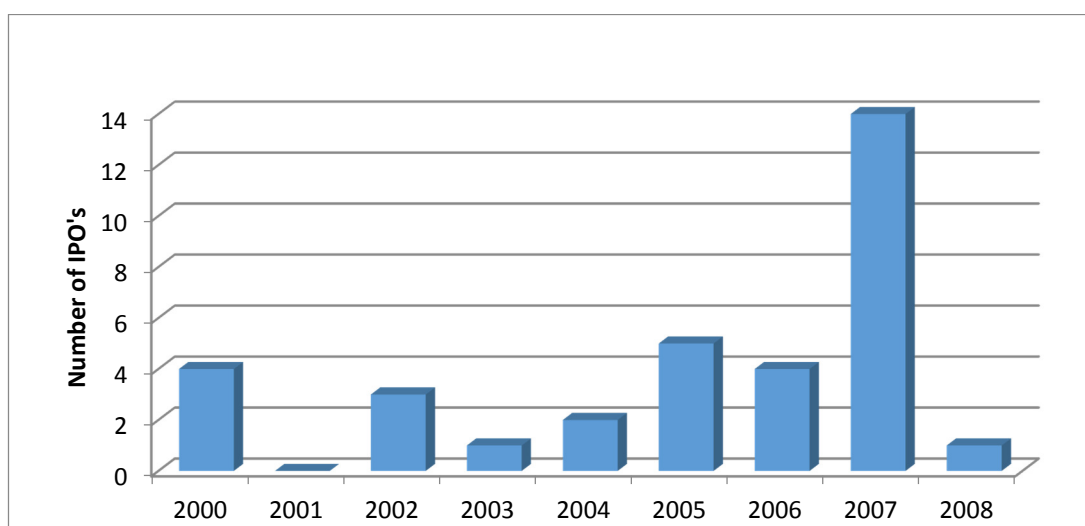


Figure 3 Number of IPO's Per Year

The above chart only includes IPOs for which sufficient, reliable data could be

obtained and does not represent all listings on the JSE over the period.

From the chart above it is clear that there is variability in the number of IPOs per year. The average over the period of study of four IPOs per year is lower than the 10 IPOs per year in the period 1980 to 1991 in the study by Page and Reyneke (1997). Lawson and Ward (1998) identified 535 IPOs between 1975 and 1995 with an annual average of 25, which included the hot market of the 1980's. Thus, listing frequency in the period under examination is markedly lower than in prior studies. The latter part of the sample period shows increased volumes and the quietest period follows the 'hot issue' bubble period directly. This is in line with historic cycles in which hot periods are followed by periods of low listing volumes. The average market capitalization at time of listing was R1.6 billion while the median market capitalization was R906 million.

Twelve IPO firms had a market capitalization of greater than R1 billion on listing date, with the largest being Telkom Ltd at R15.7 billion. Eleven firms were below 500 million with the smallest being Square One Solutions Ltd at R53 million. The sample includes firms from a range of industries including real estate holding and development, construction, mining and energy and retail. The total sample includes nine real estate funds and the pricing behaviour of these funds can be different from operating companies.

Property funds hold a portfolio of properties and typically trade at a discount to net asset value (Ritter, 1998). They are generally not widely held prior to listing as they are founded with the intention of listing to raise capital. There is not a consistent practice with regard to the treatment of property funds. Some international studies exclude property funds (Ritter, 1998; Carter, Dark and Singh, 1998; Ljungqvist and Wilhelm, 2003) but all previous studies on the JSE include property funds (Barlow and Sparks, 1986; Bradfield and Hampton,

1988; Bhana, 1989; Page and Reyneke, 1997; Lawson and Ward, 1998 and M'kombe and Ward, 2002). For this reason, all testing and analysis is performed with property funds included. Additional testing excluding these IPOs is performed in some instances. The remaining IPO firms are spread across a wide range of industries.

Formulation of Hypotheses

The main objectives of this study are to establish whether or not IPOs are significantly underpriced and to measure the extent of underpricing and to establish whether or not the degree of underpricing is related to certain IPO characteristics. The results of the above will be compared to previous international and local research.

The above objectives have been formulated into the following hypotheses:

- H1 The initial return on IPOs is not significantly different from zero
- H2 Hot and cold listing periods do not exist on the JSE

The extent of underpricing is measured by comparing the closing price at the end of the first day of trading with the original offer price. Consistent with international and local studies, the first day return is calculated as:

$$R_1 = \frac{P_1}{P_0} - 1$$

Where R_1 is the first day return, P_1 is the first day closing price and P_0 is the initial offer price.

Average premia can be calculated in a number of ways. Most commonly a simple average across the whole sample is used. This gives an equal weighting to all IPOs and is useful in making inferences across large, varied populations. Alternatively a size or period weighted average could be used. However, to enable meaningful comparison with other studies, the simple average is favoured in this paper. The

other methods of calculating the mean offer additional insight, and these means will be examined as part of detailed analysis of size and period later in this study. In addition to comparing sample averages, it is important to consider the median. Initial return distributions are usually right-skewed because of a small number of offerings with exceptionally high returns (Ritter, 1998; Lawson and Ward, 1998). In cases where the distribution is skewed, the median is an improved measure of the return expected on any single offer and is less affected by any exceptional IPOs, especially in a small sample. Thus the median is a consistent measure and adds important insight into the analysis of underpricing.

RESULTS

In this chapter the results of testing performed are discussed in three sections; average initial premia, changes in underpricing over time and cross sectional analysis of underpricing.

Average Initial Premia

The average level of underpricing was found to be 17.1% for the total sample and slightly higher at 20.4% when property funds are excluded. Table 2 presents a summary of the results.

H1 The initial return on IPOs is not significantly different from zero

Results of the student's t-test are summarized in panel B of Table 2 below. For both samples the null hypothesis that the mean return is not different from zero can be rejected at the 1% level. This is consistent with all previous studies of underpricing on the JSE.

The average initial premium of 17.1% is substantially lower than the average of prior studies on the JSE of 29.4%. Furthermore it is distinctly lower than any single previous study with the next lowest being M'kombe and Ward (2002) who found the average first day premium to be 26.8%. This is likely the result of two factors. Firstly, all other studies of the JSE have included the development capital market which has exhibited significantly higher levels of underpricing.

Table 2. Average Initial Premia

Panel A: Descriptive Statistics	<i>Total Sample</i>	<i>Ex Prop Funds</i>
Mean	17.1%	20.4%
Standard deviation	24.9%	28.0%
Median	9.4%	10.0%
Count	34	25
Max	89.0%	89.0%
Min	-20.0%	-20.0%
Count of positive return	27 [#]	20
Count of zero or negative return	7 [#]	5
Panel B: T-test of Means	<i>Total Sample</i>	<i>Ex Prop Funds</i>
T-statistic	4.00	3.63
Probability	0.0%	0.1%
Decision (5% conf. level)	Reject H ₀	Reject H ₀

[#]Mean positive return was 22.5%; mean negative return was -4.0%

Barlow and Sparks (1986) found that average underpricing on the DCM was 55% as compared to 29% found on the main board. Similar results were obtained by Lawson and Ward (1998) whose study reported an average DCM listing premium of 40.1% in comparison to 23.8% found on the main board, which is more in line with the findings above. Bhana found the initial premium on the main board to be 65.6%; only slightly lower than the DCM average of 68.5%, though these results are subject to significant limitations as discussed in Chapter III. Bradfield and Hampton (1988), Page and Reyneke (1997), and M'kombe and Ward (2002) do not differentiate between initial premia on the main board and on the DCM. Correia and Holman (2008) examined IPOs on the AltX between October 2003 and September 2007 and found underpricing to be 29%. Over a corresponding period, underpricing on the main board was 20%. If the two are combined the weighted average underpricing for the combined boards of the JSE was 26%. This is very similar to the long term average on the JSE of 26.8% (M'kombe and Ward, 2002).

The second reason that initial premia are lower in this study is that underpricing levels were particularly high in the 'hot issue' market of the 1980's and all previous studies on the JSE included this period. Thus, it would be expected that this period under examination would have a lower average than that of other studies on the JSE. Changes in underpricing over time are discussed in further detail under Hypothesis 2 below.

There is very little data available to compare average initial premia between countries in the post 2000 period, or to compare post 2000 underpricing to pre 2000 pricing for individual countries. The

summary of international underpricing maintained by Loughran, Ritter and Rydqvist (2009) only includes the average underpricing per country across *all years* studied in that country and does not include any time period breakdown. Annual underpricing data for the post 2000 period is available for the United States, China and India. Consistent with previous research, underpricing in South Africa has remained higher than the in US and substantially lower than India and China. Initial returns in the United States averaged 12% over the period 2001 to 2008. In China, the average initial premium was 123% between 2000 and 2006, and Indian first day returns between 2000 and 2004 were 50% on average.

The JSE average initial premium of 17.1% is well below the average for emerging markets (56.1%) and exceeds only Chile and Turkey (Loughran, Ritter and Rydqvist, 2009). The median first day return of 9.4% is approximately half of the sample mean. This evidence of a highly right-skewed distribution is similar to that observed by Lawson and Ward (1998) who found that for the period from 1986 to 1995 the median return of 15% was approximately half of the sample mean of 27.2%. The skewed distribution is the result of a relatively small number of offerings earning substantial first day returns; in this case, 4 IPOs earning returns above 60%. The distribution of first day returns is shown in Figure 4. More than one third of the sample earned a return between zero and ten%. The median of 9.4% lies within this range but the mean return of 17.1% is substantially higher. The skewness of the distribution is clearly visible in Figure 4.

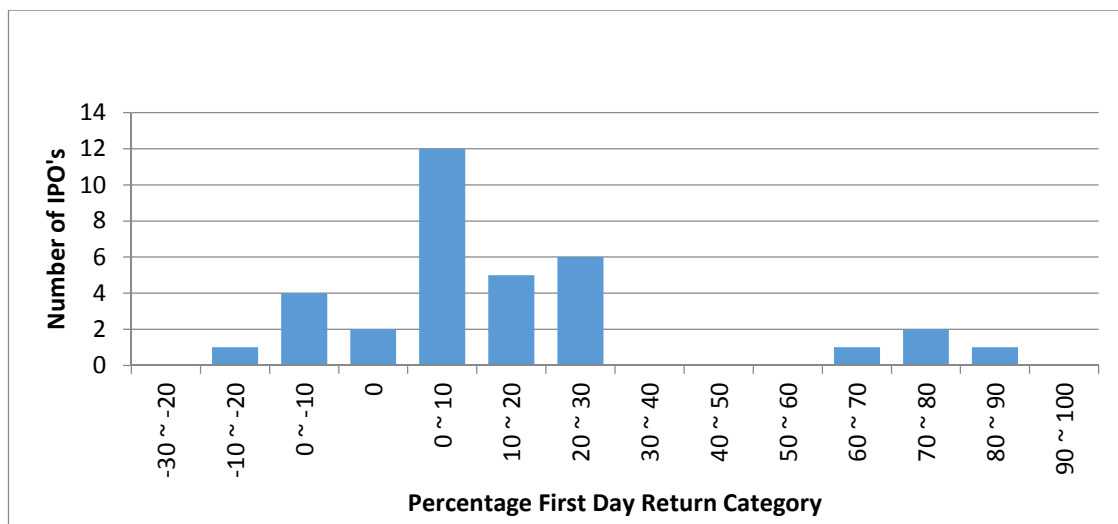


Figure 4 Histogram of First Day Returns

Figure 5 below shows initial returns by company and reveals a considerable variability of returns. This observation is supported by the high standard deviation of 24.9%. There are four IPOs which earn returns in excess of 60%, but the next largest does not exceed 30%. The highest first day return was 89% for Sea Kay Holdings (Ltd) with the lowest being -20% for Exxoteq Ltd. 5 IPOs (15% of the sample) closed the first day of trading below the initial offer price and 2 IPOs closed exactly at the offer price. Krigman, Shaw and Womack (1999) noted that while 12% of the 1,232 US offers they studied had underpricing of 30% or more, 25% closed at or below the offer price. The proportion of South African IPOs with returns greater than 30% is also 12% and IPOs with zero or negative first day returns

total 21% of the sample. For the 16 underpriced offerings for which sufficient data were available, the total amount of money left on the table was R1,346 million. The five most underpriced offers, earning returns in excess of 27%, accounted for 65% (R875 million) of the total. In an evaluation of the \$27 billion that was left on the table in the US between 1990 and 1998, Loughran and Ritter (2002) found that the majority came from a small number of offerings. The median of \$2.3 million was substantially lower than the average amount left on the table of \$9.1 million. In the sample analysed above, the median of R40 million was in similarly less than half of the average of R84 million.

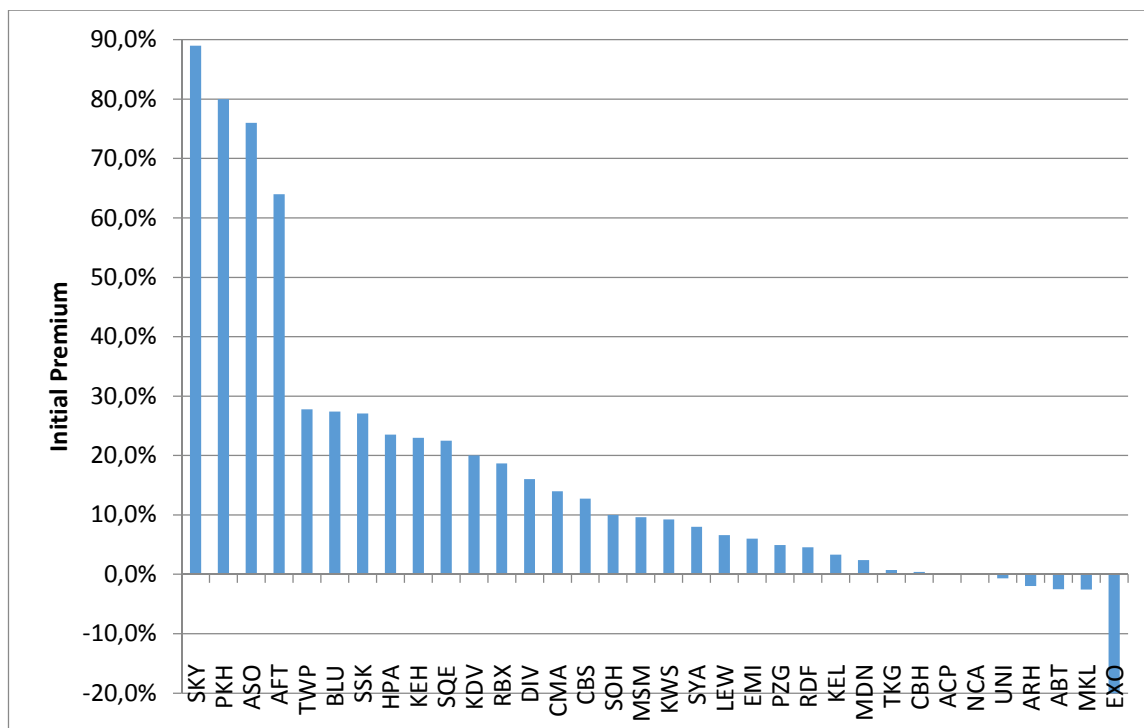


Figure 5 Initial Premium by Company

Changes in Underpricing Over Time

An inspection of the underpricing per year in Table 3 reveals that underpricing has not been consistent over the period under examination. It also shows a clear distinction between a higher and a lower period. The highest annual average before 2006 is 12.7% in 2000, with all others being below 7%. This is in stark contrast to the period 2006 to 2008 where each year is above 23% (although the number of issues are small except for 2007).

The lower underpricing observed in the earlier period adds to the growing body of evidence of the cyclical nature of initial premia. The decrease in underpricing noted in South Africa after the internet boom appears to be roughly in line with the global decline in first day returns. The results of this paper show underpricing to be notably lower than the average over the previous 35 years.

Table 3. Average Underpricing by Year

<i>Year</i>	<i>No IPOs</i>	<i>Average Underpricing</i>
2000	4	12.7%
2001	0	N/A
2002	3	-6.4%
2003	1	6.0%
2004	2	2.1%
2005	5	6.8%
2006	4	23.7%
2007	14	27.6%
2008	1	23.0%
Total Sample Average*	34	17.1%

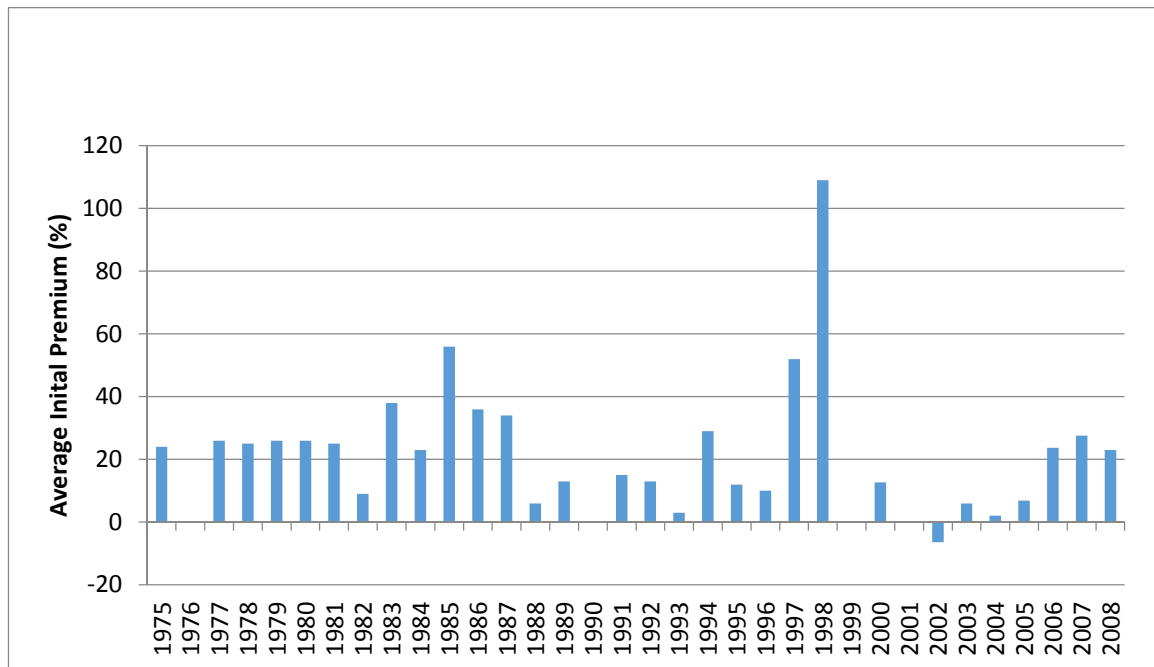


Figure 6 Yearly Average Initial Premia 1975 to 2008

Annual averages have been obtained from Barlow and Sparks (1975 to 1985), Lawson and Ward (1986 to 1995) and M'kombe and Ward (1996 to 1998). There were no listings in the years 1976 and 2001, average underpricing was 0% in 1990 and no data were available for 1999. Due to the constraints of the small sample size, it is not possible to compare underpricing on a year on year basis meaningfully. Instead the sample can be split into a hot and a cold period. Consistent with the methodology of Ritter (1984) and Barlow and Sparks (1986), the

periods can be identified through inspection of annual premia over the period. Consistent with the Ibbotson (1975) definition of 'hot issue' markets (periods of high underpricing), Figure 6 above illustrates a 'hot' period from 2006 to 2008 where initial returns are higher than average for the period under review. Thus, the sample can be split into a cold period of 2000 to 2005 and a comparatively hot period from 2006 to 2008 with the average number of listing per year being 2.5 and 6.3 respectively.

The average first day return in the cold period is 5% in comparison to 26.5% in the hot period. In the hot period, the average return is significantly different from zero at the 1% level (t-statistic of 3.99) but there is only weak evidence to suggest that the mean return in the period from 2000 to 2005 is not zero (t-statistic of 1.95). This is mainly due to the low mean and relatively high standard deviation of 10%.

H2 Hot and cold listing periods do not exist on the JSE

In a student's t-test, the null hypothesis that the mean first day returns are equal in the hot and cold periods can be rejected at the 1% level (t-stat of -3.01). The exclusion of the property funds has no effect on conclusions. As expected the median, maximum, minimum and proportion of positive returns are all greater in the hot period. Results are summarized in Table 4.

Table 4. Summary Results of Tests for Existence of Hot and Cold Periods

Panel A: Descriptive Statistics	Total Sample		Ex Property Funds	
	Hot	Cold	Hot	Cold
Mean	26.5%	5.0%	28.1%	3.9%
Std Dev	29.0%	10.0%	30.1%	12.7%
Median	20.0%	6.0%	20.0%	3.7%
Count	19	15	17	8
Max	89.0%	22.5%	89.0%	22.5%
Min	-2.0%	-20.0%	-2.0%	-20.0%
Positive return	17	10	15	5
Negative or zero return	2	5	2	3
T-statistic	3.99	1.95	3.85	0.86
Probability	0.1%	7.2%	0.1%	41.8%
Panel B: T-Test Of Means	Total Sample		Ex Property Funds	
T-statistic	-3.01		-2.83	
Probability	0.31%		0.47%	
Decision (5% conf. level)	Reject H_0		Reject H_0	

In the only tests of hot and cold periods on the JSE, Barlow and Sparks (1986) and Bradfield and Hampton (1988) also find that initial returns are significantly different in hot and cold periods. This adds to international evidence of hot and cold periods in a range of countries (Ibbotson, 1975; Ibbotson and Jaffe, 1975; Ritter, 1984; Welch, 1989; Ritter, 1998). After the bubble period, equity valuations were comparatively low and the capital firms could raise via equity offerings was

significantly diminished. As a result IPO activity almost ceased with zero IPOs in 2001 and a total of 6 in the three years up to 2004. The average number of listings per year more than doubled in the following three years. A major contributing factor was the strong market in general equities experienced from 2002 to 2007. Figure 7 below shows the JSE All Share Index (ALSI) in relation to the yearly initial premia from 2000 to 2008.

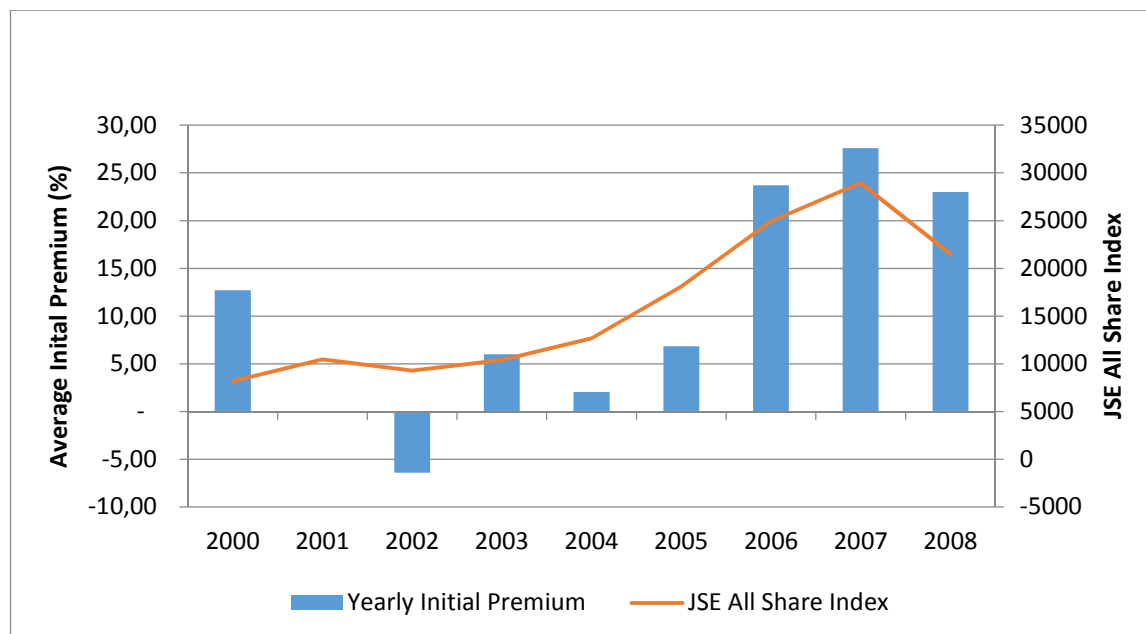


Figure 7 Yearly Average Initial Premia and JSE All Share Index 2000 to 2008

CONCLUSIONS

This paper has documented the underpricing of a sample of 34 South African IPOs that listed on the main board of the JSE between 2000 and 2008. The existence of underpricing is consistent with previous studies both internationally and on the JSE. The average initial return of 17.1% is similar to the average underpricing in developed markets of 18.1%. However, these are averages over a long period of time and it has been shown that underpricing after the internet boom has been low. Initial returns in South Africa are considerably lower than the average in emerging markets (56.1%). The average initial premium found is somewhat lower than the average of prior studies on the JSE of 29.4%. This indicates that underpricing changes over time. This is due to three main factors. Firstly, this study only includes listings on the main board of the JSE whereas all previous studies included the DCM; which reported a higher degree of underpricing. Secondly, previous studies on the JSE all included the 'hot issue' market of the late 1980's. The data period of this study follows a 'hot issue' market directly and it

has been found that historically, periods following 'hot issue' markets tend to exhibit low underpricing. The decline in underpricing is in line with decreases in other countries. This paper also tested for the persistence of hot and cold issue periods on the JSE and it was found that returns in the hot period from 2006 to 2008 (26.5%) were significantly greater than in the cold period from 2000 to 2005 (5.0%). As noted above, the cold period follows the 'hot issue' market of the internet boom directly and the low level of underpricing is in line with that noted in the years immediately following the 'hot issue' market in the 1980's. These results add to the previous evidence of the existence of hot and cold periods and the higher levels of underpricing observed in hot periods. The small number of initial public offerings during the period under review is significant in relation to South Africa's role as an emerging market economy.

REFERENCES

Aggarwal, R., Leal, R. and Hernandez, L., 1993. The Aftermarket Performance of Initial Public Offerings in Latin

- America, *Financial Management* 22, 42-53.
- Barlow H. and Sparks R., 1986. A study of the pricing of new equity issues listed on the Johannesburg Stock Exchange. Unpublished research paper, University of Cape Town.
- Bhana, N., 1989. New listings share price behaviour on the Johannesburg Stock Exchange. *South African Journal of Business Management* 20, 195-203.
- Bradfield D. and Hampton B., 1988. The post listing performance of new listings: A study of the JSE. *South African Journal of Business Management* 20, 82-87.
- Carter, R., Dark, F. and Singh, A., 1998. Underwriter Reputation, Initial Returns, and the Long-Run Performance of IPO Stocks, *Journal of Finance* 53, 285-311.
- Chen, Z., Choi, J. and Jiang, C., 2007. Private Benefits in IPOs: Evidence from State-Owned Firms, Unpublished working paper, Temple University.
- Correia, C. and Holman, G., 2008. An analysis of underpricing and aftermarket performance of initial public offerings on the Alternative Exchange (AltX), *SA Journal of Accounting Research* 22, 97-117.
- Curly, A. and Stoll, H., 1970. Small Business and the New Issue Market for Equities, *Journal of Financial and Quantitative Analysis* 5, 309-322.
- Ibbotson, R. and Jaffe, J., 1975. "Hot issue" markets, *Journal of Finance* 30, 1027-42.
- Ibbotson, R., 1975. Price Performance of Common Stock New Issues, *Journal of Financial Economics* 2, 235-272.
- Ikoku, A., *Sine Anno*. Influence Seeking and Pricing of Initial Public Offerings and Privatizations: Evidence from the Nigerian Equity Market, Unpublished working Paper, University of Southern California.
- Keloharju, M., 1993. The Winner's Curse, Legal Liability, and the Long-Run Price Performance of Initial Public Offerings in Finland, *Journal of Financial Economics* 34, 251-277.
- Krigman, L., Shaw, W., and Womack K., 1999. The persistence of IPO mispricing and the predictive power of flipping, *Journal of Finance* 54, 1015-1044.
- Lawson R. and Ward M., 1998. Price performance of newly listed shares on the Johannesburg Stock Exchange. *Investment Analysts Journal* 47, 17-31.
- Levis M., 1993. The Long-Run performance of IPO's - The UK experience 1980-88. *Financial Management* 22, 28-41.
- Ljungqvist, A., 2005. IPO Underpricing, Unpublished working paper, Tuck School of Business at Dartmouth.
- Logue, D., 1973. On the Pricing of Unseasoned Equity Issues, *Journal of Financial and Quantitative Analysis* 8, 91-103.
- Loughran, T. and Ritter, J., 1995. The new issues puzzle. *Journal of Finance* 50, 23-52.
- Loughran, T. and Ritter, J., 2002. Why Don't Issuers Get Upset About Leaving Money on the Table in IPO's, *The Review of Financial Studies Special* 15, 413-443.
- Loughran, T., Ritter, J. and Rydqvist, K., 1994. Initial Public Offerings: International Insights, *Pacific-basin Finance Journal* 2, 165-199.
- Loughran, T., Ritter, J. and Rydqvist, K., 2007. Initial Public Offerings: International Insights, Unpublished updated tables from 1994 version, *Jay Ritter IPO Website*, available at <http://bear.warrington.ufl.edu/ritter/pbritter.htm>, [1 June 2008].
- Loughran, T., Ritter, J. and Rydqvist, K., 2009. Initial Public Offerings: International Insights, Unpublished updated tables from 1994 version, *Jay Ritter IPO Website*, available at <http://bear.warrington.ufl.edu/ritter/pbritter.htm>, [12 May 2010].

- Loughran, T., Ritter, J. and Rydqvist, K., 2011. Initial Public Offerings: International Insights, Unpublished updated tables from 1994 version, *Jay Ritter IPO Website*, available at <http://bear.warrington.ufl.edu/ritter/pbritter.htm>, [16 June 2011].
- M'kombe, C. and Ward, M., 2002. Aftermarket price performance of initial public offerings on the JSE, *Investment Analysts Journal* 55, 7-20.
- Marisetty, V. and Subrahmanyam, M., 2006. Group Affiliation and the Performance of Initial Public Offerings in the Indian Stock Market, Unpublished working paper, Indian School of Business.
- Page, M., and Reyneke, I., 1997. The Timing and Subsequent Performance of Initial Public Offerings (IPO's) on the Johannesburg Stock Exchange, *Journal of Business Finance and Accounting* 24, 1401-1419.
- Ritter, J., 1984. The Hot Issue Market of 1980, *Journal of Business* 57, 215-240.
- Ritter, J., 1991. The Long-Run Performance of Initial Public Offerings, *Journal of Finance*, 46, 3-27.
- Ritter, J., 1998. Initial Public Offerings, *Contemporary Finance Digest* 2, 5-30.
- Ritter, J., and Welch, I., 2002. A Review of IPO Activity, Pricing, and Allocation, *Journal of Finance* 62, 1795-1828.
- Vaughn, G., Grinyer, P. and Birley, S., 1977. From private to public: An analysis of the choices, problems, and performance of newly floated public companies, 1966-74, Cambridge: *Woodhead-Faulkner*.
- Welch, I., 1989. Seasoned Offerings, Imitation Costs, and the Underpricing of Initial Public Offerings, *Journal of Finance* 44, 421-449.

ANÁLISE DOS DETERMINANTES DA MATURIDADE DA GESTÃO DOS SISTEMAS DE INFORMAÇÃO/TECNOLOGIAS DE INFORMAÇÃO EM UNIDADES HOSPITALARES PÚBLICAS

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RESUMO

A partir da análise de alguns modelos existentes, relevantes para o estudo em causa, pretende-se propor um novo modelo de maturidade, que permita aferir da maturidade da gestão dos sistemas de informação nos hospitais públicos portugueses, permitindo comparar as organizações entre si. Esta investigação pretende assim responder à seguinte pergunta: Quais são os fatores que determinam a maturidade da gestão dos sistemas de informação num ambiente hospitalar público? Para isso, identificaram-se os fatores que influenciam a maturidade da gestão dos sistemas de informação num ambiente hospitalar público; estudaram-se os modelos de maturidade existentes, tendo em consideração os seus factores determinantes; comparou-se os fatores determinantes desses modelos; e analisou-se a pertinência desses fatores no contexto da gestão dos sistemas de informação no sector hospitalar.

Palavras-Chave

Gestão de Sistemas de Informação, Informática Hospitalar, Modelos de Maturidade, Hospitais Públicos Portugueses.

ANALYSIS OF MATURITY DETERMINANTS OF MANAGEMENT INFORMATION SYSTEMS / INFORMATION TECHNOLOGY IN PUBLIC HOSPITAL

ABSTRACT

From the analysis of some existing models relevant to this study, we intend to propose a new maturity model, enabling assesses the maturity of the management of information systems in Portuguese public hospitals, allowing organizations to compare with each other. This research therefore aims to answer the following question: What are the factors that determine the maturity of the management of information systems in public hospitals? For this, we identified the factors that influence the maturity of the management of information systems in public hospitals; studied whether the existing maturity models, taking into account their determinants; compared the determinants of these models, and analyzed the relevance of these factors in the management of information systems in the hospital sector.

Key Words: *management information systems, hospital informatics, maturity models, portuguese public hospitals.*

INTRODUÇÃO

A presente investigação tem por objectivo analisar vários modelos de maturidade da gestão de sistemas de informação, por forma a identificar os fatores determinantes da mesma nos hospitais públicos portugueses. Pretende-se também, propor um novo modelo de maturidade, que permita aferir da

maturidade da gestão dos sistemas de informação neste tipo particular de organizações, permitindo comparar as organizações entre si.

Um modelo de maturidade identifica as melhores práticas, visando o diagnóstico e avaliação da maturidade de uma organização ou sector a qual aponta para a qualidade do seu desempenho. Conforme sublinha Siqueira (2004), o termo

maturidade está relacionado com a qualidade com que algo é definido, gerido, medido e controlado.

Segundo o dicionário online da língua portuguesa, maturidade é o estado em que se encontra algo, pessoa ou coisa, que está completamente desenvolvido.

No caso dos sistemas de informação, um modelo de maturidade torna-se relevante a medida que possibilita a organização avaliar se seu sistema de informação tem cumprido o objetivo de garantir a informação necessária para o bom funcionamento da organização (Rocha, 2002b). Este processo de avaliação torna-se ainda mais relevante se se considerar:

- 1) A importância do recurso informação no contexto contemporâneo, sobretudo para a geração de inovação;
- 2) A crescente utilização das tecnologias de informação e comunicação aplicadas no domínio da saúde (Kuhn, et al., 2007; Cardoso, et al., 2007);
- 3) A aposta dos serviços de saúde em qualidade e diferenciação que gere redução de custos e satisfação do cliente (Ribeiro, 2009);
- 4) Uma crescente necessidade do sistema de saúde se orientar para o cidadão, com um sistema de memorização que evite a repetição de exames e de redundância da informação e a necessidade de melhorar a rentabilidade dos sistemas (Lapão, 2007; Cardoso, et al., 2007).

Esta avaliação possibilitaria à organização caminhar de um sistema imaturo, caracterizado por improvisos dos processos, falta de rigor na sua aplicação, procedimentos reactivos e gestão das crises imediatas (Faria, 2011), para um sistema maduro, gestão é feita de forma sistemática e documentada, conforme critérios pré-estabelecidos de qualidade, prazos e custos (Siqueira, 2004).

Tendo em vista o contexto anterior, esta investigação pretende responder à seguinte pergunta: Quais são os fatores

que determinam a maturidade da gestão dos sistemas de informação num ambiente hospitalar público?

Assim sendo, pretende-se

- Identificar os fatores que influenciam a maturidade da gestão dos sistemas de informação num ambiente hospitalar público;
- Apreçar os modelos de maturidade existentes, tendo em consideração os seus factores determinantes;
- Comparar os fatores determinantes desses modelos;
- Apreçar a pertinência desses fatores no contexto da gestão dos sistemas de informação no sector hospitalar.

MATURIDADE E FATORES DETERMINANTES

Modelos de Maturidade em Sistemas de Informação

Nolan foi o primeiro investigador a desenvolver um modelo de maturidade para a gestão de sistemas de informação. No início da década de 70, entendeu que os computadores eram bem utilizados nas atividades empresariais mais voltadas para as áreas operacionais, mas não traziam benefícios para as atividades relativas ao contexto estratégico, sobretudo à tomada de decisão ao nível dos gestores.

A partir desta constatação, Nolan (Nolan, 1973) desenvolve um modelo de maturidade tendo como base a Teoria dos Estágios. Esta teoria possui duas características-chave: os elementos e a conceção do seu crescimento ao longo do tempo. Por elementos entende-se um determinado aspeto de um campo de conhecimento que pode ser caracterizado por um conjunto de atributos. Já a conceção de crescimento visa mensurar o progresso deste elemento em termos numéricos ou quanto à sua natureza.

Com base nesta teoria, Nolan descreveu o seu modelo de maturidade, identificando os seguintes estágios:

- Estágio I (iniciação): introdução dos computadores na organização por razões de maior eficiência dos processos administrativos e de necessidade de capacidade de cálculo;
- Estágio II (contágio): utilização generalizada da capacidade do computador na organização sem grandes preocupações de controlo. O orçamento para meios computacionais aumenta demasiado e atinge-se um ponto crítico;
- Estágio III (controlo): é o resultado da crise. A gestão pretende travar despesas excessivas em meios computacionais. Iniciam-se tarefas de planeamento e a tendência é voltar a centralizar toda a atividade computacional;
- Estágio IV (integração): a característica mais dominante neste estágio é o repensar do papel dos recursos computacionais na organização. As tarefas de planeamento tornam-se mais compreensíveis e estão efetivamente ligadas ao processo do orçamento e às atividades de planeamento da organização.

Nos diversos estudos que foi realizando ao longo da década de 70, Nolan (Nolan, 1979) reviu o seu modelo inicial de quatro estágios e propôs um modelo com seis estágios de crescimento que se continuou a basear no orçamento disponível para o centro de processamento de dados.

Modelo da gestão de SI de Hirschheim et al.

O modelo de Hirschheim, Earl, Feeny e Lockett é baseado no trabalho de (Nolan, 1979) e na pesquisa desenvolvida pelos autores, durante o primeiro semestre de 1986, sobre a evolução e gestão da função SI num conjunto de organizações Britânicas (Galliers & Sutherland, 1991, 2003). Concluíram que, quando os gestores se questionam sobre a importância estratégica das Tecnologias

de Informação e adquirem a compreensão da importância dos Sistemas de Informação nas organizações, o desenvolvimento da gestão das TI se processa em três estágios evolutivos (Earl, 1989; Galliers & Sutherland, 1991, 2003):

Fase 1 – Concretização: há um sentimento de inquietação dos Gestores em relação à capacidade da função SI satisfazer as solicitações. Existe descontentamento com a qualidade dos Sistemas de Informação, bem como uma crescente preocupação com as despesas devidas às TI e à consistência das suas políticas. A ênfase reside no restabelecimento da credibilidade na função SI e na criação de confiança, tanto nos utilizadores como na gestão de topo. Neste estágio, a formação nas TI é escassa mas, quando é realizada, está orientada para a melhoria das aptidões técnicas e das capacidades de gestão de projetos.

Fase 2 – Reorientação: nesta fase, os SI acumulam o fornecimento de serviços básicos com a exploração das TI para obter de vantagens competitivas. Há tentativas de alinhamento dos investimentos nas TI com a estratégia do negócio, com orientação para os mercados, o ambiente externo da organização, a utilização das TI na obtenção de vantagens competitivas e para a extensão da Cadeia de Valor através de sistemas inter-organizacionais.

Fase 3 – Reorganização: a principal preocupação do executivo dos SI consiste na gestão do relacionamento entre a função SI e o resto da organização. Algumas áreas serão estrategicamente dependentes dos SI, outras necessitarão dos SI sobretudo como apoio e algumas terão capacidades significativas em TI.

Modelo dos estágios de crescimento de Galliers e Sutherland

Galliers e Sutherland (1991, 2003) postulam que a sua combinação com os elementos técnicos, de gestão e organizacionais de um conjunto de modelos apresentados e uma estrutura

descritiva dos elementos considerados mais relevantes numa organização, resultaria num modelo mais inclusivo e com uma maior utilidade, o qual poderia também fornecer uma perspectiva para a gestão dos SI e indicadores para a formulação do seu planeamento estratégico. O modelo indicaria como uma organização pode aplicar a utilização da tecnologia e a organização da sua função SI, descrevendo os tipos de atividades e estruturas organizacionais necessárias para a progressão nos estágios de crescimento. Mas, para o seu desenvolvimento, tinha de ser selecionado um conjunto de elementos fundamentais na operação e gestão de uma organização.

A escolha recaiu nos componentes da denominada McKinsey 7S Framework, um modelo utilizado pela McKinsey & Company na sua consultoria de gestão, constituído por sete fatores, considerados essenciais no contexto de desenvolvimento das organizações, cujas denominações começam pela letra 'S' (Pascale, et al., 1981): Strategy, Structure, Systems, Staff, Style, Skills, Superordinate Goals.

Neste modelo de Estágios de Crescimento, a evolução da maturidade da gestão de SI numa organização é representada em seis estágios estabelecidos a partir dos fatores instituídos pela McKinsey 7S Framework (Galliers & Sutherland, 1991, 2003):

- Estágio 1 – 'Ad Hocracia': todas as organizações começam neste estágio. Envolve a aquisição de hardware, software e a instalação de simples aplicações operacionais, mas não há uma estrutura organizacional associada com as Tecnologias de Informação. Os sistemas são desenvolvidos numa abordagem ad hoc, e as TI operam com uma quase total despreocupação com o modo como influenciam a organização, os seus processos e recursos humanos.
- Estágio 2 – Iniciando as Fundações: é marcado pela ascensão do prestígio das

TI na organização. As necessidades dos utilizadores são determinadas bottom-up e as aplicações multiplicam-se mas, com a inexistência de planeamento adequado, é acumulada uma longa lista de espera, que conduz a uma crescente solicitação para o aumento das despesas com as aquisições externas. Pode haver falta de entendimento e deficiente comunicação entre a equipa das TI e o ambiente do Negócio.

- Estágio 3 – Ditadura Centralizada: são tomadas medidas para corrigir os desequilíbrios, causados pela natureza ad hoc dos desenvolvimentos. A principal preocupação dos Gestores de topo é o retorno do investimento efectuado. É criado um departamento centralizado na organização, com toda a autoridade das TI investida sua chefia, que pode ainda reportar à Direcção Financeira.
- Estágio 4 – Dialéctica Democrática e Cooperação: o departamento das TI é forçado a uma participação activa no quotidiano do Negócio e são feitas tentativas de reconciliação com os utilizadores finais. Existem pequenos departamentos de Processamento de Dados dispersos na organização, coordenados por um departamento de Serviços de Informação. O Gestor de Sistemas sobe na estrutura organizacional e, frequentemente, com uma mudança do título, que poderá passar a ser de Gestor de Recursos de Informação – o Chief Information Officer. A equipa das TI tem agora Analistas de Sistemas, Designers, Programadores e Analistas de Negócio. É estabelecida uma dialéctica para assuntos relacionados com as TI, destinada a assegurar o desenvolvimento e manutenção de compreensão e cooperação adequada na equipa. Os sistemas são implementados de um modo integrado e coordenado, com a equipa das TI a funcionar com a preocupação de assegurar a satisfação

das reais necessidades do Negócio. Estes resultados só são possíveis através de um intensivo trabalho de planeamento top-down, iniciado no terceiro estágio, sem o qual os benefícios obtidos pela iniciação desta dialéctica poderiam ser efémeros.

- Estágio 5 – Oportunidade de Empreendimento: a função TI passa a ser uma parte integrante das operações e proporciona o seu próprio benefício estratégico. Os sistemas operacionais estão agora implementados e a funcionar regularmente, proporcionando as condições para a implementação dos sistemas estratégicos. A função TI reivindica a sua importância estratégica nos objectivos do Negócio, com os sistemas orientados para o mercado, as TI utilizadas para acrescentar valor aos produtos e com os dados externos a serem combinados com os internos para produzirem informação estratégica. Equipas com aptidões transversais, numa combinação de Planeamento de Negócio e de Sistemas de Informação, são responsáveis pela identificação e implementação de sistemas de planeamento e de informação estratégicos, para as Unidades de Negócio individuais e para a organização como um todo.
- Estágio 6 – Relacionamento Integrado e Harmonioso: no estágio final, são perceptíveis as relações de funcionamento harmoniosas entre as TI e a restante organização. A Gestão pretende a vantagem estratégica comparativa e implica uma constante reavaliação da utilização das TI na organização e no mercado. As decisões estratégicas incluem, desde o seu começo, a contribuição das Tecnologias de Informação que estão agora profundamente embebidas em todos os aspectos da organização e, a partir dos sistemas estratégicos externos construídos no estágio

anterior, são implementados os sistemas inter-organizacionais e desenvolvidos produtos e serviços. Os objectivos internos estão orientados para as iniciativas de colaboração dos grupos reunidos para desenvolverem os Sistemas de Informação estratégicos. No plano externo, incluem os fornecedores e os clientes em alianças estratégicas, com a utilização de Sistemas de Informação partilhados.

Modelo dos estádios de aptidões no uso de SI de Auer

O objectivo do estudo de Timo Auer (1995) é uma avaliação das aptidões dos utilizadores finais na utilização dos SI nas organizações. Auer considera que a investigação na assimilação de Sistemas de Informação tem sido principalmente concentrada na sua implementação e nas fases que antecedem a implementação, tendo relegando para um lugar secundário o comportamento e as capacidades dos seus utilizadores, num contexto organizacional.

Descreve os modelos de crescimento dos SI como generalizações simplificadas, mas reconhece o seu valor para efeitos de pesquisa, utilizando mesmo os conceitos do modelo de crescimento de End-User Computing (Huff, et al., 1988) como um ponto de partida para as definições da utilização dos SI nas organizações. Neste contexto, as capacidades dos actores organizacionais na utilização dos SI é relacionada com a maturidade da organização, em termos das aptidões e conhecimentos associados à sua utilização no contexto de trabalho. Assim, para determinar a maturidade organizacional, é necessário avaliar as capacidades destes actores na utilização dos Sistemas de Informação.

Esta avaliação implica as aptidões para utilização dos SI, mas não as capacidades necessárias para concretizar trabalho através desses sistemas. Não obstante, o autor reclama que a classificação é

utilizável quando os resultados são interpretados no contexto do ambiente de trabalho das organizações. (Auer, 1995). Um método, designado User Organization Abilities Analysis, foi utilizado para validar um modelo de cinco estágios de desenvolvimento dos utilizadores na maturidade de utilização dos SI (Auer, 1995):

- Pré-Principiante – Quase incapacidade de utilização dos SI;
- Principiante – Utilização dos SI de forma inábil e com tendência a cometer erros;
- Experiente – Aptidão para utilização dos SI em tarefas habituais mas ainda com dificuldades em outros procedimentos;
- Avançado – Aptidão para utilização efectiva dos SI, mas ainda persistem dificuldades em tarefas mais complexas;
- Perito – Total capacidade de utilização dos SI com competência.

Modelo de Mutsaers, Zee e Giertz

Mutsaers, Zee e Giertz (1998) retomam e continuam o trabalho de Nolan e Koot (1992) e de Nolan e Croson (1995), utilizando as curvas sigmóides do modelo como representação de três Eras de crescimento na maturidade da gestão dos SI, relacionadas com as tecnologias associadas: Processamento de Dados, Tecnologias de Informação e Redes Organizacionais. Esta abordagem adopta o conceito de que as transformações no Negócio ocorrem por um processo designado Creative Destruction (Nolan & Croson, 1995), em que cada uma das Eras é constituída por um período de evolução, que tende a estabilizar e depois termina, numa sobreposição ao início da Era subsequente, formando uma descontinuidade tecnológica.

O conceito de que as transformações no Negócio podem ocorrer por meio de uma destruição criativa (Nolan & Croson, 1995) é francamente disruptivo em relação

às teorias mais tradicionais e, na perspectiva de Gottschalk e Solli-Sæther (2001), as descontinuidades do modelo podem ser consideradas transições mais revolucionárias de que evolucionárias. Cada uma das Eras, que são subdivididas em três estágios, tem características intrínsecas e distintas para as TI e para o Negócio. Os estágios da primeira e segunda Eras – Processamento de Dados e Tecnologias de Informação – mantêm fundamentalmente as características que anteriormente lhe tinham sido atribuídas, sendo nos estágios da terceira curva que os autores expandem as suas concepções. (Mutsaers, et al., 1998).

Fatores determinantes em unidades hospitalares

Em 1977, nos 10 hospitais sobre os quais incidiu o seu estudo, Nolan e outros investigadores (Nolan, et al., 1977) observaram o seguinte:

- 1) Os benefícios do uso mais alargado das TI são significativos e exigem a atenção de todos os administradores hospitalares conscientes;
- 2) Alcançar esses benefícios requer ações desconhecidas para os administradores, não acostumados à gestão de processamento de dados. Torna-se necessário um planeamento cuidadoso. Antes que os hospitais possam desenvolver esse plano os administradores, os utilizadores e o pessoal de processamento de dados deve conhecer a utilização das tecnologias on-line / bases de dados para melhorar os serviços hospitalares;
- 3) Os administradores deverão aprender bastante acerca das TI para entender como esta poderá melhorar as operações e avaliar os requisitos técnicos. Além disso deverão saber como avaliar e controlar o desenvolvimento e operação dos sistemas nos seus hospitais;
- 4) Os utilizadores terão compreender como interagir com o pessoal de

processamento de dados de modo a desenvolver sistemas que vá ao encontro das suas necessidades;

- 5) O pessoal de processamento de dados terá de entender melhor as necessidades dos utilizadores e avaliar estratégias para alcançar essas necessidades.

Um plano de ação para explorar os benefícios do processamento de dados deverá incluir o seguinte:

- 1) Levar a sério a concepção dos dados. Os administradores hospitalares têm de apoiar a gestão do serviço de informática e reconhecer as oportunidades para a gestão dos recursos de dados. É o conselho de administração, e não o CIO, que entende realmente onde residem as oportunidades lucrativas;
- 2) Expandir a utilização de sistemas on-line e de bases de dados para apoiar as áreas operacionais tais como laboratórios, admissões e registos médicos;
- 3) Desenvolver um programa de formação para os administradores, grupos importantes de utilizadores e pessoal de processamento de dados sobre os benefícios potenciais das aplicações informáticas nos hospitais;
- 4) Iniciar um planeamento formal dos processos de processamento de dados para definir uma estratégia de curto, médio e longo prazo;
- 5) Aumentar o nível de investimentos com o desenvolvimento de novos sistemas tal como se vem verificando noutras indústrias;
- 6) Conceber um programa estruturado para atualizar cada um dos fatores-chave que garantem a qualidade do desenvolvimento de sistemas de informação.

MODELO CONCEPTUAL DA INVESTIGAÇÃO

Requisitos de modelação

A análise dos modelos atrás referidos e de outros que serão apresentados na tese aconselha que a avaliação da necessidade de desenvolvimento de um novo modelo de maturidade deve ser precedida por uma comparação com os modelos existentes. Para um resumo das ideias-chave, associadas a cada um dos modelos, será apresentado um quadro sinóptico comparativo dos modelos de maturidade a descrever, onde se poderá ver os diferentes números de estágios, a sua orientação e âmbito, embora haja semelhanças no que refere aos acontecimentos que caracterizam.

A adopção de um conceito de estágio implica respeitar alguns requisitos como ter características empiricamente verificáveis e distintivas para justificarem a sua individualização, ser indicada a relação com o estágio precedente e com o seguinte e haver uma enunciação clara do universo para o qual a generalidade das características é apresentada.

Procedimentos para a concepção do modelo

Os procedimentos para a elaboração de uma proposta de um modelo de maturidade basear-se-ão na metodologia proposta por Becker, Knackstedt e Pöppelbuß (2009), que está a ser utilizada pelo European Research Center for Information Systems (Becker, et al., 2009). O processo de desenvolvimento iterativo de modelos de maturidade distingue oito fases:

- Apresentação do problema: é necessário indicar o domínio de aplicação visado pelo modelo de maturidade, a relevância da solução proposta para a investigação e os profissionais e as condições para sua aplicação e os benefícios esperados;

- Comparação dos modelos existentes: uma revisão da literatura científica é essencial em qualquer projecto académico (Webster, et al., 2002). A proposta de um novo modelo de maturidade, ou o aperfeiçoamento de um já existente, deve ser apoiada pela comparação com os modelos disponíveis;
- Formulação da estratégia de desenvolvimento: as estratégias mais relevantes consistem na elaboração de um modelo completamente novo, no aperfeiçoamento de um modelo existente, na combinação de vários modelos, ou na transferência da estrutura ou dos conteúdos de um modelo existente para um novo domínio de aplicação;
- Desenvolvimento iterativo do modelo: é um procedimento indispensável, pois a descrição do processo requer que, utilizando os meios disponíveis, as soluções para o problema devam ser iterativamente propostas, refinadas, avaliadas e, se necessário, aperfeiçoadas. O resultado deve então ser testado quanto à abrangência, consistência e adequação ao problema;
- Avaliação da adaptação do modelo: necessitam de ser tidas em consideração as diferentes formas de transferência dos resultados, para as comunidades académica e de utilizadores, a fim de possibilitar um feedback da avaliação da solução do problema solucionado pelo modelo de maturidade;
- Avaliação e validação: finalmente, deve ser analisado se o modelo de maturidade proposto proporciona os benefícios previstos e uma solução para o problema definido.

Indicadores em análise

Nesta investigação serão analisadas indicadores de dois tipos: os que pretendem dar a conhecer aspectos necessários à caracterização das organizações em análise e os indicadores

que serão usados para verificar a evolução da gestão da maturidade dos SI.

Tipo 1: Caracterização da unidade hospitalar - Pretende-se com este conjunto de variáveis caracterizar a instituição estudada verificando a sua dimensão, idade, formação académica dos seus recursos humanos e investimentos realizados na área das SI/TI;

Tipo 2: Indicadores determinantes da maturidade – este conjunto é constituído pelos indicadores dos estudos de Nolan atrás referidos:

- 1) Apoio Tecnológico (AT) – Neste indicador serão consideradas as contribuições dos tipos de processamento, do suporte físico prestado pelo equipamento e infraestruturas e o apoio lógico fornecido pelos diversos software que integram o nível de informatização dos sistemas de informação;
- 2) Gama de Aplicações (GA) – Aqui se inclui os Sistemas de Processamento de Transações, os Sistemas de Apoio à Decisão e os Sistemas de Automação Administrativa;
- 3) Organização da função SI (OFSI) - Para avaliar a organização da função SI serão avaliadas questões como estruturas organizacionais, equipas de acompanhamento, existência de uma função formal de Administração de Dados e de Gestão do Recurso Informação;
- 4) Planeamento e controlo da função SI (PCSI) - Para verificar o estágio de maturidade no que diz respeito ao planeamento e controlo da função SI, serão usadas as seguintes variáveis: a) Anos de experiência nas áreas das TI/SI; b) Posição do Departamento de Informática (DI); c) Posição hierárquica do responsável pelo DI; d) Comité de Direcção (steering committee); e) Nível de utilização dos orçamentos, Auditorias à Função SI, e f) Planeamento Estratégico do Sistema de Informação (PESI);

5) Envolvimento dos utilizadores - Este indicador será medido com recurso ao envolvimento dos utilizadores em actividades da função SI (nomeadamente, no desenvolvimento e manutenção de aplicações), na estratégia organizacional adotada para suporte ao crescimento do End User Computing (EUC) e na responsabilização dos utilizadores pelos recursos alocados a função SI.

METODOLOGIA DE INVESTIGAÇÃO

Fatores determinantes e modelos de maturidade

O principal objectivo desta investigação é identificar os fatores determinantes da maturidade da gestão de sistemas de informação nos hospitais públicos portugueses.

Pretende-se também, a partir da análise de alguns modelos existentes, relevantes para o estudo em causa, propor um novo modelo de maturidade, que poderá ser designado como HISMMM (ou HISM3), que permita aferir da maturidade da gestão dos sistemas de informação neste tipo particular de organizações, podendo, conforme se espera, vir a ser aplicado noutros contextos hospitalares, permitindo comparar as organizações entre si.

Para a elaboração do modelo de maturidade serão adotados os procedimentos propostos por outros investigadores (Becker, et al., 2009).

Tendo por base a classificação de Vergara (Vergara, 2005), quanto aos fins esta pesquisa será descritiva e quantitativa, uma vez que expõe características de uma determinada população, podendo-se vir a estabelecer correlações entre variáveis.

Já quanto aos meios de investigação, e ainda de acordo com a classificação da mesma autora, estes serão de campo, documental e bibliográfico.

A investigação será dividida nas fases de síntese da literatura de referência, fase

qualitativa e fase quantitativa. A revisão teórica possibilitará o enquadramento do tema de estudo no estado da arte. No que se refere concretamente aos modelos de maturidade da gestão dos sistemas de informação em unidades hospitalares, foram realizadas várias pesquisas nas diversas bases de dados bibliográficas não tendo sido encontrada bibliografia coincidente com o estudo, o que pode ser revelador da inovação da investigação e do interesse do tema.

Recolha e análise de dados

Numa fase exploratória serão realizadas entrevistas semi-estruturadas a grupos profissionais que desempenham as suas funções em organizações hospitalares. Na fase quantitativa pretende-se realizar um survey eletrónico.

Para a recolha dos dados utilizar-se-á um questionário, estruturado em várias secções, abrangendo os vários aspectos da Gestão dos Sistemas de Informação dos hospitais (Lapão, 2007). A pesquisa incidirá sobre os diretores de estruturas informáticas, profissionais de informática ou de TI e funcionários administrativos relacionados com a área de informática hospitalar. A análise dos dados será feita através de análise estatística descritiva com recurso ao programa SPSS.

O quadro seguinte apresenta a sequência das atividades bem como os prazos e as ações a serem desencadeadas caso algo se verifique fora do planeado.

CONCLUSÕES

Com base nos dados recolhidos, no seu tratamento e na avaliação dos resultados finais será realizada a validação da aplicação do modelo proposto na identificação dos estágios de maturidade dos Sistemas de Informação em unidades hospitalares públicas.

REFERÊNCIAS

- Auer, Timo. (1995). Beyond IS Implementation: A Skill-Based Approach to IS Use. Athens : 3rd European Conference on Information Systems.
- Becker, Jörg, Knackstedt, Ralf e PöppelbuB, Jens. (2009). Developing Maturity Models for IT Management - A Procedure Model and Its Application. Business & Information Systems Engineering.
- Cardoso, Gustavo, et al. (2007). Instituições de Saúde e Tecnologias de Informação: Mudança Organizacional e Autonomia. CIES-ISCTE. Lisboa: s.n.
- Earl, M. J. (1989). Management Strategies for Information Technology. s.l. : Prentice Hall.
- Faria, Eduardo Jorge Beça. (2011). Contributos para um modelo de maturidade em sistemas de gestão de conteúdos audiovisuais. Lisboa: Universidade Lusófona de Humanidades e Tecnologias, Tese de Mestrado.
- Galliers, Robert D. e Sutherland, Anthony R. (1991). Information Systems Management and Strategies Formulation: The Stages of Growth Model Revisited. Information Systems Journal.
- Galliers, Robert D. e Sutherland, Anthony R. (2003). Information Systems Management and Strategy Formulation: Applying and Extending The Stages of Growth Concept. Strategic Information Management: Challenges and Strategies in Managing Information Systems.
- Huff, Sidney L., Munro, Malcolm C. e Martin, Barbara H. (1988). Growth Stages of End-User Computing. Communications of the ACM.
- Kuhn, K. A., et al. (2007). Expanding the Scope of Health Information Systems. Methods Inf Med.
- Lapão, L. V. (2007). Survey on the Status of the Hospital Information Systems in Portugal. Disponível em : <http://www.schattauer.de/en/magazine/subject-areas/journals-a-z/methods/contents/archive/manuscript/8540.html>. Acedido em 20 de Dezembro de 2011. [Online]. [Citação: 20 de Dezembro de 2011.] <http://www.schattauer.de/en/magazine/subject-areas/journals-a-z/methods/contents/archive/manuscript/8540.html>.
- Mutsaers, Ernest-Jan, van der Zee, Han e Gietz, Henrik. (1998). The Evolution of Information Technology. Information Management & Computer Security, pp. 115-126.
- Nolan, R. L, Norton, David P. e Bowen, William E. (1977). Computers and Hospital Management: Prescription for Survival. Journal of Medical Systems. Nº 2, Vol. 1.
- Nolan, R. L. (1973). Managing the Computer Resource: A Stage Hypothesis. [ed.] R. Bennjamin. Communications of the ACM. 7, Vol. 16, pp. 399-405.
- Nolan, R. L. (1979). Managing the crisis in data processing. Harvard Business Review. 2, Vol. 57, pp. 115 - 126.
- Nolan, Richard L. e Croson, David C. (1995). Creative Destruction: A Six-Stage Process for Transforming the Organization. Boston: Harvard Business School Press.
- Nolan, Richard L. e Koot, William J. D. (1992). Nolan Stages Today: A Framework for Senior and IT Management to Manage Information Technology. Holland Management Review. 31, pp. 1-24.
- Pascale, Richard Tanner e Athos, Anthony G. (1981). The Art of Japanese Management: Applications for American Executives . New York: Warner Books.

- Ribeiro, A. (2009). *Conceitos e Princípios de Qualidade*. s.l.: Escola Superior de Tecnologia - Instituto Politécnico do Cávado e do Ave.
- Rocha, Álvaro e Vasconcelos, José. (2004). Os Modelos de Maturidade na Gestão de Sistemas de Informação. *Revista da Faculdade de Ciência e Tecnologia da Universidade Fernando Pessoa*, Vol. Nº1, pp. 93-107.
- Rocha, Álvaro. (2002^a). *Maturidade da Função Sistema de Informação: Teoria de Estádios, Modelos e Avaliação*. Universidade Fernando Pessoa. Porto: s.n.
- Rocha, Álvaro. (2002b). *O essencial dos Sistemas de Informação*. Porto: Universidade Fernando Pessoa.
- Siqueira, Jairo. (2004). *O Modelo de Maturidade de Processos: como maximizar o retorno dos investimentos em melhoria da qualidade e produtividade*. [Online]. [Citação: 08 de 09 de 2012.] [http://www.ibqn.com.br/htm_artigos_links/Jairo_Siqueira_Artigo_Modelo de Maturidade.pdf](http://www.ibqn.com.br/htm_artigos_links/Jairo_Siqueira_Artigo_Modelo_de_Maturidade.pdf).
- Vergara, Sylvia. (2005). *Métodos de Pesquisa em Administração*. São Paulo. Ed. Atlas. ISBN 85-224-3963-X. São Paulo: Ed. Atlas, ISBN 85-224-3963-X.
- Webster, Jane e Watson, Richard T. (2002). Analyzing the Past to Prepare the Future: Writing a Literature Review. *MIS Quarterly*. 26, pp. XIII-XXIII

ANALYSIS OF TECHNOLOGY ACCEPTANCE MODEL (TAM) TO UTILIZATION OF AUDITING APPLICATION (AUDIT SOFTWARE)

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ABSTRACT

Implementation of new information technology within an organization will affect the entire organization, especially human resources. Users is very important factor to consider in the implementation of the new system, because the level of readiness of users to accept the new system has great influence in determining the success or failure of the development / implementation of such a system. This study aims to analyze the Technology Acceptance Model (TAM) to Utilization Application Auditing (Audit Software). Data was collected using survey methods directly by distributing questionnaires to staff at five public accounting firm in Jakarta. Data were analyzed using statistical tests using SPSS 15.0 software. By testing multiple linear regression and hypothesis testing produced the conclusion that there is a positive relationship between the variables Perceived Usefulness (PU) and Perceived Ease Of Use variables (PEOU) on Attitude Toward Using (ATT) and amounted to 56.4% of the independent variable Perceived Usefulness and Perceived Ease of Use affect the dependent variable Attitude Toward Using. The remaining 43.6% are other variables that are not included in the model, which includes the confounding variable (e) in linear regression analysis.

Keywords: TAM, PU, PEOU, ATT, Audit Software.

INTRODUCTION

Information Technology (IT) is now starting to experience growth in line with the progress of human civilization. The development of information technology may be the development of information technology infrastructure such as hardware development, software, technology, data storage and communication technology development (Laudon, 2006:174). Development of information technology does not only affect one area only, but can affect all areas such as economics, education, government and

others. For modern enterprises, Information Technology and Communications not only serves as a means of support for the company's performance over time, but it has become the main weapon to compete (Suhendro, 2007).

Information Technology also affects the development of accounting. The development of accounting due to technological advances occur in three stages, namely farming era, the industrial era, and the information era. In the information era, the development of information and communication technologies evolve significantly to the accounting information

*Proceedings of the 5th Global Management Conference, 2013,
Global Academic Network & ISCTE-IUL;
ISBN: 978-989-732-156-6; © Instituto Universitário de Lisboa (ISCTE-IUL), Portugal*

system with the changes in the data processing system manual to a computerized system. This gives effect to an increase in the amount and quality of information for financial reports. These conditions require that auditors change audit procedures by considering techniques that use computers as a tool to carry out the audit. This method is called Computer Assisted Audit Technology (CAAts).

Application of new technology in an organization will affect the entire organization, especially human resources. Users is very important factor to consider in the implementation of the new system, because the level of readiness of users to accept the new system has great influence in determining the success or failure of the development / implementation of the system (Kustono, 2000). The importance of knowing the user acceptance of the application of Information Technology encourages the various studies, such as the acceptance of the Internet (Tino Fenech, 1988), acceptance of information technology in the medical profession (Succi & Walter, 1999) and acceptance of electronic mail (e-mail) (Hubona & Jones, 2002).

In previous studies, found a model that describes the level of acceptance of the technology is the Technology Acceptance Model (TAM). The main purpose of TAM is to provide an explanation of the behavior / attitudes of users in a population (Davis et al. 1989:985). This study will examine the factors that influence acceptance of the auditor to audit the software to adapt the TAM. So the hypothesis in this study are

H₁: Perceived Usefulness (PU) influence on Attitude Toward Using (ATT).

H₂: Perceived Ease of Use (PEOU) influence on Attitude Toward Using (ATT).

This study aims to examine the factors that affect the acceptance of software auditors audit using TAM.

TECHNOLOGY ACCEPTANCE MODEL (TAM)

Several models have been used to analyze and understand the factors that influence user acceptance of computer technology among which is the Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM). Technology Acceptance Model, developed by Davis (1989), is one of the Most Influential research models in studies of the determinants of information systems and information technology acceptance to predict intention to use and acceptance of information systems and information technology by individuals.

Technology Acceptance Model has received considerable attention of Researchers in the information systems field over the past decade in the Technology Acceptance Model, there are two determinants Including Perceived Ease Of Use and Perceived Usefulness. Perceived Usefulness is the degree to roommates Believes that an individual using a particular Information Systems or Information Technology would enhance his or her job or life performance.

Perceived Ease Of Use is the degree to roommates Believes that a person using a particular Information Systems or Information Technology would be free of effort. Perceived Ease Of Use and Perceived Usefulness positively Affect the attitudes toward an Information System; and further, positively Affect the individuals' intentions to

use and the acceptance of the Information System. In addition, Perceived Ease Of Use positively affects the Perceived Usefulness,

and both of Perceived Ease Of Use and Perceived Usefulness are influenced by external variables.

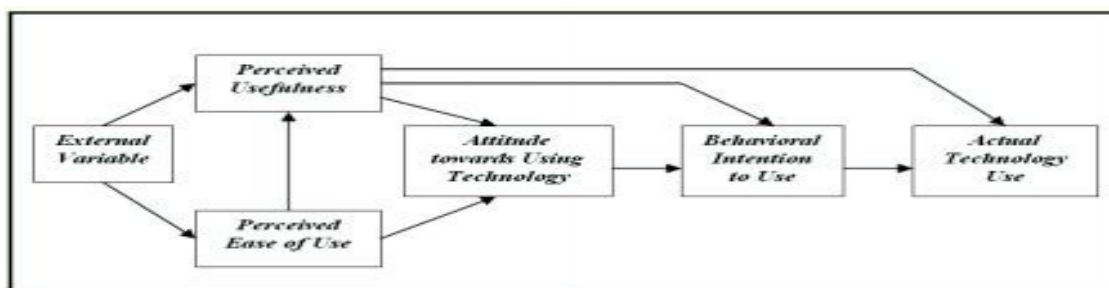


Figure 1. Technology Acceptance Model (TAM)

Sources: Davis et.al (1989)

In this research, the study was restricted to 3 main areas, namely Perceived Usefulness, Perceived Ease of Use and Attitude toward using the technology. While External Variables such as User Characteristics and System Characteristics

were not studied because of its contribution in the TAM is not significant, so it can be ignored even though it does not have any influence on technology acceptance directly (Milchrahm, 2003). For clarity, the model used in this study is in Figure 2.

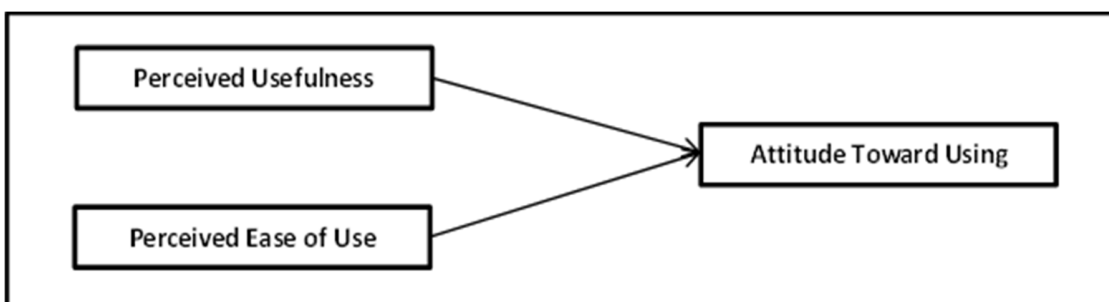


Figure 2: TAM in this study

Sources: Davis et.al, 1989 modified by the author

Perceived Usefulness

Perceived usefulness (PU) in TAM (Davis, 1989) is used as a direct determinant of behavioral intention and / or usage behavior. Perceived Usefulness is analogous to the relative advantage of perceived characteristics of an innovation by Rogers (1995). Perceived Usefulness is defined and used for this study as the degree to which a person believes that using a particular system would enhance his or her job performance. The influence of Perceived Usefulness on behavioral intention and / or usage behavior is expected to be moderated by gender and age. Since gender and age differences have been shown to exist in technology adoption contexts (Morris, Venkatesh & Summer 2000). Perceived Usefulness (PU) affects Attitude Toward Using (ATT).

Perceived Ease of Use

Perceived Ease Of Use is analogous to the complexity of perceived characteristics of an innovation by Rogers (1983). According to Davis (1989), Perceived Ease of Use is defined as a level or condition in which a person believes that using a particular system does not need any effort (free of effort). Perceived Ease Of Use (PEOU) affects the Attitude Toward Using (ATT). (Adam, 1992) states that the intensity of use and the user interaction with the system to demonstrate the ease of use. (Davis, 1989) provides some indicators of the ease of use of information technology, including:

- 1) The computer is very easy to learn
- 2) Computers work with ease what is desired by the user

- 3) Skills can be increased by using the user's computer
- 4) The computer is very easy to operate.

Attitude Toward Using (ATT)

In the research world, there are many definitions of attitude. Davis (1989) defines attitude toward the system used in the TAM as an assessment of the level of impact experienced by a person when using a particular system in its work.

METHODOLOGY

Data collection method used is to spread the questionnaire directly to the staff of the Public Accountant Firm in Jakarta (Direct Survey) by 30 respondents.

Data and Variables

In this study, the primary research used the data in order to maximize the research result. Measuring instrument used was a questionnaire.

The variables in this Study Consist of 1 (one) dependent variable (Y) and 2 (two) independent variables (X). The dependent variable in this study is Attitude Toward Using and the independent variables are Perceived Usefulness and Perceived Ease Of Use.

Descriptive Statistical Analysis

Descriptive statistics provide or a description of the data seen from the average (mean),

standard deviation, variance, maximum, minimum, sum, and range.

when the number of at least two independent variables.

Data Quality Test

1. Validity Test

Test of validity is used to measure Whether or not a legitimate or valid questionnaires. A valid questionnaire is said if the question on the questionnaire is Able to reveal something that will be measured by the questionnaire. Testing the validity of this use of facilities in SPSS.

2. Reliability Test

Reliability test is a questionnaire tool to measure roommates is an indicator of the variable. This reliability test can only be done on the questions that have been valid or invalid. This test is to Determine the extent to roommates the measurement result consistent REMAIN if done twice or more in the same group with the same measuring instrument. The result of this test indicated by a value that indicates how far a reliable gauge. SPSS provide facilities to measure the reliability of a statistical variable by using Cronbach's alpha (α).

3. Linear regression

Linear regression analysis was used when the researcher intends to predict how the state (rise and fall) dependent variable (criterion), when two or more independent variables as predictors factor manipulated (increased or decreased in value). So the multiple regression analysis will be performed

Hypotheses Testing

Hypotheses testing are to Determine the effect of variable X to variable Y is partially used t-test and regression test F-test was used simultaneously. As for the different tests using Mann Whitney U-test. Testing this hypothesis using a significance level of $\alpha = 5\%$. If $\text{sig } t > 5\%$ then received the opposite H_0 , H_0 is rejected if the $\text{sig } t < 5\%$.

Testing the hypothesis in this research is done in two phases, namely:

1. Partially Testing

Testing was conducted using the statistical t. T test basically shows how much influence an individual independent variables in explaining variations in the dependent variable (Ghozali, 2005). Criteria for decision making in the t test, by Comparing the value of t statistic with the critical point According to the table if the statistical value $t_{\text{count}} > \text{table}$, then accept the alternative hypothesis states that an individual roommates independent variables Affect the dependent variable. Step - step in performing the t test are as follows:

a. Formulate hypothesis

H_0 : no partially independent variables influence the dependent variable

H_a : there are partially independent variables influence the dependent variable.

b. Determining the significance level $\alpha = 5\%$

c. Counting t count by the formula:

$$t_{\text{count}} = \frac{b}{\sigma_b}$$

- Description:
 b = coefficient of the independent variable
 σb = standard deviation of the independent variable coefficients
2. Testing simultaneously
 F test indicates Whether Essentially all the independent variables included in the models have an influence together - similar to the dependent variable (Gozali, 2005). Criteria for decision making in the F-test, by Comparing the value Fcount Ftable value. If the value Fcount > Ftable, then H_0 is rejected and accept H_a . Step - step in performing the F test is as follows:
- a. Formulate Hypothesis
 H_0 : Collectively - as there are no independent variables influence the dependent variable
 H_a : Collectively - as there are independent variables influence the dependent variable

- b. Determining the level of significance
 $\alpha = 5\%$
 c. Counting F count by the formula:

$$F \text{ count} = \frac{\frac{R^2}{(K-1)}}{\frac{1-R^2}{(N-k)}}$$

RESULTS

The research was conducted by distributing questionnaires as data collection techniques at 30 staffs in 5 Public Accounting Firm in Jakarta as a respondent. Each item questions have been through Test Validity The reliability through test equipment and SPSS (Statistical Package for the Social Sciences) so that each grain has been declared valid question and precise in measuring each variable of the study.

Table 1. Test Result Statistics

Variables	R2	F	B	Beta	t
	.564	17.440	-. 479		
X_1				.474	2.720
X_2				.342	1.964

Testing hypotheses using linear regression analysis. The resulting regression equation through the test with SPSS is as follows:

$$Y = -0.479 + 0.474X_1 + 0.342X_2 + e$$

The regression equation above shows that the Perceived Usefulness variables X_1

and X_2 are variables Perceived Ease of Use is positive, indicating that the variables X_1 and X_2 positive effect on Attitude Toward Using.

Variables Perceived Usefulness (X_1) has a coefficient of 0.474, which means that this variable has a positive influence on Attitude Toward Using. This indicates that an audit of the software functionality and more accurate results then the attitude of an auditor likely

would choose to use the software because the auditor will feel more confident with the performance results using the software.

Variables Perceived Ease Of Use (X_2) has a coefficient of 0.342, which means that this variable has a positive influence on Attitude Toward Using. This indicates that an audit of the software is easy to operate and easy to get the attitude of auditors tend to choose to use any software because the auditor will feel comfortable and happy to work with the software because the software is easy to operate.

After doing a test Linear, then perform simultaneous Hypothesis Testing (Test F), the value of F table with df: 2: 27, and the level of significance (α) 5% of 3.35. As for the value of F calculated from the processing of the data obtained is equal to 17.440. By comparing the value of F is calculated with F table, note that F count is greater than F table or $17.440 > 3.35$ (sig. Above 0.05), it was concluded that the independent variables (Perceived Usefulness and Perceived Ease Of Use) as a whole to have significant impact the Dependent Variable (Attitude Toward Using).

In a partial test of the hypothesis testing, t values in the data table 30 respondents, 2 variables and used significant levels is 5%, data processing is known that t for variables Perceived Usefulness (X_1) is 2.720, and the variable Perceived Ease Of Use (X_2) is 1.964.

In testing the coefficient of determination, R-square value of the data processing with SPSS test equipment amounted to 0.564 or 56.4% of the independent variables, namely Perceived Usefulness and Perceived Ease of Use influence on Attitude Toward Using dependent variable and the remaining 43.6% are other variables that are not included in the

model are included in the confounding variable (e) in linear regression analysis.

The two independent variables were tested individually, and the results showed that the variables most dominant influence in the Attitude Toward Using is Perceived Usefulness with the coefficient value 0.474, which means that any increase in the accuracy and usability of a audit software will affect the increased on Attitude Toward Using.

Through testing with SPSS result that both variables positive effect on Attitude Toward Using. This means that the higher the value Perceive Usefulness and Perceived Ease of Use, the auditor will be more motivated to use the audit software. With the growing interest in someone to use audit software then they will always use the software to help their work and improve their performance. However, if an audit software has no positive value in terms of usability and operation, then attitude of the auditor likely would not choose to use an audit software.

CONCLUSION

After testing the hypotheses proposed in this study, it produced some conclusions as follows

- Perceived Usefulness has a positive effect on Attitude Toward Using, with a coefficient value 0.474 and a significance level 2.720. This means that the hypothesis H_1 is accepted (proven).
- Perceived Ease of Use has a positive effect on Attitude Toward Using, with a coefficient value 0.342 and a significance level 1.964. This means

that hypothesis H₂ accepted (proven).

- Variables most dominant influence in the Attitude Toward Using is Perceived Usefulness with the coefficient value 0.474, which means that any increase in the accuracy and usability of an audit software will affect the increased Attitude Toward Using.
- Through testing with SPSS result that both variables positive effect on Attitude Toward Using. This means that the higher the value Perceived Usefulness and Perceived Ease of Use, the auditor will be more motivated to use the audit software.

REFERENCES

- F. D. Davis (1989), "Perceived Usefulness, Perceived ease of use of Information Technology", *Management Information Systems Quarterly*.
- Kim, Hyo-Jeong, Mannino, Michael, and Nieschwietz, Robert J. (2009), "Information Technology Acceptance In The Internal Audit Profession: Impact Of Technology And Complexit Features", *International Journal of Accounting Information Systems* Vol. 10, pp. 214-228.
- Kripanont, Napaporn. (2006), "Using a Technology Acceptance Model to Investigate Academic Acceptance of the Internet", *Journal of Business Systems, Governance and Ethics* Vol. 1, no. 2.
- Shih, Hung-Pin. (2004), "Extended Technology Acceptance Model of Internet Utilization Behavior", *Journal of Information & Management* Vol. 41, pp. 719-729.
- Suryandini, Dhini. (2010), "Application of Technology Acceptance Model Audit Software In Use By Auditors", *Journal of Accounting* Vol. 2, no. 2, pp. 92-102
- Tangke, Natalia. (2004), "Application of Revenue Analysis Computer Assisted Audit Techniques (TABK) Using Technology Acceptance Model (TAM) The Supreme Audit Agency (BPK) RI", *Journal of Financial and Accounting* Vol. 6, no. 1, pp. 10-28
- Laudon, K.C, Jane P.Laudon. (2004). "Management Information Systems", 8th edition. New Jersey: Prentice-Hall, Inc..
- Suhendro, S. (2007), "Auditing E-Commerce: Collection and Validation Process Audit Evidence", *Journal of Financial and Accounting* Vol. 12, no. 1, pp. 91-105.
- Davis, Fred D, Bagozzi, Richard P and Warshaw, Paul R. (1989). "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models", *Management Science* Vol. 35, no. 8, pp.982-1003.
- Trisnawati, Rina. (1998). "Consideration of Critical Success Factors Behavior and Development of Information Systems", *Journal of Business Studies*, September, Yogyakarta.
- Milchrahm, Elisabeth. (2003), "Modelling the Acceptance of Information Technology", http://www.inforum.cz/inforum2003/prispevky/milchrahm_elisabeth.pdf
- Rogers, E. (1995), Free Press, New York, <http://search.epnet.com/login.aspx?direc>

- t=true&db=aph&authdb=epref&an=IBB
ABCA
- Morris, MG, Venkatesh, V and Summer. (2000), "Age Differences in Technology Adoption Decisions: Implications for a Changing Work Force", <<http://search.epnet.com/login.aspx?direct=true&db=aph&authdb=epref&an=PP.EC.CGE.MORRIS . ADTADI>>.
- Rogers, EM. (1983), "Diffusion of Innovations", 3rd edn, The Free Press, New York.
- Kustono, Alwan Sri. (2000), "Factors Affecting the Acceptance Level Implementation of Accounting Information System of New Media", Article XI-XII it.
- Succi, Melissa J and Walter, Zhiping D. (1999). "Theory of User Acceptance of Information Technologies: An Examination of Health Care Professionals", <<http://www.computer.org/proceedings/hicss/0001/00014/00014013.pdf>>
- Fenech, Tino. (1988), "Using Perceived Ease of Use and Perceived Usefulness to Predict Acceptance of the World Wide Web", <<http://www7.scu.edu.au/programme/poetters/1839.html>>
- Hubona, G.S and Jones, A.B. (2003), "Modeling the User Acceptance of E-Mail", <<http://www.hicss.hawaii.edu/HICSSpapers/CLMEC01.pdf>>
- Laudon, K.C and Jane, P. Laudon. (2004), "Management Information Systems", 8th edition. New Jersey: Prentice-Hall, Inc..
- Suhendro, S. (2007), "Auditing E-Commerce: Collection and Validation Process Audit Evidence", Journal of Financial and Accounting Vol. 12, no. 1, pp. 91-105.
- Rogers, EM. (1983), "Diffusion of innovations", 3rd edition, The Free Press, New York.
- Ghozali, Imam. (2005), "Application of Multivariate Analysis with SPSS, Issue 3, Agency Publisher Diponegoro University, Semarang.

ATIVOS DE CONCESSÃO SOB A ÓTICA DO ACIONISTA: ENFOQUE NA ESTRUTURA FÍSICA OU NO DIREITO QUE REPRESENTAM?

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RESUMO

O estudo baseia-se na existência de opiniões divergentes em relatórios de auditoria de duas concessionárias brasileiras de distribuição de gás natural canalizado, sendo que em um dos relatórios o prazo de amortização é objeto de ressalva às demonstrações relativas ao ano de 2011. A partir disto, a pesquisa tem como objetivo central verificar, nas normas contábeis brasileiras, se existe restrição ou recomendação com relação ao período de amortização dos ativos intangíveis de concessão e responder à seguinte questão: qual o enfoque a ser dado para os ativos de concessão: a estrutura física ou o direito que representam para a concessionária?

Palavras-Chave: contratos de concessão; icpc 01; amortização; gás natural.

INTRODUÇÃO

A tratativa contábil referente a Contratos de Concessão no Brasil é conferida pelo Comitê de Pronunciamentos Contábeis (CPC) por meio das interpretações ICPC 01 e ICPC 17, e da orientação OCPC 05.

De forma específica, a OCPC 05 direciona as orientações da ICPC 01 aos Contratos de Concessão relativos a rodovias, ferrovias e energia elétrica, no sentido de fornecer exemplos práticos especificamente a estes segmentos.

É possível encontrar alguns estudos que versam sobre a adoção da ICPC 01, como os realizados por Brugni, Rodrigues e Cruz (2011), Mincato (2011), Scalzer (2010), Zonatto, Santos, Junior e Bezerra (2011) acerca das concessões no setor de energia elétrica; Silva, Weffort, Peters e Cia (2010) versando sobre o setor de saneamento; Paris, Rodrigues, Cruz e Brugni (2011) em pesquisa que compara os efeitos esperados da adoção da IFRIC 12 e ICPC 01 entre Brasil e Europa; e Cruz, Silva e Rodrigues (2009) sobre os potenciais efeitos da adoção da IFRIC 12 por Concessionárias brasileiras.

Notadamente, existe no Brasil uma vasta gama de segmentos de concessões públicas, e pesquisas científicas

relacionadas à adoção das normas para contabilização de contratos de concessão ainda estão restritas, em grande número, ao setor de energia elétrica, tornando-se difícil localizar estudos deste tipo relacionados especificamente às concessões para distribuição de gás natural canalizado no Brasil.

Diferentemente das concessões no setor de energia elétrica, no segmento de distribuição de gás natural canalizado não há uma entidade reguladora em nível nacional, as pesquisas sobre a contabilização deste tipo de contrato são escassas e as Concessionárias “apresentam diversas diferenças, pois cada distribuidora, ou grupo delas, se situa em contexto histórico ou regional diferente” (SANTA CATARINA, 2002, p. 70).

Além da outorga da concessão para a distribuição de gás natural canalizado, a regulação da atividade também é uma prerrogativa estadual. Segundo Possas, Ponde e Fagundes (1997 *apud* SANTA CATARINA, 2002, p. 24), um regime de regulação fixa “normas de operação e tarifação, e critérios de aferição de desempenho para as atividades a serem privatizadas ou sujeitas à concessão pública”.

Desta forma, os contratos de concessão possuem duração estipulada pelo poder concedente (agente regulador) e determinam o período durante o qual os investimentos realizados serão amortizados, bem como a inclusão da respectiva parcela de amortização no cálculo tarifário, podendo tais características sofrer variação entre os estados, devido à inexistência de uma agência reguladora única a nível nacional. Os investimentos (bens de concessão) são entendidos como o direito adquirido pela Concessionária de cobrar uma tarifa dos usuários, sendo que “o concessionário deve reconhecer um ativo intangível à medida em que recebe o direito de cobrar dos usuários dos serviços” (ICPC 01, § 17). Portanto, a amortização do ativo intangível representa o consumo dos benefícios econômicos gerados pela aquisição do Direito de Concessão obtido por meio da realização de investimentos em rede de distribuição de gás natural canalizado.

Tendo em vista que estes contratos de concessão “possuem diversas especificidades no que diz respeito às partes envolvidas, ao órgão concedente e à empresa Concessionária” (ERNEST & YOUNG; FIPECAFI, 2011, p. 189) e, somando-se a isto a incipiência destas normas no Brasil e a escassez de pesquisas específicas no campo das concessões para distribuição de gás natural, é evidente que o tema pode gerar opiniões divergentes acerca da aplicabilidade de determinado critério contábil.

Evidências acerca de opiniões divergentes por parte de auditores independentes sobre a aplicação dos Pronunciamentos do CPC foram apontadas em pesquisa realizada por Almeida e Lemes (2012) onde, a partir dos resultados, as autoras inferem que “existe a possibilidade de que os profissionais brasileiros [auditores] efetuem interpretações distintas e, consequentemente, tomem decisões que

produzirão relatórios contábeis não comparáveis” (ALMEIDA; LEMES, 2012, p. 1).

De fato, isto é verificado em dois relatórios de auditoria referentes a demonstrações contábeis relativas ao exercício social de 2011 onde, sobre um mesmo critério contábil adotado por duas Concessionárias brasileiras de gás natural canalizado, há divergência explícita de opiniões por parte de auditores independentes.

Ambas as Concessionárias utilizam o prazo de dez anos para amortização de seus ativos intangíveis representativos de direitos de concessão. No entanto, uma delas apresenta relatório de auditoria com ressalva às demonstrações contábeis, pois, segundo o exposto no relatório, a entidade não utiliza o menor prazo entre o tempo remanescente do contrato de concessão e a vida útil estimada dos bens subjacentes à concessão. De outro lado, a outra Concessionária, operando sob as mesmas condições contratuais, que amortiza seus ativos por igual prazo, auditada por outros auditores independentes, não apresenta ressalva em seu parecer.

Partindo deste contexto, este estudo possui o objetivo central de verificar, nas normas contábeis brasileiras, a existência de restrição ou recomendação com relação ao período de amortização dos ativos intangíveis representativos de direitos de concessão praticado por ambas as distribuidoras. A pesquisa também se propõe a responder à seguinte questão: qual o enfoque dado aos ativos de concessão: a estrutura física ou o direito que representam para a concessionária?

O estudo é motivado pela inexistência explícita de um consenso quanto à prática contábil destas distribuidoras, seja através de uma agência reguladora única, seja pela opinião dos auditores independentes, notadamente constatada em seus relatórios.

Não obstante, a pesquisa emerge também da dificuldade em localizar

estudos específicos sobre a contabilização de Contratos de Concessão no segmento de distribuição de gás natural canalizado e da necessidade de explorar o conceito do ativo gerado pela concessão sob a ótica da Concessionária, que adquire propriamente um direito e não um bem em sua estrutura física.

CONTRATOS DE CONCESSÃO PARA DISTRIBUIÇÃO DE GÁS NATURAL CANALIZADO

O serviço de distribuição de gás natural canalizado como prerrogativa estadual foi regulamentado no Brasil a partir da Constituição Federal de 1988, sendo que no ano de 1995 foi permitida a

participação do capital privado para constituição das Concessionárias:

Art. 25. Os Estados organizam-se e regem-se pelas Constituições e leis que adotarem, observados os princípios desta Constituição.

§ 2º - Cabe aos Estados explorar diretamente, ou mediante concessão, os serviços locais de gás canalizado, na forma da lei, vedada a edição de medida provisória para a sua regulamentação. (BRASIL, 1988).

Segundo a Associação Brasileira das Empresas Distribuidoras de Gás Canalizado (ABEGÁS), atualmente existem no Brasil vinte e sete Concessionárias para distribuição de gás natural canalizado:



Figura 1: Mapa das distribuidoras brasileiras de gás natural canalizado

Fonte: ABEGÁS, 2012

Além da outorga da concessão, a regulação do serviço também ocorre a cargo dos estados, e, conquanto não exista uma entidade a nível nacional para regulação da atividade de distribuição – a exemplo das atividades de produção e transporte de gás natural, que têm sua regulação exercida pela Agência Nacional do Petróleo – os termos do contrato de concessão firmado entre cada estado da

federação e a Concessionária podem variar entre si, conforme demonstram os estudos realizados por Santa Catarina (2002) e Carvalho (2010).

Carvalho (2010, p.44) classifica os contratos de concessão em quatro grupos, tomando por base as similaridades entre eles:

- Grupo 1: Rio de Janeiro (CEG e CEG Rio);

- Grupo 2: São Paulo (COMGÁS, GNSPS e GBD);
- Grupo 3: Mato Grosso (MTGÁS);
- Grupo 4: Demais estados (BAHIAGÁS, COPERGÁS, CEGÁS, ALGÁS, POTIGÁS, PBGÁS, SERGÁS, GASPIA, SULGÁS, SCGÁS, COMPAGÁS, MSGÁS, CEBGÁS, GASMIG e BR Distribuidora).

No mesmo estudo, Carvalho (2010) realizou levantamento acerca da duração dos contratos de concessão, apontando que os prazos variam entre 30 e 50 anos, sendo que do Grupo 4, BAHIA GÁS, BR Distribuidora, SULGÁS, SCGÁS, COPERGÁS, ALGÁS, POTIGÁS, PBGÁS e SERGÁS possuem Contrato de Concessão com duração de 50 anos.

Dentre outros aspectos, os contratos de concessão estipulam a vida útil dos ativos e o método de cálculo da tarifa cobrada dos usuários. Em alguns contratos, a amortização dos investimentos realizados, pelo prazo da vida útil estipulada, é componente direto da composição tarifária, como é o caso das concessionárias BR Distribuidora, BAHIA GÁS, SULGÁS, SCGÁS, COPERGÁS, CEGÁS, MSGÁS, ALGÁS, POTIGÁS, PBGÁS, SERGÁS, CEBGÁS e GASPIA (Carvalho, 2010).

De acordo com Santa Catarina (2002, p. 93), nestes contratos de concessão, a fórmula para cálculo da tarifa, contendo a amortização, é a seguinte:

$$TM = PC + MB,$$

sendo:

TM = tarifa média em R\$/m³;

PC = preço de compra, englobando preço do gás e o preço do transporte;

MB = margem bruta de distribuição.

MB = CCP + COP + DEP + AJ + PR + RM,

sendo:

CCP = custo do capital;

COP = custo operacional;

DEP = depreciação;

AJ = ajustes;

PR = aumento de produtividade;

RM = reserva de modernização.

Para o cálculo da depreciação, na maioria dos casos é utilizada uma taxa de 10% ao ano.

Normas contábeis relativas a contratos de concessão

A demanda brasileira por normas de contabilidade aplicáveis especificamente a contratos de concessão partiu do processo de harmonização ao padrão contábil internacional, como parte dele. Desta forma, até o ano de 2009, não havia normativa específica a este segmento no Brasil, sendo que o balizador para a contabilização de contratos de concessão eram as normas aplicáveis a Ativo Imobilizado.

Neste contexto, tem-se, no ano de 2009, a emissão da Interpretação Técnica ICPC 01 – Contratos de Concessão, que faz correlação à IFRIC 12 – *Service Concession Arrangements* emitida pelo *International Financial Reporting Interpretations Committee* (IFRIC) em 2006.

Uma Interpretação emitida pelo CPC tem a finalidade de orientar a aplicação dos Pronunciamentos a determinados casos específicos. Desta forma, a ICPC 01 tem o objetivo de orientar a aplicação do CPC 04 – Ativo Intangível e CPC 27 – Ativo Imobilizado, entre outros, ao segmento de concessões de serviços públicos.

Segundo Cruz, Silva e Rodrigues (2009), igualmente em âmbito internacional havia muitas dúvidas sobre a contabilização de transações relacionadas a contratos de concessão, fato que motivou o *International Financial Reporting Interpretations Committee* a editar a IFRIC 12 em 2006. Todavia, “dadas as dificuldades de interpretação da norma e aplicabilidade, tendo em vista as particularidades jurídicas e regulatórias de cada país, a União Europeia prorrogou o

prazo de aplicação obrigatória da IFRIC 12 para dezembro de 2009” (MINCATO, 2011, p. 39).

No Brasil, a adoção inicial da ICPC 01 deu-se no exercício social de 2010 para as entidades alcançadas pelo escopo da norma. Em 2011, o CPC procedeu à primeira revisão da Interpretação, sendo esta sua posição atual.

Em dezembro de 2010 o CPC emitiu uma Orientação Técnica denominada OCPC 05 – Contratos de Concessão, a qual traz exemplos práticos atrelados aos conceitos da ICPC 01, especificamente às concessões de energia elétrica, rodovias e ferrovias.

Já em 2011, o CPC emitiu Interpretação Técnica que versa sobre a evidenciação dos Contratos de Concessão, a ICPC 17 – Contratos de Concessão: Evidenciação, que se correlaciona à SIC 29 – *Disclosure - Service Concession Arrangements*, emitida pelo *International Accounting Standards Board* (IASB) em 2001.

Após o primeiro ano de adoção da ICPC 01 pelas Concessionárias, Ernest & Young e FIPECAFI (2011) realizaram estudo sobre os impactos da sua adoção:

a contabilização de contratos de concessão é considerada um dos tópicos mais polêmicos das normas internacionais. Isso porque esses contratos possuem diversas especificidades no que diz respeito às partes envolvidas, ao órgão concedente e à empresa concessionária. (2011, p. 189).

Paris, Rodrigues, Cruz e Brugni (2011) igualmente demonstram a mesma constatação de Ernest & Young e FIPECAFI (2011), ponderando, inclusive, sobre a aplicação da ICPC 01 de forma diferente por parte dos envolvidos em contabilização de contratos de concessão.

Vida útil e amortização de ativos intangíveis de concessão

Segundo estudo publicado por Ernest & Young e FIPECAFI (2011), a estimativa considerada mais crítica pelas oito Concessionárias de serviços públicos selecionadas em sua amostra, é a ponderação acerca da vida útil e/ou critério de amortização do ativo intangível de concessão. O quadro 1 ilustra os resultados:

Quadro 1: Estimativas críticas

Estimativa Crítica	Quantidade
Vida útil e/ou critério de amortização do ativo intangível de concessão	5
Apuração e atualização dos ativos financeiros de concessão	3
Reconhecimento das receitas de contratos de concessão	3
Valor justo dos ativos intangíveis de concessão	2
Taxa efetiva de juros do ativo financeiro de concessão	1
Classificação de obras de melhoria no ativo intangível de concessão	1
Total	15

Fonte: Ernest & Young e FIPECAFI (2011, p. 197).

Com relação às concessões para distribuição de gás natural canalizado, segundo levantamento realizado por

Carvalho (2010), as vidas úteis adotadas pelas Concessionárias são as seguintes:

Quadro 2: Vida útil dos bens – contratos de concessão para distribuição de gás natural canalizado no Brasil

VIDA ÚTIL	CONCESSIONÁRIAS
Vida útil de acordo com IN RFB 162/1998	COMGÁS, GNSPS, GBD, CEG, CEG RIO, GASMIG, MTGÁS
30 anos	COMPAGÁS
20 anos	BR DISTRIBUIDORA (ESPÍRITO SANTO)
10 anos	SULGÁS, SCGÁS, BAHIA GÁS, COPERGÁS, CEGÁS, MSGÁS, ALGÁS, POTIGÁS, PBGÁS, SERGÁS, CEBGÁS, GASPISA

Fonte: Adaptado de CARVALHO (2010, p. 51).

De acordo com o CPC 04 § 8, “amortização é a alocação sistemática do valor amortizável de ativo intangível ao longo de sua vida útil”, e vida útil, “o período de tempo no qual a entidade espera utilizar um ativo, ou, o número de unidades de produção ou de unidades semelhantes que a entidade espera obter pela utilização do ativo”, sendo que “o método de amortização utilizado reflete o padrão de consumo pela entidade dos benefícios econômicos futuros” (CPC 04, § 97).

Sob a ótica da Concessionária, todos os investimentos realizados não se configuram como ativo imobilizado, pois ela não detém a posse desses bens, mas apenas adquire um direito de cobrar dos usuários uma tarifa:

o concessionário deve reconhecer um ativo intangível à medida em que recebe o direito (autorização) de cobrar os usuários dos serviços públicos. Este direito não constitui direito incondicional de receber caixa porque os valores são condicionados à utilização do serviço pelo público. (CPC 04, § 17).

Para ativos intangíveis que resultam de direitos contratuais, o parágrafo 94 do referido pronunciamento define:

a vida útil de ativo intangível resultante de direitos contratuais ou outros direitos legais não deve exceder a vigência desses direitos, podendo ser menor dependendo do período durante o qual a entidade espera utilizar o ativo. (CPC 04, § 94).

E, no parágrafo 95:

podem existir tanto fatores econômicos como legais influenciando a vida útil de ativo intangível. Os fatores econômicos determinam o período durante o qual a entidade receberá benefícios econômicos futuros, enquanto os fatores legais podem restringir o período durante o qual a entidade controla o acesso a esses benefícios. A vida útil a ser considerada deve ser o menor dos períodos determinados por esses fatores.

A OCPC 05, direcionada a esclarecer o disposto na ICPC 01, define claramente acerca do prazo de amortização dos ativos intangíveis de concessão: “o ativo intangível deve ser amortizado dentro do prazo da concessão, e o cálculo deve ser efetuado de acordo com o padrão de consumo do benefício econômico por ele gerado” (OCPC 05, § 42).

Com relação aos contratos de concessão para distribuição de gás natural canalizado que imputam ao cálculo tarifário a respectiva parcela de amortização calculada com base na vida útil definida, aplica-se o disposto no parágrafo 70 da OCPC 05:

o método de amortização que pode ser utilizado e que melhor reflete o padrão de consumo em relação aos benefícios econômicos esperados é aquele que coincide com o mecanismo da tarifa da venda de energia. A despesa de amortização (antes depreciação) incluída na tarifa é determinada com base na vida útil econômica estimada de cada bem e apropriada de forma linear

no prazo da concessão. (OCPC 05, § 70).

Tendo o direito de concessão representado pelo ativo intangível uma vida útil de dez anos, ao final deste prazo a concessionária não recebe a correspondente parcela de remuneração. Contudo, o bem em sua estrutura física ainda continua operando e integrando a rede de distribuição de gás natural, ainda que o direito que representa, sob a ótica da concessionária, tenha sido totalmente amortizado.

Em referência a esta situação, o parágrafo 72 da OCPC 05, enuncia: “quando o ativo estiver totalmente amortizado, mesmo que continue a ser utilizado na prestação de serviço, a distribuidora não terá direito de receber tarifa correspondente à depreciação regulatória e à remuneração dos acionistas desse bem”.

Em âmbito internacional, a amortização de ativos intangíveis de concessão também é alvo de questionamentos. Em novembro de 2011, o *International Financial Reporting Interpretations Committee* recebeu demanda acerca do método de amortização dos ativos intangíveis de contratos de concessão (IFRIC, 2011), no sentido de esclarecer o significado do termo *consumo de benefícios econômicos futuros esperados de um ativo*, mencionados nos itens 97 e 98 da IAS 38 *Intangible Assets* – correlata ao CPC 04.

De acordo com o relatório IFRIC Update (IFRIC, 2011), a resposta do comitê ao questionamento foi a seguinte:

The Committee noted that the principle in IAS 38 is that an amortisation method should reflect the pattern of *consumption* of the expected future economic benefits and not the pattern of *generation* of expected future economic benefits. Examples of the types of amortisation methods that reflect this principle are provided in paragraph 98 of IAS 38. (IFRIC, 2011).

Ou seja, o método de amortização do ativo intangível deve refletir o padrão de consumo dos benefícios econômicos, e não o padrão de geração destes benefícios, que seria representado por um método de amortização baseado nas variações da receita auferida.

Em reunião realizada no mês de março de 2012, o *International Accounting Standards Board* (IASB) formalizou este entendimento para envio ao *Board* do IASB (IASB, 2012a), sendo que tal entendimento fará parte do *Annual Improvements 2011-2013 cycle* (IASB, 2012b) visando a alteração da IAS 16 *Property Plant and Equipment* e IAS 38 *Intangible Assets*, com adição de parágrafos específicos relacionados à depreciação e amortização, respectivamente.

METODOLOGIA DA PESQUISA

Esta pesquisa é caracterizada, de acordo com Martins e Theóphilo (2009), como um estudo teórico de abordagem crítico-dialética sob a dimensão da práxis, onde a reflexão teórica realiza-se em função da ação, baseada no pressuposto da ligação entre teoria e prática.

O estudo é de cunho qualitativo e preocupa-se em entender e descrever o comportamento do objeto de pesquisa tendo como base um referencial teórico.

Foram utilizadas as técnicas de pesquisa bibliográfica e documental na coleta das informações pertinentes ao objeto de estudo e que se relacionam com a prática contábil específica ao tema.

As fontes bibliográficas utilizadas constituem-se em publicações, abrangendo a literatura científica sob a forma de livros e artigos científicos, bem como dissertações e as normas contábeis emitidas pelo Comitê de Pronunciamentos Contábeis.

As fontes documentais consistem nos documentos de entidades da classe contábil em âmbito nacional (IBRACON)

e internacional (IASB, IFRIC), no sentido de complementar os achados da pesquisa bibliográfica e permitir maior embasamento para a análise crítica através do estabelecimento de um contexto atual sob o qual o tema é abordado.

Com relação às limitações do estudo, estas dizem respeito às características dos contratos de concessão das duas concessionárias abordadas pela pesquisa, as quais foram coletadas nos estudos de Santa Catarina (2002) e Carvalho (2010), constituindo-se em fontes de dados secundárias. O estudo baseia-se nos demonstrativos contábeis e relatórios de auditoria publicados nos sítios eletrônicos das concessionárias, referentes ao exercício social de 2011.

Visando a análise dos achados, utilizou-se a técnica de análise de conteúdo, a qual “presta-se tanto aos fins exploratórios, ou seja, de descoberta, quanto aos de verificação, confirmando, ou não, proposições e evidências” (MARTINS; THEÓPHILO, 2009, p. 99). A análise de conteúdo compreendeu três fases: pré-análise, descrição analítica e interpretação inferencial, onde a pré-análise ocorre concomitantemente à pesquisa, seguindo-se a descrição analítica dos achados e concluindo o estudo com a interpretação dos dados.

DISCUSSÕES DA PESQUISA

Considerando o disposto na ICPC 01 § 11, 17 e 26, a Concessionária de serviços públicos não possui um ativo imobilizado, mas sim um direito contratual representado contabilmente sob a forma de ativo intangível, devendo a mesma observar o disposto no CPC 04 e considerar os aspectos contábeis sob a ótica desse Pronunciamento, inclusive os relativos à amortização dos direitos contratuais representados pelo ativo intangível.

O Pronunciamento CPC 04 parágrafo 94 define que “a vida útil de ativo

intangível resultante de direitos contratuais ou outros direitos legais não deve exceder a vigência desses direitos”, sendo que a determinação da referida vida útil pode ser influenciada por fatores legais (restrição ao controle do acesso aos benefícios) e fatores econômicos (período durante o qual receberá os benefícios), concluindo que a vida útil deverá ser a menor entre os dois prazos (CPC 04, § 95).

A partir da determinação da ICPC 01, de que “a infraestrutura dentro do alcance desta Interpretação não será registrada dentro do ativo imobilizado do concessionário porque o contrato de concessão não transfere ao concessionário o direito de controlar o uso da infraestrutura de serviços públicos” (ICPC 01, § 11), devendo registrar um ativo intangível à medida em que recebe a licença para cobrar dos usuários dos serviços, o ativo intangível assim registrado pela Concessionária é entendido, e é de fato, resultante dos direitos contratuais derivados do próprio contrato de concessão. Desta abordagem surge, logicamente, a concepção da amortização como consumo do direito contratual pelo prazo estabelecido no contrato de concessão, e não propriamente uma amortização considerando o bem em sua estrutura física.

Com relação às duas distribuidoras consideradas neste estudo, a restrição legal é representada pelo prazo de duração do contrato de concessão, que é de cinquenta anos, tempo pelo qual ambas possuem acesso ao benefício econômico advindo da concessão. Já a restrição econômica é claramente identificada como sendo a vida útil econômica definida no contrato para o direito de concessão representado pelo ativo intangível, que é de dez anos. A restrição econômica está relacionada com o consumo do direito de concessão por meio da amortização do ativo intangível, que representa para o acionista um benefício econômico. Desta forma, de acordo com o disposto no CPC 04 § 95, a

vida útil a ser utilizada corresponde ao período de dez anos.

Muito embora a própria OCPC 05 tenha sido direcionada às concessões de rodovias, ferrovias e energia elétrica (OCPC 05, § 6), é possível, e assim o orienta o CPC no referido parágrafo, fazer-se uma analogia para o caso específico das concessões para distribuição de gás natural canalizado. Logo, a aplicabilidade do prazo de amortização de dez anos é igualmente permitida pelo disposto no parágrafo 42 da OCPC 05: “o ativo intangível deve ser amortizado dentro do prazo da concessão. O cálculo deve ser efetuado de acordo com o padrão de consumo do benefício econômico por ele gerado”.

No caso dos contratos de concessão para distribuição de gás natural que determinam a inclusão da amortização dos investimentos no cálculo tarifário utilizando a vida útil determinada em contrato – uma das características, segundo Carvalho (2010), do contrato de concessão das duas concessionárias em questão – “o método de amortização que pode ser utilizado e que melhor reflete o padrão de consumo em relação aos benefícios econômicos esperados é aquele que coincide com o mecanismo da tarifa da venda de energia” (OCPC 05 §70).

Deve-se salientar ainda, que as concessões “sob o ponto de vista do

acionista, são um negócio de vida finita” (OCPC 05, § 71), visto que os contratos de concessão possuem prazo limitado e a vida útil do direito adquirido também.

Isto exposto, e considerando que: (a) a remuneração do acionista é advinda da cobrança da tarifa; (b) o direito de cobrar emerge da realização de investimentos; (c) os investimentos constituem-se no direito de concessão adquirido; e (d) o direito de concessão tem vida útil estabelecida no contrato concessão, então, sob a ótica do acionista, a amortização dos investimentos contabilizados como ativo intangível representa e reflete o consumo do direito de concessão adquirido e que possui prazo de vida útil determinado, devendo ser, portanto, este o respectivo prazo de amortização.

Em síntese, o quadro 3 apresenta um resumo dos tópicos presentes nas normas contábeis do CPC que versam sobre a amortização do ativo intangível representativo de direitos de concessão, reforçando os seguintes conceitos:

- Ativos de concessão representam um direito – ativo intangível;

A amortização está associada ao consumo do direito adquirido pelo prazo estabelecido nas regras do negócio – contrato de concessão.

Quadro 3: Síntese dos dispositivos presentes nas normas do CPC que se referem à amortização de direitos de concessão registrados como ativo intangível na concessionária

ICPC 01 § 11, 17, 26	A concessionária não possui um ativo imobilizado, mas sim um direito contratual representado contabilmente sob a forma de ativo intangível, na medida em que recebe a licença para cobrar dos usuários dos serviços. O contrato de concessão não transfere ao concessionário o direito de controlar o uso da infraestrutura de serviços públicos. O concessionário deve reconhecer um ativo intangível à medida em que recebe o direito de cobrar dos usuários dos serviços
CPC 04 § 8	Amortização é a alocação sistemática do valor amortizável de ativo intangível ao longo de sua vida útil; vida útil é o período de tempo no qual a entidade espera utilizar o ativo.
CPC 04 § 94	A vida útil de ativo intangível resultante de direitos contratuais ou outros direitos legais não deve exceder a vigência desses direitos, podendo ser menor dependendo do período durante o qual a entidade espera utilizar o ativo.
CPC 04 § 95	Podem existir tanto fatores econômicos como legais influenciando a vida útil de ativo intangível. Os fatores econômicos determinam o período durante o qual a entidade receberá benefícios econômicos futuros, enquanto os fatores legais podem restringir o período durante o qual a entidade controla o acesso a esses benefícios. A vida útil a ser considerada deve ser o menor dos períodos determinados por esses fatores.
CPC 04 § 97	O método de amortização utilizado reflete o padrão de consumo pela entidade dos benefícios econômicos futuros.
OCPC 05 § 42	O ativo intangível deve ser amortizado dentro do prazo da concessão, e o cálculo deve ser efetuado de acordo com o padrão de consumo do benefício econômico por ele gerado.
OCPC 05 § 70	O método de amortização que pode ser utilizado e que melhor reflete o padrão de consumo em relação aos benefícios econômicos esperados é aquele que coincide com o mecanismo da tarifa da venda de energia. A despesa de amortização incluída na tarifa é determinada com base na vida útil econômica estimada de cada bem e apropriada de forma linear no prazo da concessão.
OCPC 05 § 72	Quando o ativo estiver totalmente amortizado, mesmo que continue a ser utilizado na prestação de serviço, a distribuidora não terá direito de receber tarifa correspondente à depreciação regulatória e à remuneração do acionista desse bem.

Fonte: dados da pesquisa (2012)

CONCLUSÃO

O fator que impera quando se trata de concessões de serviços públicos é o entendimento sobre como deve ser tratado o ativo construído pela concessionária. Deste consenso emerge todo o tratamento contábil a ser dado ao ativo, e um deles refere-se ao prazo de amortização.

Cada tipo de concessão possui particularidades a depender da esfera do poder concedente e do tipo de serviço público que está sendo prestado. A maneira como a concessão irá operacionalizar-se, ou as regras do negócio, estão descritas no contrato de concessão firmado entre poder concedente e concessionária.

Os investimentos realizados em rede de distribuição, do ponto de vista da Concessionária, não podem ser entendidos sob sua forma física, uma vez que a realização de investimentos para construção de gasodutos e interligação dos consumidores à rede de distribuição representa a aquisição do direito, previsto em contrato, de cobrar uma tarifa dos usuários pelo consumo do gás natural. Tendo em vista que a infraestrutura construída não é de propriedade da concessionária, devendo ser revertida ao poder concedente ao final da concessão, o direito adquirido é classificado como ativo intangível, pois irá realizar-se mediante a cobrança da tarifa, a depender da demanda dos consumidores.

Sob a ótica da Concessionária seu negócio possui prazo limitado e regras definidas. Portanto, o balizador para a determinação do período de amortização do ativo intangível é o contrato de concessão. A partir das características deste contrato tem-se identificadas as restrições legal e econômica. A restrição legal é imposta pela duração do contrato, e a restrição econômica pela vida útil do direito de concessão adquirido, determinada pelo poder concedente.

Desta forma, considerando: (a) duração do contrato de cinquenta anos, e (b) vida útil do direito de concessão de dez anos, procedendo à análise das normas contábeis pertinentes, tem-se que a restrição legal é de cinquenta anos e a restrição econômica de dez anos, sendo que, pelo disposto nas normas, a concessionária deve amortizar o ativo intangível pelo menor entre os dois períodos.

Além da análise das restrições impostas pelo contrato de concessão, deve-se observar o fato de que a vida útil estabelecida no contrato para o direito de concessão indica que ele é consumido pela concessionária neste período. Logo, se a amortização deve refletir o padrão de consumo dos benefícios econômicos esperados de um ativo, tem-se igualmente uma amortização pelo prazo de dez anos. Isto, pois é durante este período que o direito de concessão, ao representar um benefício econômico para a concessionária, é consumido por determinação do poder concedente quando este determina sua vida útil.

Este entendimento parte de uma análise criteriosa das normas contábeis pertinentes a contratos de concessão, emitidas pelo CPC, bem como dos parâmetros definidos no contrato de concessão.

Segundo o próprio CPC, “o grande desafio é a operacionalização da sua adoção [ICPC 01] na realidade econômica de cada empresa e especificamente em

cada contrato” (OCPC 05 § 4), de modo que,

esta tarefa deve ser precedida das seguintes recomendações: [...] (b) conhecimento do arcabouço regulatório (marco regulatório) de cada indústria e dos respectivos setores de cada indústria; (c) análise individual de cada modalidade de contrato de prestação de serviços públicos por entidade de direito privado, tais como contratos de concessão, autorização, uso do bem público, permissão e outros de naturezas similares; (d) conhecimento de todos os direitos e obrigações estabelecidos nesses contratos; (e) conhecimento da formação de preços (mecanismo de tarifa) e processo de revisão desses preços ao longo do prazo de concessão (OCPC 05 § 2).

Portanto, este estudo evidencia que não há dispositivo contábil presente nas normas emitidas pelo Comitê de Pronunciamentos Contábeis que restrinja a prática adotada pelas duas concessionárias com relação à amortização por período de dez anos dos direitos de concessão contabilizados como ativo intangível. Evidencia também, que o ativo sob a ótica da concessionária representa um direito e não um bem em sua estrutura física.

A contabilização de contratos de concessão tendo como foco o direito de concessão da concessionária ainda é prática recente no Brasil – a adoção da ICPC 01 deu-se no ano de 2010 – e os diversos segmentos de concessões possuem características distintas entre si, sendo que dentre eles pode-se afirmar que o setor de energia elétrica é o mais explorado por estudos e pesquisas científicas.

Uma vez que o campo para discussões sobre a contabilização de contratos de concessão é muito amplo e, tendo em vista a existência de certa divergência de opiniões mesmo entre empresas de auditoria independente, pesquisas futuras podem realizar um levantamento das

opiniões de auditores independentes sobre tópicos específicos da ICPC 01 e OCPC 05, podem abarcar outros tipos de concessões e ainda realizar levantamento dos demonstrativos de concessionárias de determinados segmentos visando identificar semelhanças ou discrepâncias na adoção das normas do CPC, contribuindo para o avanço nas discussões referentes ao tema.

REFERÊNCIAS

- ABEGÁS. **Associação brasileira das distribuidoras de gás natural canalizado**. Disponível em: <<http://www.abegas.org.br>>. Acesso em: 06 nov. 2012.
- ALMEIDA, Neirilaine S. de; LEMES, Sirlei. Pronunciamentos contábeis brasileiros: evidências do entendimento dos auditores independentes do Brasil. In: VI ANPCONT, 2012, Florianópolis. **Anais eletrônicos**. Disponível em: <<https://www.furb.br/especiais/download/714789-693343/CUE%20206.pdf>>. Acesso em: 24 jan. 2013.
- BRASIL. **Constituição da República Federativa do Brasil de 1988**. Disponível em: <http://www.planalto.gov.br/ccivil_03/constituicao/constituicaocompilado.htm>. Acesso em: 29 nov. 2012.
- BRUGNI, Talles V.; RODRIGUES, Adriano; CRUZ, Claudia F. da. IFRIC 12, ICPC 01 e Contabilidade Regulatória: Influências na Formação de Tarifas do Setor de Energia Elétrica. In: XXXV EnANPAD, 2011, Rio de Janeiro. **Anais eletrônicos**. Disponível em: <[http://www.administradores.com.br/informe-se/producao-academica/ifric-12-icpc-01-e-contabilidade-regulatoria-influencias-na-formacao-de-tarifas-do-setor-de-energia-eletrica/4413/Acesso em: 28 nov. 2012](http://www.administradores.com.br/informe-se/producao-academica/ifric-12-icpc-01-e-contabilidade-regulatoria-influencias-na-formacao-de-tarifas-do-setor-de-energia-eletrica/4413/Acesso%20em%2028%20nov%202012)>.
- CARVALHO, Rogério A.L. **Regulação estadual do gás natural no Brasil: metodologia tarifária e marcos regulatórios regionais**. 2010. 84f. Monografia (Especialização em Contabilidade Governamental) - Curso de Especialização em Contabilidade Governamental, Universidade Federal de Minas Gerais, Belo Horizonte, 2010.
- COMITÊ DE PRONUNCIAMENTOS CONTÁBEIS **ICPC 17 – Contratos de Concessão: Evidenciação**. Disponível em: <<http://www.cpc.org.br>>. Acesso em: 21 nov. 2012.
- COMITÊ DE PRONUNCIAMENTOS CONTÁBEIS **OCPC 05 – Contratos de Concessão**. Disponível em: <<http://www.cpc.org.br>>. Acesso em: 21 nov. 2012.
- COMITÊ DE PRONUNCIAMENTOS CONTÁBEIS. **CPC 04 – Ativo Intangível**. Disponível em: <<http://www.cpc.org.br>>. Acesso em: 21 nov. 2012.
- COMITÊ DE PRONUNCIAMENTOS CONTÁBEIS. **ICPC 01 – Contratos de Concessão**. Disponível em: <<http://www.cpc.org.br>>. Acesso em: 21 nov. 2012.
- CRUZ, Claudia F.; SILVA, Angelino F.; RODRIGUES, Adriano. Uma Discussão sobre os Efeitos Contábeis da Adoção da Interpretação IFRIC 12 – Contratos de Concessão. **Revista Contabilidade Vista e Revista**, Belo Horizonte, v. 20, n. 4, p. 57-85, out./dez. 2009.
- ERNEST & YOUNG; FIPECAFI. **IFRS 1º ano: análises sobre a adoção inicial do IFRS no Brasil**. São Paulo, 2011.

- INSTITUTO DOS AUDITORES INDEPENDENTES DO BRASIL (IBRACON). **CVM edita Deliberação que aprova revisões do Comitê de Pronunciamentos Contábeis – CPC referentes as Interpretações Técnicas ICPC 01 e ICPC 17**. Rio de Janeiro, 13 dez. 2011. Disponível em: <<http://www.ibracon.com.br/ibracon/Portugues/detNoticia.php?cod=103>>. Acesso em: 20 nov. 2012.
- INTERNATIONAL ACCOUNTING STANDARDS BOARD (IASB). **Annual Improvements 2012 (b)**. Disponível em: <<http://www.ifrs.org/Current-Projects/IASB-Projects/Annual-Improvements/Documents/AIPissues20092011cycle.pdf>> Acesso em: 27 nov. 2012.
- INTERNATIONAL ACCOUNTING STANDARDS BOARD (IASB). **Staff Paper, April 2012 (a)**. Disponível em: <<http://www.ifrs.org/Meetings/Documents/AIP0412b09.pdf>> Acesso em: 27 nov. 2012.
- INTERNATIONAL FINANCIAL REPORTING INTERPRETATIONS COMMITTEE (IFRIC). **IFRIC meeting 2011 - 3 and 4 November**. Disponível em: <<http://media.ifrs.org/IFRICUpdateNov11.html>>. Acesso em: 20 nov. 2012.
- MARTINS, Gilberto A.; THEÓFILO, Carlos R. **Metodologia da investigação científica para ciências sociais aplicadas**. 2 ed. São Paulo: Atlas, 2009.
- MINCATO, Karen D. **IFRIC 12 – Service Concession Arrangements – Uma proposta de aplicação em uma concessionária de serviço público de distribuição de energia elétrica**. 2011. 103f. Dissertação (Mestrado em Economia) – Programa de Pós-Graduação em Economia, Universidade Federal do Rio Grande do Sul, Porto Alegre, 2011.
- PARIS, Patrícia K. S. RODRIGUES, Adriano. CRUZ, Claudia F. da. BRUGNI, Talles V. Efeitos esperados da adoção da IFRIC 12 e ICPC 01: estudo comparativo entre Brasil e Europa. In: V ANPCONT, 2011, Vitória. **Anais eletrônicos**. Disponível em: <<http://www.anpcont.com.br/site/docs/congressoV/CUE214.pdf>>. Acesso em: 21 nov. 2012.
- RODAK, Edison L. **Alinhamento do Manual de Contabilidade dos Concessionários Rodoviários da ANTT às normas nacionais e internacionais de Contabilidade**. 2010. 113 f. Dissertação (Mestrado em Contabilidade) – Programa de Pós-Graduação em Contabilidade, Universidade Federal do Paraná, Curitiba, 2010.
- SANTA CATARINA, Ricardo. **Regulação econômica do serviço de distribuição de gás natural canalizado no Brasil**. 2002. 133 f. Dissertação (Mestrado em Engenharia) – Programa de Pós-Graduação em Engenharia de Produção, Universidade Federal de Santa Catarina, Florianópolis, 2002.
- SCALZER, Rodrigo S. **A adoção do ICPC 01 e os impactos financeiros nas demonstrações contábeis: um estudo de caso na Light S.A.** 2010. 114 f. Dissertação (Mestrado Profissionalizante em Administração) – Programa de Pós-Graduação e Pesquisa em Administração e Economia, Faculdade de Economia e Finanças IBMEC, Rio de Janeiro, 2010.
- SILVA, Pedro C.; WEFFORT, Elionor F.J.; PETERS, Marcos R.S.; CIA, Joanília N.S. Impacto da adoção das IFRS nas empresas brasileiras de saneamento: a percepção dos profissionais do setor. **Revista Contabilidade Vista e Revista**, Belo Horizonte, v. 21, n. 2, p. 69-94, abr./jun. 2010.

ZONATTO, Vinícius C. S.; SANTOS, Alexandre C. dos; JUNIOR, Moacir M. R.; BEZERRA, Francisco A. Determinantes para a adoção de padrões internacionais de contabilidade no Brasil: uma investigação em empresas públicas e privadas do setor de energia elétrica. **Revista de Contabilidade e Organizações**, Ribeirão Preto, v. 5, n. 12, p. 26-47, 2011.

ATTITUDE AND INTENTIONS TOWARD VERBAL MESSAGES IN PRINT ADVERTISING: COMPARISON INDIA AND PORTUGAL

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ABSTRACT

Nowadays, it becomes very important for the companies to decide how the advertisement of the goods or service should be. Attract customers to a certain limit is not very hard, but to gain the feedback from a huge number of customers with strong existing competitors is not very easy. In this study, we analyze the impact of print statements (messages) as stimuli in print advertisements on Indian and Portuguese consumers. We have selected one product, coffee, which is very popular and “famous”, especially for young generation of both countries. Findings reveal that males tend to demonstrate negative attitudes more than females of two countries. On the other hand, women have expressed happiness, interest, liking, stimulation and showing interest to recommend product for each picture more than men. Result also highlight that power distance has been decreased in India than what was expected. Long-term orientation and individualism is still very high for Indian people as expected. They are more individualistic and less affected by uncertainty than Portuguese. Collectivism is much preferable for Portuguese than Indian culture.

Keywords: print advertising, verbal messages, cultural comparison

INTRODUCTION

Advertising (ad) is one of the most important elements of marketing communication. Our research is about the incentive process of advertisement that coffee companies use according to the different cultural mind to persuade customer mentally to buy their products. To point out how they measure (or they have to measure) the psychological effects and changes by visualizing an ad, is our main subject.

Advertising (ad) is a form of communication used to encourage or persuade audience (viewers, readers or listeners) to continue or take some new action. Ads help to keep the consumers informed about whatever new products or services are available in the market at their disposal. Ads also help to spread awareness about products or services that are of some use to consumer and potential buyers. Most commonly, the desired result is to drive consumer behaviour with respect to a commercial offering, although political and ideological advertising is also

common. The main objective of advertisement is to help the product gain maximum success by reaching maximum audience.

The current study analyse the effect of ads on consumer behaviour based on S-O-R theory. This theory emerges from the environmental psychology proposed by Mehrabian and Russell (1974). This theory is operationalized in a stimulus–organism–response (S–O–R) framework. Therefore, S–O–R suggests that the stimuli as antecedents affect the consumers’ emotional states (organism), whose response may result in their retail behaviours (responses) such as re-patronage, store search and in-store behaviour (Thang & Tan, 2003). The stimuli are operationalized as the atmospheric cues, organism as emotional and cognitive states of consumers, and response as approach/avoidance behaviours (Donovan & Rossiter, 1982). Sherman et al. (1997) show that while social and design factors have a positive effect on pleasure, ambient factor has a positive impact on arousal. In addition,

they found that pleasure has a positive impact on the amount of money spent and store liking, arousal has a positive effect on the amount of money spent and the number of items purchased.

Our selected product is coffee. We have chosen this particular product because this is common and known to every citizen of India and Portugal and they have gained popularity also in these two countries. For such, we will start with theoretical background, which enabled us to realize that there is a lack of studies analyzing comparatively, in culturally different countries, the perception of consumers to stimuli generated by verbal messages. Thus, besides having regard to the S-O-R theory, we also apply the knowledge of Hofstede dimensions to differentiate the cultural values. Regarding the print ads of coffee, the main goal of this study is to compare the attitude towards the ad (pleasure, arousal, negative emotions and intentions) and the attitude towards the brand (positive attitude, negative attitude, and intentions) between Indian and Portuguese people.

Following the introduction, next section presents the theoretical background. Then, the methodology and results are provided. Finally, the last sections present conclusions, limitations, and suggestions for future research.

THEORETICAL BACKGROUND

Mehrabian and Russell's (1974) propose environmental psychology's S-O-R theory, which is our base to assemble this study. According to this theory, stimuli affects the consumers' emotional states, which is organism, and as a result, consumers response through searching in the store, watching with a long time or/ and purchasing the product.

S-O-R is a combined process of *stimuli*, *organism* and *response*. Stimuli means those thing, set from outside, which work as catalyst to the attract consumer-

mind positively towards the product or service. In this case, we are working on messages used in advertisement, how it attracts the customer. Organism is the middle process of stimuli and the reaction of consumer. Stimuli makes consumer react. But before consumer react, they have some feelings towards the product; that is organism. For an example, after watching an ad, somebody can think "I like it" or "o, I love this chocolate" or "wow, it's nice (ad)" etc. This change of mind is organism. Response is perceptual activity, which is represented by value judgement, by customer. This is the final action of customer as a reaction and can be psychological reaction such as attitudes or behaviour, intention to stay, explore, and affiliate, avoidance behaviours concern the opposite (Mehrabian & Russell, 1974) are some of the probabilities of response.

In case of using stimuli in advertising we can use information, entertainment, colour, design and presentation as the variables. For example, Clarke and Honeycutt, Jr. (2000) have determined that different cultures use different colour schema due to the amount of sun received, natural selection, biological factors (number of cones and rods in the eye), etc. Zettl (2005) indicates that these differences lead to different colour conventions among the cultures around the world. The impact of using colour is different for different gender, different region and different social culture. Design and presentation are other items to stimulate the consumer mind.

Based on literature review, we can point out two major responses usually analysed in the advertising field of research: attitude and purchase or behavioural intentions. Customers can respond positively or negatively to a particular advertisement. Customers who have more positive attitudes toward advertising are more likely to be persuaded by advertising (Mehta, 2000). Ducoffe (1996) has explored the

antecedents of consumer attitudes toward website advertising.

Previous studies have focused on the characteristics of online advertising that influence customer attitudes by considering the unique characteristics of the Internet as opposed to offline advertising (e.g., Campbell & Wright, 2008; Coyle & Thorson, 2001; Peng, Fan, & Hsu, 2004). Recent studies of online advertising have also shown positive relationship between attitude and purchase intentions and between attitude and behaviour, such as the likelihood of buying, online visitations, and online shopping frequency (e.g., Bruner & Kumar, 2005; Karson & Fisher, 2005; Korgaonkar & Wolin, 2002; Stevenson et al., 2000; Wang et al., 2009; Wolin et al., 2002).

Emotions

Emotion is regarded as mental state that arises spontaneously rather than through conscious effort and is often accompanied by physiological changes; a feeling (e.g., Edell and Burke, 1987; Goldberg & Gorn, 1987). Edell and Burke (1987) demonstrate that feelings generated by ads are conceptually different from thoughts about the ad and both are important and contribute uniquely to explaining the effects of advertising. Goldberg et al. (1987) examine funny or sad television program to induce a positive or negative mood and found that both types of commercials are rated as more effective

when embedded within the funny program and that this effect was strongest for the emotional commercials. Olney, Holbrook and Batra (1991) show how mood responses to an advertisement affected viewing time of the advertisement. They found that advertising content influenced both the positive-negative and arousal dimensions of mood and, most effectually, the consumers spent more time watching advertisements with positive content, which created happy moods in the viewer. The present study adopts the emotional responses in two dimensions: pleasure and arousal.

Cultural differentiation

Varnum et al. (2009) has divided the differentiation through Values & beliefs (Individualism Autonomy), Self Independent (self-construal, Personal social identity, Self as bounded), Emotions (Higher propensity of socially disengaging emotions, Happiness as a disengaging emotion), Motivation Individual achievement, Self-enhancement, Ego-inflation). Through the image of “culture” people behaves differently in different region. Basic intention to purchase a product is not also same in different countries especially east and west really have a big difference in their daily life-style. To understand the differentiation of both culture (Portugal and India), we are following the theory of Hofstede (see figure 1).

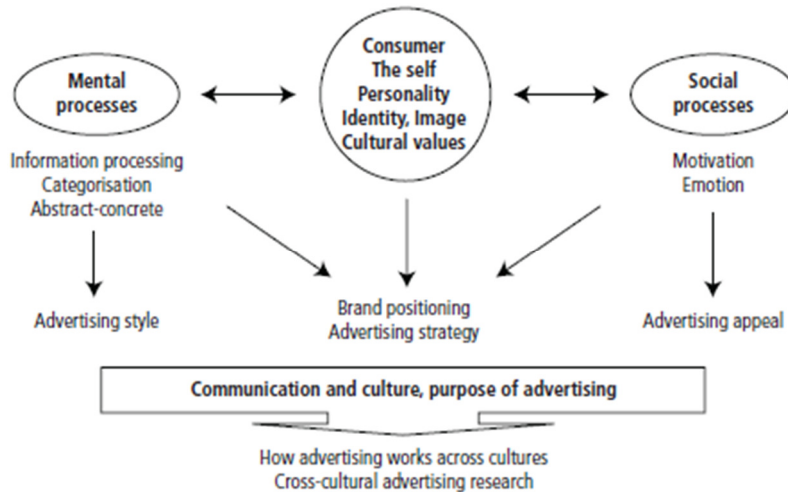


Figure 1. Global advertising research-understanding cultural values of consumers
Source: De Mooij & Hofstede (2010)

Hofstede (2001) proposes five dimensions of culture: power distance, individualism, masculinity, uncertainty avoidance and long term orientation. Considering the two countries' cultural aspect, we found a huge difference between India and Portugal (see figure 2). As result, the mentality and the behaviour, habits are also different among these two country's people. Still, coffee is popular in both countries. The companies have tackled both of them either with some common measurement, or they have applied different tactics for different countries. The first solution cannot be very effective as the customers from different countries have to feel something different and unique attraction towards the same products.

In their six-country cross-cultural study, Cutler, Javalgi, & Erramsilli (1992) also find that US magazine ads relied more on direct rather than indirect visuals in general. Contrary to their expectations, they found that Korea was the most direct advertiser among the six countries studied. They conclude that the cross-cultural difference was not clear in that they found evidence of indirectness of visual forms far less than expected.

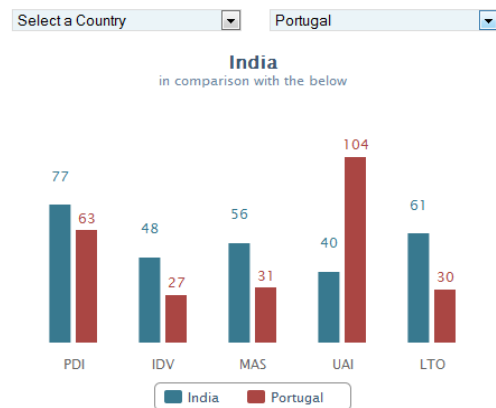


Figure 2. Hofstede cultural dimension between India and Portugal
Source: Hofstede (2012)

METHODOLOGY

Our study has been divided into three parts.

Study 1

Using a group of 100 students from two major universities in Portugal and India, it was possible to understand that coffee is a drink well recognized in both countries, Portugal and India.

Study 2

Based on Hofstede dimensions and Kyunghye (2009), Callow and Schiffman (2002), An (2003), and Zubcevic and Luxton (2011)'s studies, a list of words and statements were prepared regarding

the culture characteristics of the two counties. The list was first built in English than back-translated to Portuguese in order to keep the same meaning Sekaran (1983). Then, using a group of 50 students from two major universities in Portugal and India, it was possible analyse which words and statements are more suitable to be used in print advertisings for each counties.

Study 3

The main study starts with the selection of the picture representing the background of the advertising. First, it was collected a lot of advertisements (print ads and videos) of coffee to measure the facts behind the attraction of consumers through the Medias mentioned above (except sms). But to measure consumer perception for this research, we have selected only one picture of coffee (see figure 3). Using the picture showed in figure 3, a group of 6 print advertisings were manipulated in order to analyze statements and brands. Each slide showed with the same picture and different statements. The statements are presented in each table of results.



Figure 3. Background of the manipulated print advertising

Source: coffee image from Google image (free access)

RESULTS

The collected data was treated using SPSS 20 software. First the sample characterization is presented, then the descriptive statistics and finally the mean difference in order to test the hypotheses. We prepared our questionnaire with 6

pictures, which consist to the same image with different message or key-line. To fulfil the objectives of the present work, we experimented English questionnaire with Indian students and Portuguese questionnaires with Portuguese students from several universities and collected total 247 samples (total sample size). The results are minutely described in the following description with the tables.

We have got answer from various age groups- from 18 to 43. Mostly the answers are collected from 20-22 years' young people (44,5%). Among female participants average age is 22,36 and among male participants it is 23,42. In case of Indian people, the average age is 24,19 and Portuguese average age is 22,30. Among the total sample of 247, 32% people have fully agreed that they have strong interest in coffee and 17,8% people had neutral answer. On other side, 35,6% people have totally disagreed to get bored when other people talk about coffee and 22,3% had neutral answer. Tables 1-6 summarize the results of SPSS 20 for each of the six pictures (the statement presents in each picture is written in the top of each table), reflecting the mean, the standard deviation (SD), the interval of confidence (95%) and the results of t test (sig.-different significant and not sig.-difference not significant).

When comparing the mean values between Portugal and India, it is possible to see that Indian respondents tend to be more connected to the statement presented in the ad than the Portuguese respondents, though this. Indian respondents seem to feel more interest, enthusing, exciting, stimulated; they are less annoyed and happier by watching the ad than the Portuguese students. On the other hand, Portuguese seem to feel that the ad is very much annoying for them. The first message was targeted mainly for Portuguese people, but the results tend to reveal the opposite of what was expected.

Table 1. Mean differences between Portugal and India, Picture 1 (A cup that makes you a helping person)

	Port. ean	SD	Indian mean	SD	Mean dif.	t	Std. Error Dif.	Interval lower	Interval upper	Dif. sig./ not sig.
This ad is interesting to me	3,35	1,68	4,14	1,82	-0,79	-3,17	0,25	-1,28	-0,30	Sig.
This ad is enthrusing	3,04	1,58	4,05	1,58	-1,01	-4,60	0,22	-1,45	-0,58	Sig.
I like this ad	3,27	1,70	4,15	1,67	-0,88	-3,75	0,23	-1,34	-0,42	Sig.
This ad is exciting	2,79	1,59	4,11	1,71	-1,32	-5,63	0,23	-1,78	-0,86	Sig.
I would recommend coffee to others after watching this ad	2,79	1,55	4,07	1,77	-1,28	-5,39	0,24	-1,75	-0,81	Sig.
This ad is irritating	3,11	1,74	3,23	1,99	-0,12	-0,46	0,27	-0,65	0,41	not sig.
I feel stimulated after watching this ad	2,82	1,63	3,34	1,67	-0,52	-2,26	0,23	-0,98	-0,06	Sig.
This ad is very much annoying for me	3,32	1,85	2,66	1,87	0,66	2,55	0,26	0,15	1,18	Sig.
I feel happy by watching this ad	2,94	1,44	3,95	1,73	-1,01	-4,38	0,23	-1,47	-0,55	Sig.
I feel depress by watching this ad	2,88	1,74	2,81	1,88	0,07	0,27	0,26	-0,44	0,58	not sig.

Note: colour pink represent significant differences (sig.) at 0,05

Most of the mean differences are not statistically significant. This means that the statement showed in the picture does not represent a cultural different between the two countries. This could point out that Portuguese people tend to be more individualists nowadays and more close to Indian culture in this aspect.

Tradition and safety, uncertainty avoidance is usually more connected to Portuguese people than Indian people. Picture 3 was designed mainly for Portuguese people; however the results tend to reveal that the mean differences are

not significant. Therefore, the idea of tradition and continuity tend to be so important for both Portuguese and Indian people. And here also the significant result shows that Indians are happier than Portuguese people when they watch this particular picture 3.

Globally, as expected, Indian respondents seems to be more engaged to a statement appealing for achieve goals, be a winner than the Portuguese respondents. Indians are more interested, enthusiastic to feel as a winner. On the other hand, Indians have reacted more with their negative attitudes also.

Table 2. Mean differences between India and Portugal, Picture 2 (A cup for a very exclusive person)

	Port.		Indian		Mean		Std. Error Dif.	Interval		Sig
	mean	SD	mean	SD	dif.	t		lower	upper	
I like this ad	3,90	1,64	3,74	1,74	,16	,68	,24	-,31	,64	No
This ad is irritating	2,83	1,54	2,74	1,65	,09	,39	,23	-,36	,53	No
This ad is really interesting to me	3,81	1,54	3,95	1,76	-,13	-,55	,24	-,60	,34	No
This ad is enthusing	3,53	1,59	3,11	1,75	,42	1,75	,24	-,06	,89	No
I feel depress by watching this ad	2,63	1,59	3,26	1,98	-,63	-2,42	,26	-1,15	-,11	Sig.
I would recommend coffee to others	3,56	1,50	3,90	1,65	-,35	-1,54	,22	-,79	,10	No
This ad is exciting	3,07	1,43	3,37	1,78	-,30	-1,39	,22	-,72	,12	No
This ad is stimulating	3,31	1,56	3,75	1,66	-,30	-1,28	,23	-,77	,17	No
This ad annoyed me	2,97	1,63	3,32	2,00	-,45	-1,96	,23	-,90	,00	No
I feel happy by watching this ad	3,24	1,34	3,81	1,75	-,35	-1,32	,26	-,87	,17	No

Note: colour pink represent significant differences (sig.) at 0,05

Table 3. Mean differences between India and Portugal, Picture 3 (Same cup, same taste, as always...)

	Port.		Indian		Mean		Std. Error Dif.	Interval		Sig
	mean	SD	mean	SD	dif.	t		lower	upper	
This ad is interesting to me	3,55	1,76	3,23	1,99	0,31	1,17	0,27	-0,22	0,84	no
I feel happy by watching this ad	3,25	1,43	3,73	1,81	-0,48	-2,01	0,24	-0,95	-0,01	Sig.
I like this ad	3,57	1,58	3,85	1,81	-0,28	-1,15	0,24	-0,76	0,20	No
This ad is irritating	3,02	1,52	3,26	1,88	-0,24	-0,95	0,25	-0,73	0,26	No
I would recommend coffee to others	3,46	1,53	3,92	1,83	-0,46	-1,88	0,24	-0,94	0,02	No
This ad is so exciting	2,92	1,33	3,19	1,75	-0,27	-1,19	0,23	-0,73	0,18	No
This ad stimulates me	3,19	1,44	3,56	1,60	-0,37	-1,71	0,22	-0,80	0,06	No
This ad is annoying	3,01	1,57	3,21	1,81	-0,19	-0,80	0,24	-0,68	0,29	No
This ad is enthusing	3,14	1,36	3,55	1,76	-0,40	-1,75	0,23	-0,86	0,05	No
I feel depress by watching this ad	2,68	1,59	3,03	1,94	-0,35	-1,34	0,26	-0,85	0,16	no

Note: colour pink represent significant differences (sig.) at 0,05

Table 4. Mean differences between India and Portugal, Picture 4 (A cup that makes you feel winner)

	Port.		Indian		Mean		Std. Error Dif.	Interval		Sig
	mean	SD	mean	SD	dif.	t		lower	upper	
I would recommend coffee to others after watching this ad	3,38	1,71	3,63	1,87	-,25	-,99	,25	-,75	,25	No
I like this ad	3,47	1,66	3,26	2,07	,21	,75	,27	-,34	,75	No
This ad is irritating	3,24	1,73	3,23	2,11	,01	,03	,28	-,54	,56	No
This ad is interesting to me	3,30	1,48	4,01	2,04	-,71	-2,71	,26	-1,24	-,19	Sig.
This ad is exciting	2,99	1,48	3,44	1,94	-,44	-1,75	,25	-,95	,06	No
This ad is annoying	3,28	1,68	3,89	2,19	-,61	-2,13	,29	-1,18	-,04	Sig.
This ad is stimulating	3,30	1,59	3,67	1,88	-,37	-1,46	,25	-,86	,13	No
I feel happy by watching this ad	3,13	1,54	3,62	2,07	-,49	-1,82	,27	-1,02	,04	No
This ad is enthusing	3,24	1,60	3,99	1,85	-,75	-3,02	,25	-1,24	-,26	Sig.
I feel depress by watching this ad	2,71	1,60	3,55	2,05	-,84	-3,10	,27	-1,38	-,30	Sig.

Note: colour pink represent significant differences (sig.) at 0,05

Table 5. Mean differences between India and Portugal, Picture 5 (A cup for sharing with friends)

	Port.		Indian		Mean		Std. Error Dif.	Interval		Sig
	mean	SD	mean	SD	dif.	t		lower	upper	
I like this ad	4,65	1,68	4,38	2,14	0,27	0,95	0,28	-0,29	0,82	No
This ad is interesting to me	4,4	1,62	3,52	2,26	0,88	3,01	0,29	0,30	1,45	Sig.
I would recommend coffee to others	4,22	1,72	4,73	2,09	-0,50	-1,81	0,28	-1,05	0,05	No
This ad is irritating	2,49	1,59	3,3	2,31	-0,81	-2,75	0,30	-1,40	-0,23	Sig.
This ad is annoying	2,45	1,56	3,45	2,22	-1,00	-3,49	0,29	-1,57	-0,43	Sig.
I feel depress by watching this ad	2,3	1,55	2,47	1,92	-0,16	-0,64	0,25	-0,66	0,34	No
This ad is exciting	3,7	1,50	3,52	2,10	0,18	0,65	0,27	-0,36	0,71	No
This ad is enthusing	3,83	1,54	3,66	2,21	0,18	0,62	0,28	-0,39	0,74	No
I feel happy by watching this ad	3,86	1,65	4,51	2,03	-0,65	-2,40	0,27	-1,18	-0,11	Sig.
This ad is stimulating	3,89	1,64	4,48	2,04	-0,59	-2,21	0,27	-1,13	-0,06	Sig.

Note: colour pink represent significant differences (sig.) at 0,05

Table 6. Mean differences between India and Portugal, Picture 6 (A cup of coffee makes you confident)

	Port. mean	SD	Indian mean	SD	Mean dif.	t	Std. Error Dif.	Interval lower	Interval upper	Dif. sig./ not sig.
I would recommend coffee to others	3,61	1,59	3,95	2,11	-,33	-1,20	,28	-,88	,22	not sig.
This ad is interesting to me	3,57	1,57	3,88	1,93	-,30	-1,18	,26	-,81	,20	not sig.
This ad is exciting	3,24	1,52	4,03	1,89	-,79	-3,17	,25	-1,29	-,30	Sig.
This ad is enthusing	3,34	1,53	4,16	1,92	-,83	-3,27	,25	-1,33	-,33	Sig.
I like this ad	3,68	1,54	4,29	1,85	-,61	-2,46	,25	-1,09	-,12	Sig.
This ad is stimulating	3,4	1,52	4,04	1,91	-,65	-2,56	,25	-1,14	-,15	Sig.
I feel happy by watching this ad	3,28	1,46	4,25	1,98	-,97	-3,76	,26	-1,47	-,46	Sig.
This ad is irritating	3,06	1,72	3,49	2,10	-,43	-1,54	,28	-,98	,12	not sig.
I feel depress by watching this ad	2,62	1,71	3,4	2,09	-,78	-2,82	,28	-1,33	-,23	Sig.
This ad is annoying	3,16	1,73	2,86	2,07	,30	1,08	,28	-,25	,84	not sig.

Note: colour pink represent significant differences (sig.) at 0,05

From the empirical research, collectivism is important part of Portuguese culture. The result also shows that the idea of friendship seems to be more interesting for Portuguese than for Indian respondents. Indian respondents tend to regard the statement of this picture more irritating and annoying than Portuguese. On the contrary, Indian people have shown more happiness and stimulated with this ad. Therefore, seems that Portuguese still are more collectivists than Indian people.

As expected, Indian respondents seems to be more connected to the statement of this picture than Portuguese. Again feeling confidence, achieving goals, taking risks are more connected to Indian people than with Portuguese people. In short, Indians like to be more individualistic.

CONCLUSIONS

This study intent to contribute to fulfil a gap found in previous studies which

demanding for more research that analyzes the perceptions of statements of potential consumers in different countries.

Due to globalization or by the time, changes have happened to both countries' cultures. The current result of our study didn't prove completely the theoretical culture perspective of Hofstede, but in order to achieve such goal, an empirical study was carried out which allowed collecting data from two countries India and Portugal. From the result of the research, we find that pleasure and arousal from two countries are very prominent. Sometimes, negative intension toward ad is also valid. Surprisingly, males have always showed negative attitudes more than females of two countries. On the other hand, women have expressed happiness, interest, liking, stimulation and showing interest to recommend product for each picture more than men. Result shows that Power distance has been decreased in India than what was expected. Long-term orientation (LTO) and individualism is still very high for Indian people as expected. They are much individualistic

and less affected by uncertainty than Portuguese. Collectivism is much preferable for Portuguese than for Indian. Other important factors are:

- Portuguese seems not be so collectivists as traditionally regarded Indians.
- Indian people are still goal and win oriented but are also very concerned and connected to spend good times with friends and family.

Limitation

Alike every other study, our study is also not without its limitation. Firstly, only two universities of Portugal have been selected. India is a comparably big country and has different languages (with different letters) and different culture all over the country, where as the survey is mainly conducted in Kolkata (Calcutta) (West Bengal) and in a precious management institute and technological institutes. So, it lacks to measure the purchasing motivations of other region's people. Still, we have got answers from different regions also (by spreading personal messages). Secondly, most of the samples are students. Thirdly, the toughest thing we faced to collect data from Indians, as there is almost no "cultural environment" to fill up the questionnaire, and people avoided. Unfortunately, we couldn't collect much data from Indians. Fourthly, we didn't have any age bar. We targeted mainly young generation and did the experiment.

Future research

Future research should focus these points again with more sophisticated way. The research can be done in various places with various cultures and various products or services. Moreover, we can measure the consumer perception with the base of one common brand in two different countries. We may also have deeper research with specific age-groups. Educational level can

be another variable in future. Even social economic status can change the decision of a person. So, there are various ways to make research in this field.

References

- An, D. (2003). An empirical study of Hall and Hofstede's cultural values: a content analysis of internet advertising in Korea and the US. Unpublished Doctoral Dissertation, University of South Carolina.
- Bruner, G.C., & Kumar, A. (2005). Explaining consumer acceptance of handheld Internet devices. *Journal of Business Research*, 58 (5), 553–558.
- Callow, M., & Schiffman, L. (2002). Implicit meaning in visual print advertisements: a cross-cultural examination of the contextual communication effect. *International Journal of Advertising*, 21(2), 259–277.
- Campbell, D.E., & Wright, R.T. (2008). Shutup I don't care: understanding the role of relevance and interactivity on customer attitudes toward repetitive online advertising. *Journal of Electronic Commerce Research*, 9 (1), 62–76.
- Coyle, J.R., & Thorson, E. (2001). The effects of progressive levels of interactivity and vividness in Web marketing sites. *Journal of Advertising*, 30 (3), 65–77.
- Cutler, B., & Javalgi, R. (1993). Analysis of print ad features: services versus products. *Journal of Advertising Research*, 33(2), 62–69.
- Cutler, B., Javalgi, R., & Erramsilli, M. (1992). The visual components of print advertising: a five-country cross-cultural analysis. *European Journal of Marketing*, 26(4), 7–20.
- De Mooij, M., & Hofstede, G. (2010). The Hofstede model: Applications to global branding and advertising strategy and research. *International Journal of Advertising*, 29(1), 85–110.

- Donovan, R. J., & Rossiter, J. R. (1982). Store atmosphere: An environmental psychology approach. *Journal of Retailing*, 58(1), 34–57.
- Ducoffe, R.H. (1996). Advertising value and advertising on the Web. *Journal of Advertising Research*, 36 (5), 21–35.
- Edell, J., & Burke, M. C. (1987), The Power of Feelings in Understanding Advertising Effects, *Journal of Consumer Research*, 14(3), 421–433.
- Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2001). Atmospheric qualities of online retailing: A conceptual model and implications. *Journal of Business Research*, 54(5), 177–184.
- Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2003). Empirical testing of a model of online store atmospherics and shopper responses. *Psychology & Marketing*, 20(2), 139–150.
- Goldberg, M. E., & Gom, G. J. (1987), Happy and Sad TV Programs: How They Affect Reactions to Commercials. *Journal of Consumer Research*, 14 (3), 387–403.
- Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations across Nations*. Thousand Oaks CA: Sage.
- Hofstede, G. (2012) geert-hofstede.com. Retrieved on <http://geert-hofstede.com/countries.html>
- Karson, E.J., & Fisher, R.J. (2005). Reexamining and extending the dual mediation hypothesis in an online advertising context. *Psychology & Marketing*, 22 (4), 333–351.
- Korgaonkar, P., & Wolin, L.D. (2002). Web usage, advertising, and shopping: relationship Patterns. *Internet Research*, 12 (2), 191–204.
- Kyunghee, B. (2009). Determinants of visual forms used in print advertising: A cross-cultural comparison. *International Journal of Advertising*, 28(1), 13–47.
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. Cambridge, MA: MIT Press.
- Mehta, A. (2000). Advertising attitudes and advertising effectiveness, *Journal of advertising research*, 40(3), 67–72.
- Olney, Th. J., Holbrook, M. B., & Rajeev Batra, R. (1991). Consumer Responses to Advertising: The Effects of Ad Content, Emotions, and Attitude toward the Ad on Viewing Time. *Journal of Consumer Research*, 17 (4), 440–453.
- Peng, K.F., Fan, Y.W., & Hsu, T.A. (2004). Proposing the content perception theory for the online content industry—a structural equation modeling. *Industrial Management & Data Systems*, 104 (5–6), 469–489.
- Sekaran, U. (1983). Methodological and theoretical issues and advancements in cross-cultural research. *Journal of International Business Studies*, 14 (2), 61–73.
- Sherman, E., Mathur, A., & Smith, R. B. (1997). Store environment and consumer purchase behavior: Mediating role of consumer emotions. *Psychology & Marketing*, 14, 361–378.
- Stevenson, J.S., Bruner II, G.C., Kumar, A. (2000). Web page background and viewer attitudes. *Journal of Advertising Research*, 20 (1/2), 29–34.
- Thang, D. C. L., & Tan, B. L. B. (2003). Linking consumer perception to preference of retail stores: An empirical assessment of the multi-attributes of store image. *Journal of Retailing and Consumer Services*, 10(4), 193–200.
- Varnum, M. E. W. Grossmann, I. Kitayama, Sh., & Nisbett, R. E. (2009). The Origin of Cultural Differences in Cognition: The Social Orientation Hypothesis. *Current Directions in Psychological Science*, 000(00), 1–5. <http://sitemaker.umich.edu/igor.grossmann/files/CDPS359301.pdf>
- Wang, Y, Sun, S., Lei, W., & Toncar, M. (2009). Examining beliefs and attitudes toward online advertising among

- Chinese consumers. *Direct Marketing: An International Journal* 3 (1), 52–66.
- Wolin, L., Korgaonkar, P., & Lund, D. (2002). Beliefs, attitudes and behavior towards web advertising. *International Journal of Advertising*, 21 (1), 87–113.
- Zubcevic, N.; Luxton, S. (2011). A comparison of print advertisements from Australia and Croatia, *Australasian Marketing Journal*, 19 (2), 131–136.

BUSINESS MERGERS AND CHANGE: A VIEW FROM OUTSIDE IN

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ABSTRACT

We analyze in the present article the results of Business Mergers in the level of internal communication and the set of the internal climate generated with the changes brought on with the 1980 mergers in Portugal, very relevant to the insurance activity, prototype of the consequences verified with the globalization of the 90's. Here we have made a comparative study between two groups of companies undergoing such mergers and some of the connected problems that were investigated. The main factor that distinguishes the groups analyzed is located within the changing moments; so that while one of the group's process is shown immediately, instantaneously, the other group revealed lengthwise, by stages planned over three years, which enabled the preparation for the change that was coming. In terms of results we have to admit that the confusion initially perceived in the merging process, occurs mainly in the new company which does not carry out any kind of preparation for the new constitution, while the same process works much easier in that which had the opportunity to make plans over three years of adaptation.

Keywords: Business mergers, internal communication, internal climate, change, strategic communication, planning.

INTRODUCTION

The issue presented here represents one of the foundations of the current economic and social life of the developed societies. The process of globalization unleashed in the last two decades of the 20th century with the development of technologies and their economic consequences, led organizations and institutions worldwide to significant changes in patterns of management and administration.

Particularly in developing countries, globalization brings with it the mark of entry of foreign capital through mergers and acquisition of local companies. Mergers and acquisitions can function as true instruments of economic and financial restructuring promoting business combination and the natural synergies that might ensue.

For a company with availability of funds this may be the way to overcome difficulties in the increasing market share quota or loss of profitability. On the contrary, for a company with financial constraints, though economically viable,

opening its capital to third parties or merger with other(s) may be, especially in the current situation, the only way to renew sources of capitalization. The case will be to say, here, that two and two do not make four, but five.

The truth is that, increasingly, the activities of merger and acquisition of companies have become a source of analysis by scholars in the field of business, because they have growing importance in the globalized economy and a vast impact on various dimensions of the market, changing relationships between companies and the settings of organizational networks. They are activities that hold a high degree of complexity, risk and uncertainty, and split opinions about their advantages and disadvantages.

Lately, however, it has been noted that other factors lead to large organizations to a merger or acquisition, running away from the goals of synergies shown earlier. Among these factors, according to Bulgarelli (1999), is the pursuit of monopoly power. From the moment when

two or more organizations merge, there is an increase in market concentration of this new company and the consequent reduction of competition, which brings more benefits for the same company.

Another very common factor in mergers and acquisitions currently under discussion is the issue of reduction of risk of insolvency, resulting from the fusion of two or more companies with cash flows without perfect correlation. When an organization realizes that it is on the way to bankruptcy, for various reasons, such as inability to pay their debts, it is preferable the sale of its assets to avoid major losses and, with the help of the buyer company, agglomerate the individual assets in a single company.

The fact is that, increasingly, the phenomenon of increasing globalization from the 90s has been promoting constant integration of organizational structures by means of mergers and acquisitions in various sectors of the economy, an aspect that has merited study and reflection on the business scope. It is understood that the acquisitions and mergers are always related to domestic issues of the communicational nature. The truth is that the changes are very visible at the level of human resources in terms of communication, derived from fusion processes.

In terms of research, the factors related to the management of people are still not addressed by administrative summits with the same concern that we consider the economic and financial results of these transactions. We cannot ignore the fact that the internal communication presents itself as an essential factor for cultural management since the internal employees occupy one of the public most affected in mergers and acquisitions.

For the analysis of the case study we have chosen two cases which have proved paradigmatic mergers of services in Portugal - the insurance sector – an era that

has characterized these processes so well, having proceeded to the comparative study of the results of each situation. It is in this context we have seen highlighted the importance of the Communication factor for the integration of several employees of different companies after the merger, given the recent coexistence of the different Cultures and vivid changes generating a Global climate to the new drive.

With the results of our research we intend to contribute to a better understanding of generated problems with mergers, given the little that has been studied in regards to Sociology, and particularly of Internal Communication.

METHODOLOGY

The *object of study* we set, led us to formulate an issue for investigation, in order to obtain the necessary scientific validity. Thus, all this research was developed with a view to responding to the following question:

How will the role of internal communication be translated after mergers in insurance, and what are the consequences that were derived in relation to climate stability and the cohesion installed of a new culture?

Simultaneously, we have designed some working hypotheses whose analysis is presented in the Discussion of Results in light of the information already obtained then and now we describe:

Main hypotheses:

The merger of insurers have led to dysfunctions at the level of internal communication which, in turn, are found related to the anomic processes in its internal stakeholders /public.

Secondary hypotheses:

- *Internal Communication both formal and informal will have become dysfunctional in relation to the clash*

of different distinct Organizational cultures

- *The new organizational structure has led to constraints on the decision making of managers*
- *The organizational identity of origin have caused processes of incompatibility with the new organizational entity, the result of the merger*
- *The organizational structure arising from the merger will have led to states of personal and group Anomie*

The research methodology used was based on case studies, specifically in *compared multi cases*. As a technique, we undertook a sociological survey conducted by *semi-structured* interview. This means that the basis of the script contains relatively open-ended questions. The technique used for research revealed almost exclusively in the speech the interviewee. Thus, in addition to the identifiable aspects, very few are those that will have a limited response. The approach by the case study method allowed us to have a flexible attitude and openness to new ideas. The introduction of a second case in research has a *control group* function regarding the results obtained with the findings of the first case and, hence, the *compared multi cases*. It is the attempt to find similarities between the two cases. As complementary techniques to semi-structured interviews we conducted *Documental Analysis*.

Note that we conducted an *exploratory study* with some direct interviews with qualified informants for a thorough understanding of the environment and research orientation previously to this research development.

DISCUSSION

With globalization and the new economy, a new reality emerged. More and more, there was less "Space" for the little ones,

to the least powerful. Acquisitions and mergers are increasingly constant so that companies can face the characteristics of globalization, recurrent of the new economy and opening borders at the economic level. The choice for mergers between insurance business companies led to a strategic choice of overall management. The process derived from this strategy has been the source of transformations and adaptations that have translated into several areas and at several levels.

The theme analysis that focuses on the consequences on the level of the internal communication in business insurance activity, the most representative target while merging, has its purpose to ascertain the results of this process of change in social and human terms. There are related aspects that translate as dependent variables while under investigation that are then introduced, without much theoretical development.

This is not a current concern and therefore already considered in the light of sociological perspectives, of human relations and, more recently, business communication. They are, therefore, theoretical foundations already under authors such as Schein (1985), and generally in Company Culture in concepts such as cultural identity (see Sainsaulieu, 1977), and human values, social and institutional which are often marginalized from tops of businesses.

The present case translates into the imposition of political resource: it is the *consequences of the merger*, which translate the *object of our study* as before mentioned, but with the grounds which make it possible to consider this decision on the level of a management strategy for an even larger reality, inserted throughout an economic situation, even internationally, which was then lived. They will reveal the *dimensions of analysis of the research* that we will present next. We can only, even before,

substantiate a little the goals and effects of mergers, based reasons of such management option.

On the basis of the fusion strategy, a synergistic effect is sought. It is assumed that with the combination of various businesses we create more value together than when isolated, ie: we start from the principle that the whole worth is always more than the sum of its component parts ($2 + 2 = 5$). The merger is a strategy which is expected to obtain valuable gains for the new company. The merger involves *change* and a process involving all stakeholders in achieving this change.

With the merging of several companies an opportunity is found in increasing the size of an organization. At the core bottom, what is sought is a form of rapid growth of the organization. In a very pragmatic strategy that is at the base of the foundation in corporate mergers, it is creating value in two ways: by simultaneously reducing both costs and an increase in profits. As a matter of strategy, this involves risk. It is, somehow, a game. There is, therefore, to note that, as in all Parallel situations, the expected results are not always obtained. And this, too, because organization is not isolated from the world, nor is it static internally.

In obtaining the synergies the company will always have to fulfill certain requirements. In addition to an ongoing guidance to the market, it is still fundamental the appropriate organizational framework between organizational structures, information systems and communication mechanisms coordination and control and the different business cultures. Assessment of assimilation between the combined companies leads to issues of "Versus" integration assimilation. Vertical combinations are characterized by the fact that contractors operate in the same field work, although they are involved in different stages of evolution. It is here that we find the most problematic situations.

Often it is dominated by the law of the fittest. It is in this context that we found our *field of observation*.

We cannot forget the very specific case that, somehow, influenced in a unique way the merging processes of the case study. Although the whole situation at international level was in its favor, we have to fit in the Portuguese political situation of that time. The political consequences of the Revolution of 25 April 1974 had provoked a whole series of Nationalizations regulated on March 15, 1975, we had the consequences on a financial level in companies with a imbalance and weakness in the face of foreign competition difficult to overcome. One way to help overcome such problems was, precisely, using this management strategy that had already begun to be drawn.

Mergers and acquisitions concentric (in Ferreira, 2002) which is the latest form of business combination and "bancassurance" is the best known and most sought after. In this particular case of this combination the basic idea has a certain foundation: at the counters of their banks, staff will try to sell insurance products (life insurance, savings, retirement ...), for their side, insurance agents will promote banking products, particularly mortgage loans. And increasingly we are witnessing mergers, but especially acquisitions.

But, as we have seen, mergers have implied a situation of *change*. Change that involves the whole organization in creating the new *project*. In addition to the financial resources that are the foundation of the philosophy of mergers, humans interpose. The overall strategy of management can not be oblivious to this feature that makes up the soul of its organization. And the communication to dominate the *identity* of the company, in close relationship with all its internal audience, internalizes its culture and will

have an important role to collaborate in the construction of the new project and the new identity, and also in the *integration* of all parts, concluded a change obtained with the merger.

It is precisely this factor of change that forces us to analyze *two distinct moments*: the vivid realities in the company while being independent before the merger implemented, and later, as an element of the new design already put in practice, with all the implicit consequences in terms of human resources integrated in the new unit and communicational level, an organization with a much bigger and more complex size, where although their role is likely to have become more difficult due to these two factors, on the other hand, certainly far more appropriate, the challenge that will have been offered.

Internal Communication - formal and informal (Almeida: 2000)

Formal communication (Notification) is one that circulates through channels of communication set by the organization itself, as a source of authority. It is basically a communication vertical status, related to tasks that develop within the company and functions that guide. It follows a rigid, pre-defined structure, located on an official scheme that translates through the organization chart of the company.

While *Informal Communication* will be developed in a natural way throughout the organization. With a more spontaneous nature, information travels across the organization, not obeying any formal lines of authority, trying to resolve in the most pragmatic way possible difficulties of specific emerging points. Much more emotional in nature, it translates in a much more spontaneous way, fluid, contingent and dynamic. Born naturally without conscious and precise goals.

It must be pointed out that in most cases, these two groups of channels, which translates in communication networks described, plenty of opportunity within the

companies are found. When, from the outset, there are no conflicting behaviors the coexistence of both networks is of great benefit to the extent that they complement each other, making communication more effective.

Informal channels of communication have a role to fill in the lengthy range of communication transmission, which makes the process much more fluid than if it all had to be traversed by the channels of formal authority. On the other hand, it can sometimes resolve problems among different hierarchical levels, overcoming barriers that, in the case of using only formal processes, never would reach a compromise between groups or individuals within the organization. Its role as "mediator" should not be overlooked. It can not be ignored, however, situations, not rare, in which, rather than this beneficial complementary nature, these are the situations in which they may even fall in the aforementioned conflict where it generates contradiction in the contents of the information emanating from the two kinds of channels, or in which the informal channel tries, in turn, to gain greater power through this medium, seeking thereby to override the channel of higher authority within the company, naturally translated through the network of formal communication.

All these aspects that have been mentioned in connection with the *communication networks, formal and informal*, bring us, those that which stand as the core of our study, permeable dimensions of dysfunctions that occur in situations of change in organizations, so we must consider them, by the close relationship we found with the importance of the concept we have just set.

Corporate Culture and Organizational Climate

The corporate culture (in Thévenet:1990) is a concept herein which a theoretical relationship with *organizational*

environment is found, but according to what we believe, it can hardly be translated into practical situations, especially in the First stages of the application of the merging processes.

Culture takes time to be created; fusion is a solution, although thought out, but of a quick decision. The sense of *identity*, basic to the elements of an organization had been created with a daily coexistence in the same environment. The change to a contact with different cultures provides a mix of feelings which come to dominate the confusion and conflict. Values and symbols of each company end up being trampled in the rush to the defense of their biggest supporters, catering to the diverse dimensions between the various companies.

A conciliation of each project is nonetheless a source of instability, both to supervisors and to subordinates. Situations of disorder and imbalance, both individual and in relation to internal standards hitherto existing come to settle down, often reaching states of *anomie* and *entropy* which highlight all that disruption. Either way, there is no doubt that the *cultures* implemented, even the characteristic of several small businesses, whose environment was basically familiar, is completely changed in the face of these mergers.

The organizational climate (Schneider & Reichers in Cunha et al.: op. cit.; 549) translates the self-perception that the organization has of itself. It results from individual self-perceptions but is more than the sum of them. It is a kind of psychological consciousness of the group/organization. In an organization there may be multiple mini-climates, articulated or not with each other and whether or not the climate of the whole organization. The climate influences the motivation of individuals and is, by definition, something that changes. So, some companies issue questionnaires of the mood or atmosphere of the company

two or three times a year and others on the occasion of important events.

Because of its transient nature, the study of climate without subsequent management intervention is useless. Is closely linked to employee motivation, personal satisfaction, group and to the work, the feeling of belonging to the same organization even in terms of duty and obligations, since this is felt as "their home", hence the sense of group and organizational personal identity, as a consequence leading to the integration and active participation in the company and its objectives. All this will facilitate an increase in self-esteem of the workforce. Also a sense of security provided by the understanding and acceptance of leadership, authority, respect for superiors, organs and functions.

On the part of the company it operates based on rewards, that should exceed the mere reward salary and social benefits. It should not be disregarded that in addition to the psychological aspects mentioned, the respect for workers, the responsibility assigned to them, but also the legitimate authority, the predisposition to new working methods, to always have present potential latent tensions between departments and between social stakeholders and a constant preoccupation with a certain cohesion of the *organizational culture*. In this context, whenever possible, is to promote times and spaces for sociability so that we can generate an approach that goes beyond the mere profession among the company's employees, thus helping to create a "family business", which in human and social terms will, indirectly, generate more profit than the finance can make an immediate way.

The *climate*, in turn more quantifiable, becomes a more accessible study in cases of sudden and drastic change like this, it can not be overlooked, however, accessible intrinsic aspects brought by the concerns of the company culture.

For the new forms of work coming from the change to succeed expected results, the analysis of the existing forms of communication is important, and it is in the lack of communication management that can generate poor results in other strategic plans of the organization. The communication, to be used by organizations, need broad understanding of culture and organizational climate. Communication holds an important aspect within the transformations and can facilitate understanding in the processes of transmission and assimilation of new concepts and socialization of knowledge, that is, all workers share with the organization's goals.

When a worker really knows the plans of the company where he works, (s)he can collaborate with the changes that are proposed in the case of mergers. Since communication plays an important role, especially in periods of change in organizations, it needs to go beyond flexibility or brief softening of impacts, ie, it must go beyond only informative changes procedures to participating in decisions on any matters. As the organization's employees participate in the change process they will be part of a context, and being part of it, they will be able to participate actively, for instance through suggestions. Strategic communication is essential in organizational change.

The way it handles and manages the communication can generate influences on the climate of the organization and these influences can be strengthened or refuted by the pattern of organizational culture. Thus, communication is strategic as it takes into account the current state of organizational climate and the type of organizational culture. The result of one and the other establish strategies to be used. Internal auditing is one of the strategies that the organization should reflecting organizational changes. But this model is static.

It is critical that managers encourage participation, demonstrating their benefits and providing feedback resulting there from. Auditing leads to integration. It is up to the organizational leaders to decode these forms of how they are processed in the organization and insert the results of these decoding strategies of transition processes. Following the innovations is a necessity. But organizations get better results if they take into account the human being involved in work processes.

Conclusion: The *change* is a constant process within organizations or drastic, as the case study, during a merger process. To achieve the goals of organizational transformation it is necessary to insert the *strategic communication* in the planning system and business development, taking into account the analysis of *climate and organizational culture*. Realizing the problems of work presented here: any merger of companies leads to consequences in different aspects of management and behavior, particularly internally. For all that has previously been justified we understand it is relevant to highlight the level of communication between human resources, a concern that led us to equate this present summary: "The communicational consequences of the merging process the in the Insurance companies, on the level of stability and Internal environment and the cohesion of company Culture.

Recalling the *hypothesis* that justified our research we assume that "*mergers of insurance companies will have led to disorders in internal communication which, in turn, is connected to anomic processes in their internal public.*"

We can confirm that we have obtained necessary information which allowed us to broadly confirm the hypothesis raised at the beginning of the empirical research for the majority of mergers when done without any preparation, as is the case in the majority of Insurance Companies in

1980. The merger analyzed and shown in Group A is one example of this.

Let us consider that formal communication has ceased to exist; informal communication flux has become “anomic” – informal communication found in the group after the merger has begun to flow in a disorderly - manner, favored contacts with co-workers from their former companies, disregarding the new structure causing “noise” and even communication barriers with the new colleagues in the recent company. One could observe inhibition when contacting with new colleagues and there was a huge lack of internal communication. As a result, Communication has shown to have *lost efficiency* due to the diminishing of communication and information flow. Dimension growth of the company and the *great complexity* of the new structure is the main cause for this communication setback.

Lack of cohesion and segregation have become the main consequences of this. In this manner, one can confirm the lateral hypothesis that we have built regarding *Company Cultures*, preponderant dimensions in the effectiveness of communication in this changing process in which “*internal, formal and informal Communication has become dysfunctional when facing confrontation with different organizational cultures*”. It has been very difficult to communicate between new structures; workers would find strategies not correspond to the orders of superiors, the “conflict” installed itself in the company; many elements were sheltered in old classmates, having created to comply with their bosses’ orders; “conflict” has settled inside the company; many subjects would shelter with former colleagues. A deep sense of rupture was created between hierarchical levels, which led subordinates not to comply or reject new bosses’ authority which not only led subordinates to fail to accept or reject the authority of the new bosses, but these in

turn and, as a result, the “*failure to play their role in full, since they felt constrained in any decision made*”. And this is also one of our initial hypotheses, we found confirmed. It is the demonstration of *lack of integration* and *lack of identification* on the part of subordinates that led to this behaviour and *rejection of authority* that provoked a distancing reaction in between high hierarchies. This distancing from the new bosses led to an approach to the old ones. This approach has always been present.

In fact, many of the elements that have gone through the merger in Group A never forgot their old company and the *familiar atmosphere* that they had shared. For some, this has continued to always be their “home” and could never identify themselves with the new company. They did not feel any kind of integration nor could they recognize a particular Culture in the Company they had started to work at. In a word, they had always found impossible to accept it as “theirs”.

We have confirmed what we had hypothetically expected: “*organizational identity of origin caused them incompatibility processes with the new organizational entity, resulting from the merger*”. This incompatibility was clearly revealed in reality: rejection was total since the beginning of the merger. The fact of the matter is that, in real terms, they encountered a radical break with the past. This past made them feel good, in a familiar atmosphere where everyone knew one another, where job sharing was intuitive, different hierarchies lived side by side in extra labor sociability and where communication was easy and close.

What did they find then? Four different crops in the same space without some prior knowledge, a new structure set, direct business contacts with people they had never seen and who they had never worked with before and new and different work for the majority of workers.

Consequences of the situation: *lack of integration, lack of cohesion, "cold" atmosphere and segregation* caused by the *different cultures*. At a given moment, even a *sense of friction and conflict* by rejecting the work, colleagues and the company itself was shown. The failure to comply with the rules was made clear the non-acceptance of the situation and the "strategies" that began to be used to overcome the new implemented structure.

Dias Baptista's view (online, 2002), is ultimately confirmed with the results obtained from the information in Group A. According to Dias Batista "*the atmosphere reflects the reflexes of all organizational changes*". It is understandable, therefore, why and how "*Organizational structure arising from the merger led to personal and group anomie*". This was the last parallel hypotheses that we had considered in our research and was confirmed by the results of this study Group. Nonetheless, the situation reached such a dimension that we even needed to *extend our study to the entire organization*. This situation had been predicted for individuals and groups in terms of the appearance of anomie.

The scientific curiosity deposited in this investigation involved an analysis we expanded. The variables that influence the merging of one group do not always coincide with that to which another is subjected to. And yet, the reactions found may deviate from a pre-designed standard, which was based on a purely empirical analysis of the issue in question. Bernoux (1989) safeguard us in our position when he argued that *cultures were created to respond to very concrete conditions in different companies*.

In the particular case of Group B, we were confronted, when comparing results with Group A, with a feature that led us to particularize an entire analysis to check for possible deviation. The fact that one of the companies from Group B had already gone through a merger before in 1980, *phased in three years* (between 1972 and

1975) and another suffered a *clumping* from a competitor largest market in 1972, although this does not get ahead as significant for our study, and there are few references to this situation.

It's somewhat true that immediately after the merger in 1980, "*mergers of insurance companies led to dysfunctions in the internal communication which is, in turn, related to anomic processes in its internal public*". It was confirmed, in part, the hypothesis that we generalized for our work. The communication that prevailed was informal and there was even *inhibition in communicating with new colleagues*, which demonstrated a *lack of initial integration*. But only in part, we insist, was this proposition found for this group. It is true that there was an *inhibition in the communication at first* that revealed *lack of integration*. On the other hand, the relationship with former colleagues remained and this led to an initial mistrust, which led to the creation of informal subgroups based on old structures, fostering informal communication. We shall speak of this informal communication which already comes from before the merger in 1980. But in terms of *anomic processes, lack of guidance rules and conflicts*, we can say that they never were very evident and this lack of integration and distrust also quickly faded.

The *facility of integration* by individuals shown at the moment of the merger quickly expanded to their colleagues and gradually, the vast majority revealed a feeling of *total integration* quite soon. It is known that *effective communication* is the key to successful integration, unlike the hypothesis we have also presented initially, but according to successful relationships in the company: *Internal Communication, either formal or informal have not become dysfunctional when confronted with different Organizational Cultures*.

With the merger, the different cultures of various companies also became part of

a structure to which the communication contributed proving to be efficient. Strictly speaking, the structure implemented was not easy: the large heterogeneity found within a different structure where *Differentiated Cultures* coexisted - *binders and bonded* - and even then, unlike what we also considered to be a hypothesis, as we saw with different assumptions, the *new organizational structure did not induce constraints on the decision making of bosses*, who, with the generalization of informal communication in a first stage, and also later, the consequent need of structure complexification did not show that feeling.

On the contrary, *we can say that the acceptance of tasks by the subordinate which were distributed by their new bosses was easy* and those in authority would take the posture of a leader, so communication became quite effective. Good relationship between subordinates and bosses, in which participation of those is allowed, has been repeatedly pointed out by management researchers and therefore we highlight it. Vroom / Yetton / Jago (1973) model presented by Teixeira (1998) *puts the emphasis on the degree of participation subordinates should have in making decisions in order for them to be more efficient and effective. [Model] defines a number of rules that must be followed to determine the shape and desired degree of participation in decision making.* We agree with McGuire in this sequence whose position also contributed to the debate, which sees *"internal communication as one of the most effective for the change in attitudes"*. (in Evaristo:1991;149)

It has been clarified that the proposition put as secondary hypothesis by us, which is that the *organizational structure arising from the merger will have led to a state of personal and group anomie* has not found solid ground in this study. As was just mentioned, what we

found was the coexistence of *Differentiated Cultures*, to which we have given the attribute of *Bonded and Mergers (the leader, the persistent and the forgotten)*.

It is to be clear, however, that this whole set of apparent health symptoms of the new company did not let her be trouble free in an ideal world of coexistence and personal and professional relationships. The *atmosphere* perceived internally had become *quite confusing* for most workers. The Internal atmosphere was going from *good* until *confusion, conflict and segregation*. It was mostly very *heterogeneous*, but *more negative than positive*. We reiterate, however, that we do not understand such parallel situation to the one we showed as hypothesis: state of *anomie* and *confusion* include very different realities.

The coexistence of *Differentiated Cultures* remains to be justified, the predominance of *informal Communication* after the merger already coming from a period prior to the merger, *facility of integration* into the new company after the merger, the *heterogeneity of the atmosphere* post-merger, the *good understanding between hierarchies* and finally everything that leads to the rejection of all our hypotheses contradicting the findings in Group A. Basically, the core of the analysis of Group B.

In short, this difference is at the level of a previous experiment, a merger prior to 1980 which had been made in a 3-year phase. It was this sole fact which allowed getting to 1980 with those conditions and learning who had been through a merger. It was also this wisdom that has made this new company, the result of the previous merger, if it could override their counterparts, getting to lead the merger process and the management of the new company. It was also this wisdom that has made this new company, the result of the previous merger, if it could override their

counterparts, getting to lead the merger process and the management of the new company.

This merger was in a more *fluid communication* and *increased flows* already since 1972. Furstenberg (in Evaristo: op. cit.;147) "*provides a correlation with the quality of learning and amount of information*": the best and most knowledgeable becomes more critical and more demanding in terms of information. Teixeira also is in the same line of thought. According to him, "*so that subordinates can know exactly what you want from them is what type of tasks they must undertake to achieve overall objectives of the company, it is vital to have a perfect awareness of this. This means the same as the need of effective communication*" (1998). Bavelas (in Evaristo: op.cit; 147) also finds a "*correlation between information and profitability*". Hence, information, preparation and experience go hand in hand for better effectiveness in the field.

Informal verbal communication has also assumed a privilege, accented with the revolution of 25 April 1974 and the influence of the Workers, which will enhance the communication *descending level*. The fusion of 80 informal channels were already open and the relationships between employees. Previous cases had worked as a preparation for this new change.

In comparison, it can be said that Group B has overcome the merger more positively than Group A. It has found a positive development that was already coming from before 1980, thanks to a merger done by one of the companies, between 1972-75 and this is now which, owing to its previous experiment (*the leader*) eventually led Group B, even succeeding in relegating to second place another company far more well-known by the image of tradition and also striking with a distinct position in the profession (*persistent*), and other units found their

place in the spaces they were allowed by them (*the forgotten*). Communication proved to be very efficient in this group, even after installation. In this sense Macy (in Teixeira: op. cit;148) believes that "*biased information and increase discontent and cause negative effects on problem solving and decision making*", and hence it is essential to linear information and communication. The experience gained by the group that has been mentioned would have allowed this learning ahead of all others who clashed for the first time with such a situation.

The "*supranumerary*" was a problem due to both mergers but this showed how to deal with it better. Several individuals denounced lack of personal and professional recognition. Still, in Group B there are those who manifest positively showing enrichment to the fullest extent of the company and the relationship with new colleagues, and this is a Exclusive to Group B. Hoffman (in Teixeira: op. cit; 150) has said that "*the flow of information is critical in creating solidarity among people and cooperation at work*". This is the prototype of the need for communication and sharing of work that has been mentioned several times in interviews and found here. However, these aspects are also a reliable source of trust at work which is a fundamental aspect, even more so in a situation of change. It is confirmed by Schein: which argues that *successful change can only occur in environments where people feel psychologically safe. This is a condition in which there must be a high level of trust* (in Cunha et al: 2003).

Therefore, we must totally refute the hypothesis that has not yet been referred to which, based on these recent arguments with proven research results, modestly make us bend to the found evidence: in Group B *Identity organizational processes of origin did not cause incompatibility with the new organizational result of the merger*.

Generalizing a little more our *Discussion of the Results* we must also highlight

other aspects that have surpassed the propositions we raised at the beginning of our study and become relevant throughout the investigation.

No authority to challenge the scientific *results* obtained with the work done, and because all steps were carefully taken considering loyalty of the process - we have full knowledge and awareness of the fact that because we conducted and executed it from the beginning - the formation of New Culture presented by most of the elements in Group A does not seem totally credible given the heterogeneity and type responses. We base or posture on the interaction of responses "Lack of Culture" and links that still found an old unit for quite long extinct - an emotional relationship that was apparent still persisted at the time of our research. The lack of consistency found in some of the speeches that illustrate our perception. The absence of Communication that is in the new company in personal and professional terms, justifying even *internal conflicts* and "back turned" between different structures, as may allow contemplating a *new culture*? If we try to analyze the factors that characterize the *forming of the new culture*, effectively revealed the interviewees' discourse, we are left with the question before the panorama presented, which pillars underpin this Culture?

Regarding group B one can immediately denote the *absence of a single culture*, but the presence of *Cultures living together - binders and bonders*. One overlaps distinctly over the other. Informal verbal communication played a pivotal role in understanding what was generated, despite everything. Our study gives the factor "previous merger" with experience based on a phased process that has responsibility. The fact is that, regardless of this or another

reason, we must agree with Thévenet premise when he says that "*the merger of cultures is a myth. Each one changes and sets up a commitment, in the worst case scenario one adapts to the other*" (ibid: 160 -162).

Just one last curiosity, being aware of the importance of a *company image* as Brooms and argued by Gahmberh (1983, in Thévenet, op. cit: 42): "*communicating is, first of all, to know yourself, master your own identity in order to build a consistent policy image; communicating will also be (...) a very significant activity to the company culture: real or ideal culture.*"

We have also tried to investigate the *external image* of the two companies after the merger. Let us make a little note about this. In situations as diverse, and with very different results found in each of the groups, the perceptions obtained are shown as basically identical: the *external image* is divided, roughly half of perceptions.

For one of them the *image does not reflect the reality to the outside, the other half says the opposite*. And this result is presented in conformity to both companies ... It is unknown in terms of practical result. Maybe not so much in theoretical terms: we think that this would even be an expected outcome on the processes which companies have gone through. In truth we had predicted it. And before us Thévenet (op.cit.) theorized it as a likely consequence to address the *importance of Communication in terms of increased external image, which is referred to as disconcerted by derived problems and curiously also by merger processes*.

Conclusions

It remains for us to briefly consider the effectiveness of communication to the effectiveness of mergers.

In terms of final reflection on human resources perspective, the company's

employees, regardless level where they are or where they will be integrated in a merger needs *time*. There is time to prepare, time to think of the company restructuring. It is the starting point. There is time to design preparation so as to be made without mishap, time to allow time for employees to realize and accept the change. We still have some last assessments to make in this context.

Communication is on the basis of preparation. And communication moves across the company which will allow integration of employees, the building of a favorable atmosphere, a mix of cultures which minimizes the shock of a moment and easily lead to the formation of a new culture, cohesion amongst workers and to the creation of a new institutional identity. All this needs time, time for adjustment and time for acceptance. This time we needed before and asked for. Nothing can be imposed.

The role of an informal internal communication is critical, and, even more so of extra labor sociability; informality is the springboard for the acceptance of a formal structure. The quality of information is important, but a first step, the spontaneity prevails – then yes, one must put the house in order, introduce the necessary formalization when moods are calmed down which means a successful integration is underway, a stable and positive degree of cohesion among the new colleagues is apparent, which is a more difficult dimension to achieve by the set of cultures that are coexisting in the new company.

One must never think of impositions early in the process because there can easily result in hardly insurmountable barriers that naturally lead to an attitude and feeling of rejection, even uncontrolled behavior, from the most displeased. In brief reference to conclusions reached by Eva Soares, who is Psychologist and H.R. Professor, an expert on these matters, in her investigations: on the merger,

"in such an atmosphere, the employees of both companies are bewildered, they do not know if they should be concerned with possible dismissal, if they plan to seek a new occupation in the market, if they should bother to show service in order not to be fired, if they should search for more information about the process which the company is going through (and often the information is not accessible to all hierarchical levels, which causes further anxiety)" (www.guiarh.com.br).

Lack of communication in these proceedings may have physiological consequences, resulting solely from emotional state. Let us consider the following:

"And what is more serious in this whole anxiety is that it also demands result and discretion ..." (...) "Not able to speak or show what you're feeling, such employees become increasingly 'suffocated' while showing various symptoms: headaches, back pain, pain in the whole body, nausea, diarrhea, sexual dysfunction, etc.. all of them without any biological or physiological causes, but with an emotional cause". (Idem, Idem.)

In most cases, feelings are not considered, and, as the author says, *"the human being is and should always be human (...)* And everybody deserves special attention, openness, etc., for at least talk about what bothers you, what makes you anxious, regardless if the environment is a working environment".

Employees cannot be treated as isolated pieces in a chess tray in the new company. There is a context they do not know and have no desire of getting to know, to start off with. If they are not motivated to do so, if we do not help them with getting started, the game will never start. One can confirm states of anomie in the new structure in this context, the emotional symptoms mentioned before, as well as deviations in interpersonal relations in the company. Therefore, the condition we are faced with most of the time: *from fusion to confusion*.

On the contrary, if you manage to motivate and motivate, this may be the key to a successful change. Given this perspective, we can allude to a successful and real case shown by Carlos Parente (www.golrh.com.br) who starts by telling us that *"active participation of the international community can promote integration processes between different institutions, respecting cultural diversity."* According to the author the success of a merger comes from mobilizing the workforce. The situation he shared indicates that the *"organization decided to establish a process of gradual integration basing itself on solid corporate [institucional] values"*. Actions ensued where employees of both companies merged were players of the events and where emotion, fraternization and positive energy reigned. As Parente said *"it is essential to establish a process of gradual integration and based on solid corporate [institutional] values"*.

We are not stretching, given that mergers investigated in this study took place in 1980, in a field of research still unexplored within this area of knowledge, it will be abusive the requirement in parallel unions that is reported already in the twenty-first century and with countries in very different stages of development in this field of Science, such as Brazil and Portugal. We understand why the

researcher Maria João Centeno who, despite everything, brings a more modern take on the change. A dynamic perspective, according to her - sometimes too much, but the author does not fail to predict at the outset the difficulty in controlling. Although in a different context it tells us that *"the dizzying pace of change is becoming increasingly difficult to control,"* and concludes with her reasoning that *"... this situation [the consequences] makes it difficult to assemble permanent communication channels and relationships that lead to a true mutual understanding and change"*. (bocc.ubi.pt)

The truth is that this is a verified reality confronting this observation: when there is concern for companies joining gradually trying to maintain the flow of communication, opening new channels before emerging needs and designing an appropriate structure or, simultaneously, allowing communication to flow informally at first *"ad libitum"* to bridge the gaps that present themselves, it is the form of an easier integration and achieving a more stable climate within the new company. And when it is the time of the actual merger, it is almost done. It could be said that a new Corporate Identity will be created. The company is formalized and launched.

References

- Almeida, V. (2000). *A Comunicação Interna na Empresa*, Ed. Práxis
- Baptista, R. D. (2003). "Comunicação Interna nos processos de Mudança", Universidade Estadual de São Paulo, 2003, in *Labcom, Laboratório de Conteúdo on-line*
- Bernoux, P. (1989). *La Sociologie des Organizations*, Ed. du Seuil, Paris

- Bulgarelli, W.(1999). Fusões, incorporações e cisões de sociedades. 4ed.São Paulo: Atlas
- Centeno, M. J.. *Instabilidade vs. Complexidade na Mudança* – Escola Superior de Comunicação Social de Lisboa. bocc.ubi.pt
- Cunha, M. P.; Rego, A.; Cunha, R. C.; Cardoso, C. C. (2003). *Manual de Comportamento Organizacional e Gestão*, RH Editora, Lisboa
- Evaristo, F. (1991). *Sociopsicologia das Empresas e Organizações*, Porto, Ecla Ed.
- Ferreira, D. (2002). *Fusões, Aquisições e Reestruturações de Empresas*, Vol. I, Sílabo, Lisboa
- Parente, C.. *A mobilização interna na disseminação de uma nova cultura*. www.golrh.com.br
- Reichers, A. & Schneider, B. (1990). *Climate and Culture: an Evolution of Constructs*, 1990, in Cunha, M. P. et al., op. cit.
- Sainsaulieu, R. (1977). *L'identité au travail*, Fondation Nationale des Sciences Politiques
- Schein, E. (1986). *Organizational Culture and Leadership*, Jossey-Bass Publishers, San Francisco
- Soares, E. B.. *Psicossomatismo e as fusões empresariais*.www.guiarh.com.br
- Teixeira, S. (1998). *Gestão das Organizações*, McGraw Hill, Lisboa
- Thévenet, M. (1990). *Cultura de Empresa - Auditoria e Mudança*, Ed. Monitor, Lisboa
- Vroom, Yeton, Jago (1973). *Leadership and Decision Making*, University of Pittsburg Press

COLLABORATIVE STRATEGIES ON REVERSE LOGISTICS WASTE MANAGEMENT

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ABSTRACT

Success in today's highly demanding waste management requires organisations to perform increasingly complex logistics. Keeping a clean environment from materials' reverse flows requires new strategies, being the emerging collaborative logistics a promising model for better performance on consumer products waste management. An empirical study was led by carrying out a survey to know what the best practices in this business currently are. This paper reflects the conclusions of that research lead by Carlos Carvalho, as a result of his Master's dissertation, supervised by Dulce Mendes and Amílcar Gonçalves. It discusses an exploratory perspective of logistics collaborative best practices of waste management, particularly in specific waste flows of consumer products. The results demonstrate the existence of logistics collaborative practices in a comprehensive scale, although with low levels of integration with logistic partners. On the other hand, the survey identifies that waste management organisations evaluate very positively the experiences already performed and the contribution of collaborative logistics to the success of their organisations.

Key Words: Collaborative strategy, partnerships, reverse logistics, supply chain, waste management.

INTRODUCTION

The growing concern in deploying a sustainable development model has been promoting the establishment of systems that could ensure the balance between the needs of economic progress, social equity and environmental protection. One of the paths, implemented in the European Union to address this objective is the creation of organisations to manage continuous waste generated. These organisations brought the need to implement new logistics systems, whose efficient management and optimization have direct impact on waste management system costs and, ultimately, the selling price of the products to the final consumer, to whom these costs are charged by fees on the products selling prices.

These logistics flow create the need for a reverse logistics management, to ensure the movement of products from the point of consumption, at the end of its life, to the reintroduction in the production circuit for recycling, recovery or, alternatively, proper disposal (Rogers & Tibben-Lembke, 1998).

Numerous integration initiatives in the supply chain have had great success, creating business models that provide relevant comparative advantages (Bowersox, Closs, & Cooper, 2007). The application of collaborative strategies for reverse logistics waste management can be seen as an opportunity to increase the efficiency of operations, increase service levels and reduce logistics costs.

LOGISTICS COLLABORATIVE STRATEGIES

In order to clarify the concept of collaboration in logistics, the CSCMP (Council of Supply Chain Management

Professionals, 2011) give the following definition: “Joint work and communication among people and systems - including business partners, suppliers, and customers - to achieve a common business goal”.

Research in logistics management has sought to demonstrate the achievement of higher performance levels, associated with increased levels of integration and cooperation between logistics partners. Some studies have identified collaborative approaches as one of the most economical means to achieve these results. However, these collaborative strategies demand a vision of long-term relationship, joint planning of operations, sharing of resources and technologies, and above all, sharing objectives, risks and benefits (Stank, Keller, & Closs, 2001).

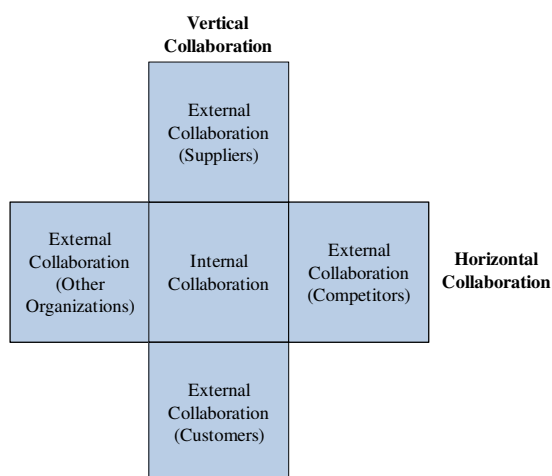
Supply chain integration can take at least three major forms: intra-organisational process integration, inter-organisational collaborative closeness, inter-organisational process excellence (Morash & Clinton, 1998). This analysis allows us to have a comprehensive view of the variety of vectors that collaboration has on the management of organisations. This view can be extended by the model suggested by Barratt (2004) in a modelling framework for collaboration (Figure 1):

Proceedings of the 5th Global Management Conference, 2013,

Global Academic Network & ISCTE-IUL;

ISBN: 978-989-732-156-6; © Instituto Universitário de Lisboa (ISCTE-IUL), Portugal

Figure 1 - The scope of collaboration



Source: Barrat (2004)

The initial steps on external collaboration were started by outsourcing activities based on services contracts, which worked as an extension of their own means ("arms-length"), focused on transactions and reducing these costs. This model has progressed until the present day to more intense partnership relations, with the aim of reducing costs spent to a structural contribute to organisational change, that ensures the sustainability of the company on a perspective of globalisation of business and to manage a relationship with a view to collaborative development (Hätönen & Eriksoon, 2009).

Logistics activities that can be outsourced range from execution activities, such as transportation, to planning activities, such as transportation planning (Hsiao, Kemp, van der Vost, & Omta, 2010), basic execution logistics, transportation and warehousing, value-added execution logistics activities, logistics planning and control and, finally, outsourcing the logistics network management.

In the study performed by Mentzer, Foggini, & Golicic (2000) one can find a structure of the critical factors for successful collaborative strategies in logistics management, grouped into: enablers, impediments, and benefits.

More in-depth benefits can be obtained increasing the level of integration between logistics partners, like strategic alliances in logistics activities. Strategic alliances are based on trust, sharing information that contributes to the logistics performance, setting goals to be achieved together, which offer greater performance than what it would be achieved individually, defining rules of engagement between partners and termination procedures for partners who want to abandon the alliance established. The benefits gained in strategic alliances' logistics can be bigger than on the other strategic collaborations. However, they are fragile and unstable structures, making it difficult to adhere into these organisations and maintain its sustainability (Ballou & Srivastava, 2007).

There isn't research on these areas published in referenced publications on collaborative logistics in waste management. However, studies on collaborative logistics point toward the existence of benefits in implementing these practices, which emphasizes the need to look for logistics strategies implementation that could give identical benefits to waste management. The objective of this paper is to contribute to a better understanding of the issues that may be associated that the implementation of collaborative logistics strategies in waste management.

METHODOLOGY

For this exploratory research, data was collected through a survey submitted to a number of waste management organisations across Europe. Respondents were asked to characterise their logistics activity and to evaluate a set of propositions by choosing a Likert scale range of responses: (1) Strongly Disagree, (2) Disagree, (3) Neither, (4) Agree and (5) Strongly Agree.

Having structured the questionnaire on the basis of two pilot semi-structured interviews with professional experts on waste management logistics, a survey was then distributed to 180 entities identified through inquiries to country Environment Agencies. The survey was executed in February and March 2012.

From this set, 31 completed questionnaires were received. Applying data clearance criteria, 7 questionnaires were rejected. An Alpha Cronbach reliability test was applied to the received questionnaires, rejecting 2 of the statements presented on the survey to assure high levels of data reliability for survey analysis (Malhotra & Birks, 2006), leaving 24 as valid questionnaires.

Fifteen countries participated on the survey with a number of responses: Portugal 6; Belgium 2; Denmark 2; Finland 2; France 2; Germany 1; Slovenia 1; Spain 1; Greece 1; Italy 1; Malta 1; Norway 1; Romania 1; Sweden 1 and Switzerland 1.

RESULTS AND DISCUSSION

The results from the survey are summarized in this chapter with a discussion on the 8 variables addressed on the survey, structured on:

- 3 Variables on factual issues
- 5 Variables on perceptual issues

Results on Factual Issues

Figure 2 presents the results to the survey question on Classification of Outsourced Logistics Activities. Most of the surveyed entities outsource execution logistics activities, although a significant number of entities outsource logistics activities at a higher level of logistics management.

Most of the outsourcing partners are at a vertical upward orientation (Barrat, 2004), although some entities outsource logistics activities to client/associates partners, as shown on Fig. 3. However, a high degree of collaboration with external partners is observed with a sharing of logistics activities (Fig. 4). This occurs in a model of low level of integration among partners, mostly on a one-to-one contract of service delivery. Higher levels of integration are rarely seen.

Results on Perceptual Issues

Table 1 presents the results to survey questions on evaluation of waste management entities about experiences on collaborative logistics. A high degree of satisfaction (on a range from 1 to 5) is presented with internal collaboration and the experience achieved with logistic information shared with partners.

Most of the waste management entities are looking for an improvement in logistics service levels performance. Cost reductions are also looked as a benefit. Specific regulatory waste management targets are also a high motivational factor for logistics collaborative practices.

Figure 2 – Outsourced Logistics Activities

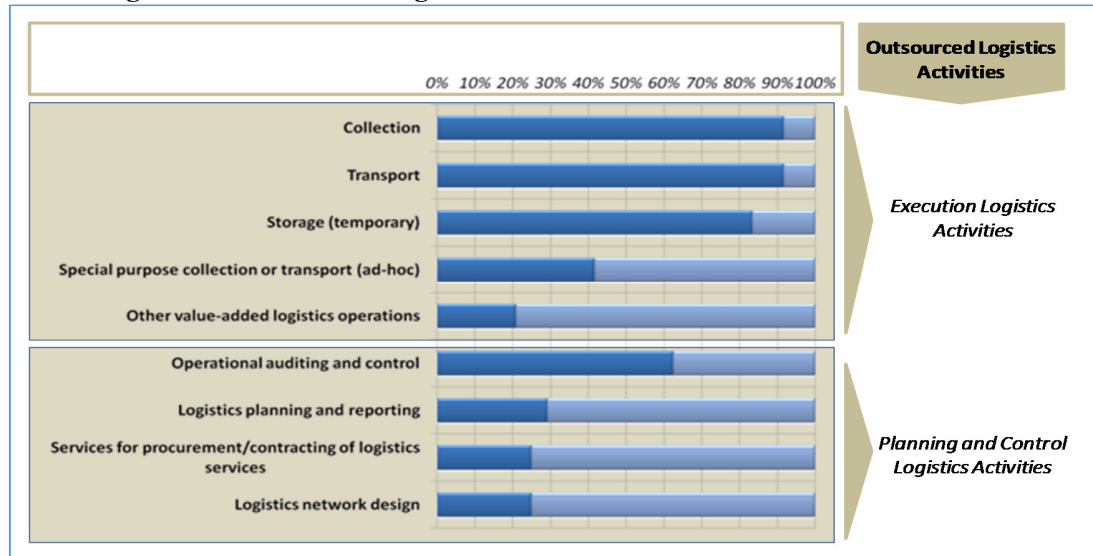


Figure 3 – Logistics Collaboration Orientation

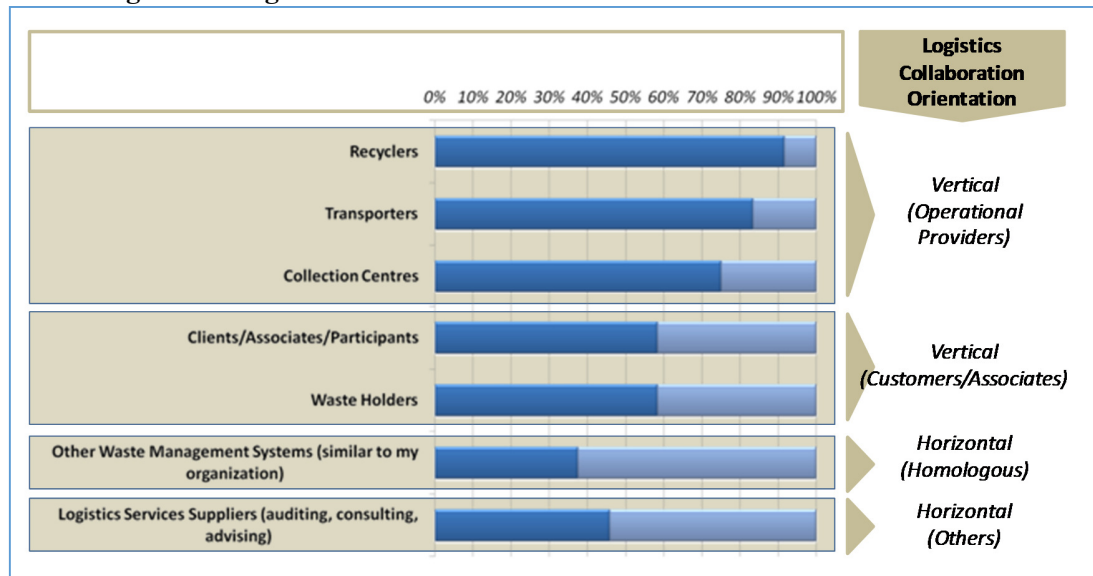
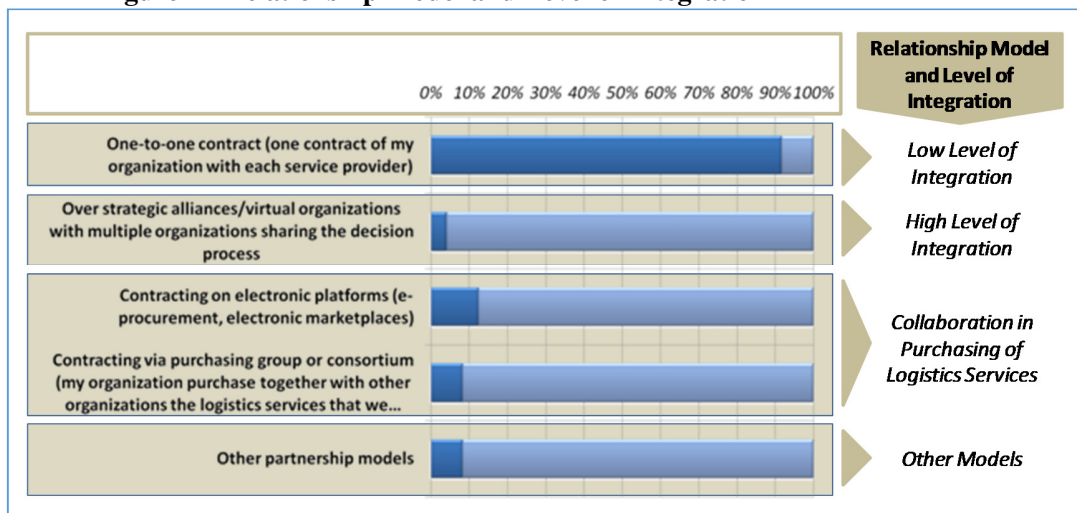


Figure 4 - Relationship Model and Level of Integration

Table 1 - Logistic Collaborative Experience Assessment

<i>Logistic Collaborative Experience Assessment - Survey Statements</i>	<i>Average</i>
Our internal departments collaborate to achieve superior logistics performance	3,96
We share operational information with selected external partners	3,96
The results of our collaborative logistics experiences, already done, improved our logistic performance	3,92
We have information systems that integrate daily operational data with our logistics partners	3,79
Average	3,91

Table 2 - Collaborative logistics main motivating factors

<i>Collaborative logistics main motivating factors - Survey Statements</i>	<i>Average</i>
Increase in operating performance and service level	4,29
Cost and investment reduction	4,25
Achievement of targets for collection and recycling of waste	4,25
Greater effectiveness of administrative support to logistics	3,63
Access to new technologies	3,54
Average	3,99

As a highly regulated activity, waste management is potentially impeded, by legal matters and activity licences, on sharing activities externally. Other hurdles are related with the difficulty to determine potential benefits of logistic collaboration in advance (Table 3).

Main risks addressed by waste management entities are related with fear of

being too much dependent on external partners and, also of not achieving expected benefits (Table 4).

Surveyed participants valued positively the contribution of logistics collaboration to the overall success of the organisation, and confirm that they have plans to increase logistics collaboration (Table 5).

Table 3 - Collaborative logistics main hurdles

<i>Collaborative logistics main hurdles - Survey Statements</i>	<i>Average</i>
• Legal matters, regulations, licences or contracts of my organisation	3,21
• Difficulty to determine benefits and operational savings in advance	3,04
• Investments in Information Technologies	3,00
• Difficulty to identify potential partners with whom it could be achieved the objectives of my organisation	2,96
• Difficulty to ensure a fair distribution of benefits of collaboration	2,96
Average	3,03

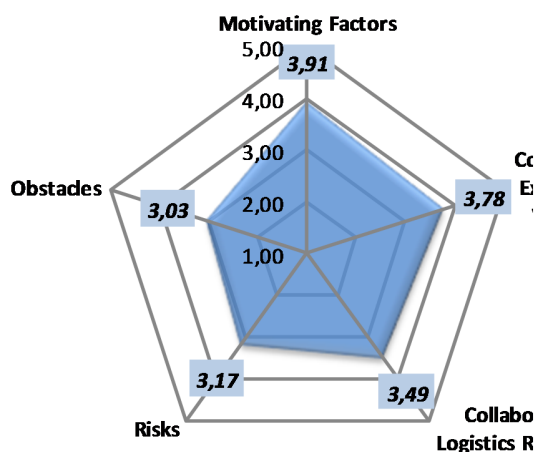
Table 4 - Collaborative logistics main risks and doubts

<i>Collaborative logistics main risks and doubts - Survey Statements</i>	<i>Average</i>
• Excessive dependency on partners	3,50
• Not achieving the expected results	3,38
• Difficulty in integrating the activities executed outside with the ones executed inside	2,92
• Loss of decision capacity	2,88
Average	3,17

Table 5 - Collaborative logistics relevance

<i>Collaborative logistics relevance – Survey Statements</i>	<i>Average</i>
Logistics collaboration makes an important contribution to the success of my organisation	3,83
My organisation has appropriate plans to increase the level of logistics collaboration	3,63
We intend to participate in collaborative logistics activities involving several entities collectively	3,42
We are willing to share benefits of logistics performance increase on collaborations with external partners	3,38
Our information systems has the requirements to support process integration with external logistics partners	3,21
Average	3,49

Figure 5 shows the relative value of perceptual variables by survey responses, where it is seen a high score of motivational factors to implement collaborative strategies compared to lower score of obstacles and difficulties to its implementation

Figure 5 - Perceptual Variables Rating

CONCLUSIONS

To achieve better performance levels in reverse logistics waste management, collaborative logistics strategies should be considered as way to achieve success in waste management organisations.

The current adherence to collaborative logistics strategies were assessed on this research and it is concluded that European integrated waste management systems embrace collaborative logistics practices, characterised on:

- High level of outsourcing, largely in execution logistics activities;
- Dominant model is based on contractual relationships;
- Collaborative models with higher levels of logistics integration are not very significant up to now.

The main benefits, risks and obstacles to the implementation of collaborative logistics are:

- Benefits that organisations look for: improvement in logistics performance, cost reduction and contributions for achieving licensing goals;
- Main experiences accomplished are on internal collaboration and on sharing operational information with partners;
- Entities with implemented collaboration experiences recognize, as a main achievement, the contribution to overall organisational success;
- Main risks are: too much partner dependency and not to achieve expected results;
- Major obstacles identified are: legal and regulatory constraints and difficulty to foresee potential benefits

The trends on the implementation of collaborative strategies are the following:

- The research results demonstrated the tendency of evolution to implement collaborative strategies:
 - The perception of most entities is that they are ready, in terms of organisation and resources, to increase the level of logistics collaboration.
 - There are plans and strategic intent, in many cases, to put into practice more logistics activities in collaboration with external partners.

Although this research has achieved a great set of conclusions and deeper knowledge on this subject, the study has several limitations, the main one is related to

the size of the sample as a limitation of the relevant condition and statistical analysis performed to obtain results from the study.

Further development of this research can be done, looking for a wider and more solid knowledge, by studying a conjugate analysis of waste management organisations together with widening the research on their partners, in order to understand both sides' vision on the implementation of collaborative logistics strategies.

REFERENCES

- Ballou, R., & Srivastava, S. (2007). *Business Logistics / Supply Chain Management*. New Delhi: Pearson Education, Inc.
- Barrat, M. (2004). Understanding the meaning of collaboration in the supply chain. *Supply Chain Management: An International Journal*, 9 (1), 30-42.
- Bowersox, D., Closs, D., & Cooper, M. B. (2007). *Supply Chain Logistics Management*. New York: McGraw-Hill.
- Council of Supply Chain Management Professionals. (2011). Glossary of Terms. Obtained on 9th October 2011, de Council of Supply Chain Management Professionals: <http://cscmp.org/digital/glossary/glossary.asp>
- Cruijssen, F., Cools, M., & Dullaert, W. (2007). Horizontal cooperation in logistics: opportunities and impediments. *Transportation Research Part E: Logistics and Transportation Review*, 43 (2), 129-142.

- Hätönen, J., & Eriksoon, T. (2009). 30+ years of research and practice of outsourcing – Exploring the past and anticipating the future. *Journal of International Management* , 15 (2), 142-155.
- Hsiao, H., Kemp, R., van der Vost, J., & Omta, S. (2010). A classification of logistic outsourcing levels and their impact on service performance: Evidence from the food processing industry. *International Journal of Production Economics* , 124 (1), 75-86.
- Malhotra, N., & Birks, D. (2006). *Marketing Research: An Applied Approach*, 2nd Edition. Harlow: Prentice-Hall Inc.
- Mentzer, J., Foggin, J., & Golicic, C. (Sep/Oct de 2000). Collaboration: The enablers, impediments and benefits. *Supply Chain Management Review* , pp. 52-58.
- Morash, E., & Clinton, S. (1998). Supply Chain Integration: Customer Value Through Collaborative Closeness Versus Operational Excellence. *Journal of Marketing Theory & Practice* , 6 (4), 104-119.
- Rogers, D., & Tibben-Lembke, R. (1998). *Going Backwards: Reverse Logistics Trends and Practices*. Reno: Reverse Logistics Executive Council.
- Stank, T., Keller, S., & Closs, D. (2001). Performance Benefits of Supply Chain Logistical Integration. *Transportation Journal* , 41 (2/3), 32-46.

COMPREENSÃO DOS FATORES DETERMINANTES DO TERRORISMO ATRAVÉS DE UM MODELO DE ÁRVORE DE REGRESSÃO

UNDERSTANDING THE DETERMINANTS OF TERRORISM: A REGRESSION TREE MODEL

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RESUMO

O presente estudo pretende identificar fatores determinantes do terrorismo e gerar um modelo explicativo para a ocorrência de atos terroristas, tendo sido consideradas na análise variáveis de dimensão económica, sociodemográfica, política, religiosa e outras caracterizadoras de 173 países, num período de 20 anos, entre 1990 e 2010. Através da aplicação de Árvores de Regressão com o algoritmo CART foram identificados diversos fatores, das diferentes dimensões analisadas, como tendo importância para a explicação do número de atentados. Confirmou-se que os fatores sociodemográficos são os que melhor explicam este indicador do terrorismo. O modelo explicativo gerado não revela capacidade explicativa muito elevada, mas dada a complexidade e subjetividade que envolve o fenómeno do terrorismo, considera-se que o modelo gerado constitui mais um contributo para a literatura sobre terrorismo.

Palavras-chave: Determinantes do Terrorismo, Árvores de Regressão, CART

ABSTRACT

This study aims to identify the determinants of terrorism, namely the number of attacks, and generate an explanatory model for the occurrence of terrorist acts, having been considered in the analysis economic, socio-demographic, political, and religious variables, 173 countries and a period of 20 years. Through the application of decision trees, namely the CART algorithm, several variables of the different dimensions have importance for the explanation of the number of attacks, being the socio-demographic that better explain this terrorism metric. The regression tree model does not show a very high explanatory capacity, but given the complexity and subjectivity involved in the phenomenon of terrorism, we can consider that the estimated model is a further contribution to the literature and to the understanding of the terrorism drivers.

Keywords: Terrorism, Drivers, Regression tree, CART.

INTRODUÇÃO

Na era da globalização é clara a noção de que o fenómeno da criminalidade também se expandiu largamente, na sua dimensão e especificidade. O crime organizado com o apoio dos facilitadores resultantes da crescente economia global, com a abertura de fronteiras e tirando proveito dos fortes avanços das tecnologias de informação e comunicação, tem assinalado rápida evolução na sociedade de hoje. O terrorismo constitui uma das formas mais agressivas de crime organizado, pelos meios que utiliza e fins que visa alcançar (Braz, 2009). Relativamente ao crime organizado em geral, o terrorismo distingue-se por agir com base em motivações de carácter político, ideológico e religioso, não tendo como fim último a obtenção de compensações financeiras (Ventura, 2003).

O presente estudo aborda o tema do terrorismo, pretendendo compreender que fatores tornam mais propício o seu desenvolvimento. A forma de luta mais eficaz contra o terrorismo passa pela prevenção da radicalização e recrutamento, a qual apenas será bem-sucedida conhecendo em profundidade os indicadores que caracterizam o ambiente ideal para a sua proliferação. A análise abrange o terrorismo numa amplitude global, ocorrido desde 1990, no âmbito de uma amostra de 173 países, procurando encontrar fatores potencialmente explicativos do terrorismo entre um conjunto de características desses países de cariz económico, sociodemográfico, político, religioso e outros.

O estudo realizado fornece à comunidade científica mais um contributo na área da análise do terrorismo, salientando-se o facto de fazer uso de metodologia inserida no

âmbito das técnicas de *data mining* (Han & Kamber, 2001), árvores de regressão com o algoritmo CART, não tendo sido identificado qualquer estudo anterior em que esta técnica de análise tenha sido utilizada com o mesmo objetivo. Desta forma, utilizou-se o algoritmo CART para gerar um modelo explicativo do número anual de atentados terroristas que ocorre, em média, num país, que evidenciou a importância das características sociodemográficas do país como as mais determinantes para a explicação do terrorismo.

A estrutura do artigo contempla cinco secções. Na secção dois faz-se uma breve contextualização das dimensões de caracterização dos países e da sua relação com o terrorismo de acordo com a literatura existente sobre o tema, na secção 3 aborda-se a metodologia associada ao estudo empírico. Na secção 4 apresentam-se os resultados e, por fim, na última secção expõem-se as conclusões e os contributos do estudo.

DETERMINANTES DO TERRORISMO

As causas que motivam os atos terroristas e fomentam a radicalização violenta são multifacetadas, podendo constituir um conjunto de fatores que juntos originam o ambiente necessário ao surgimento e crescimento do terrorismo, ou até representarem elementos precipitantes que determinam ações de curto prazo.

O desempenho económico de um país tem influência predominante no seu destino. O crescimento económico gera bem-estar social e estabilidade política, influencia as decisões a nível internacional e o equilíbrio geopolítico, determina fluxos migratórios e produz efeitos na maior parte dos fenómenos

sociais. Esse crescimento é usualmente medido pela taxa de crescimento real do produto interno bruto (PIB). O rendimento per capita também constitui um indicador de forte relevância na dimensão económico (Capul & Garnier, 1998).

O terrorismo tem sido considerado como uma ameaça ou fator de risco para o crescimento económico (Abadie & Gardeazabal, 2008; Crain & Crain, 2006; Mirza & Verdier, 2008 e Nitsch & Schumacher, 2004). Conduz igualmente a um ambiente de ansiedade e a uma maior perceção de risco, influenciando as decisões de investimento.

Diversos estudos empíricos concluíram que o terrorismo gera prejuízos económicos afetando negativamente o comércio (Nitsch & Schumacher, 2004), o turismo (Llorca-Vivero, 2008), o investimento estrangeiro direto (Enders & Sandler, 1996; Powers & Choi, 2012) e outras dimensões económicas fundamentais como a inovação tecnológica e a migração (Dreher et al., 2011; Larocqueet al., 2010), conduzindo a quebras no crescimento económico (Abadie & Gardeazabal, 2003; Araz-Takayet al., 2009; Crain & Crain, 2006 e Eckstein & Tsiddon, 2004). Contudo, condições económicas mais desfavoráveis podem também conduzir a mais atividade terrorista, por mais facilmente encontrar suporte e ambiente propício à radicalização, pela ausência de oportunidades atrativas de integração económica (Blomberger et al., 2004a).

Mas se nas sociedades originárias dos terroristas o PIB per capita, o crescimento da economia e a taxa de alfabetização não denotam relação com o terrorismo, no que se refere aos países alvo de atentados terroristas concluiu-se que esses mesmos indicadores tendem a ser relevantes quando relacionados

com a incidência de ataques. Gassebner & Luechinger (2011) concluíram que a urbanização (população urbana), as tensões religiosas e étnicas, a dimensão populacional, o número de militares e as despesas militares demonstram uma relação positiva com o terrorismo. Dreher & Fischer (2010) reportam que o crescimento populacional tem uma relação negativa com o terrorismo, concluindo que países com população em crescimento são alvo de menos terrorismo. Tavares (2004) e Urdal (2006) referem que populações jovens estão relacionadas com mais terrorismo, enquanto Krueger & Maleckova (2009) não encontraram nenhuma relação forte entre elevados índices de juventude e o terrorismo. Freyet al. (2009) salientam que o terrorismo conduz a um aumento de insatisfação com a vida, a nível individual e coletivo, o que se inclui nos impactos indiretos do terrorismo, que assumem geralmente, em conjunto com outras dimensões como a económica e política, danos mais elevados que os diretamente infligidos.

Os indicadores sociais, demográficos e religiosos estão intrinsecamente interligados, já que uma sociedade é caracterizada pela sua dinâmica populacional e comportamentos sociais, em que se incluem os aspetos culturais e a religião. A caracterização de um país no que se refere à política tem um papel fundamental devido à interdisciplinaridade existente entre ela e as dimensões económica e sociodemográfica. Vários estudos evidenciam que países com conflitos internos têm e geram mais terrorismo (Campos & Gassebner, 2009; Piazza, 2007, 2008a e Testas, 2004). No que se refere a conflitos e guerras internacionais verifica-se a mesma tendência (Braithwaite & Li, 2007; Dreher & Fischer, 2010; Koch & Cranmer, 2007; Piazza, 2008a e Walsh & Piazza, 2010).

Krueger (2007) e Pape (2006) consideram que o terrorismo é causado por situações políticas, o primeiro destacando como fator indiciante os regimes que determinam o seu aparecimento, e o segundo as condições políticas em que o terrorismo se desenvolve. O nível de democracia de um país tem sido a variável mais usada para a avaliação do grau de repressão dos regimes políticos (Feldmann & Perälä, 2004 e Meierrieks & Gries, 2012). Li (2005) realça que a possibilidade de participar politicamente com relativa facilidade torna menos provável a manifestação por meio da violência, o que implica uma relação negativa entre o terrorismo e o nível de democracia. Pelo contrário, a repressão política e ações militares contra grupos terroristas são menos prováveis quando governos têm que respeitar as liberdades civis e ter em conta uma ampla gama de interesses políticos (Frey & Luechinger, 2003; Li, 2005 e Gassebner & Luechinger, 2011).

Pelo exposto, são inúmeros os estudos que abordam a relação entre o terrorismo e as diferentes características dos países, e, por realizados em contextos e épocas diferentes,

nem sempre produzem as mesmas conclusões.

METODOLOGIA

A investigação tem como objetivos a identificação de fatores determinantes do terrorismo e a conceção de um modelo explicativo para a ocorrência de atos terroristas, nomeadamente do número de atentados. Adicionalmente pretende-se identificar qual das dimensões caracterizadoras de um país (económica, sociodemográfica, política, religiosa ou de outro índole) apresenta maior importância na explicação da atividade terrorista.

Amostra

A investigação tem por base uma amostra constituída por 173 países, distribuídos por um conjunto de 13 regiões (Tabela 1). Destaca-se a região africana subsariana com um quarto dos países e a Europa ocidental com 11,5% dos países, a segunda região com mais países na amostra.

Tabela 1: Distribuição dos países por região

Região	Países	%
África Sub-Sahariana	44	25,43
Europa Ocidental	20	11,56
Médio Oriente e Norte da África	19	10,98
América Central e Caraíbas	18	10,40
Europa de Leste	13	7,51
América do Sul	12	6,94
Sudeste Asiático	10	5,78
Ásia do Sul	10	5,78
Rússia e os Novos Estados Independentes (NEI)	9	5,20
Australásia e Oceania	7	4,05
Ásia Central	4	2,31
Leste Asiático	4	2,31
América do Norte	3	1,73
Total	173	100,00

Proceedings of the 5th Global Management Conference, 2013,

Global Academic Network & ISCTE-IUL;

ISBN: 978-989-732-156-6; © Instituto Universitário de Lisboa (ISCTE-IUL), Portugal

Dados

Utilizou-se a Global Terrorism Database (GTD), disponibilizada pelo Consórcio Nacional para o Estudo do Terrorismo e Resposta ao Terrorismo (EUA), conhecido por START (<http://www.start.umd.edu/gtd/>). O período de vinte anos decorrido entre 1990 a 2010 foi selecionado, por forma a ter o maior número possível de países com dados considerados válidos. Foi decidido não incluir o ano de 1993, cujos dados de terrorismo disponíveis na base de dados estavam bastante incompletos devido ao extravio do seu suporte físico pela anterior empresa responsável, os quais não foram possíveis de reconstituir.

Para além dos dados relativos ao terrorismo, organizados em dados em painel (país/ano), dados relativos a diversos indicadores de cariz económico, sociodemográfico, político, religioso, e outros de carácter multidimensional que permitem caracterizar os países foram recolhidos de diversas fontes: The Quality of Government Data set (Alesina et al., 2003; Cheibub et al., 2009 e La Porta et al., 1999); Database of Political Institutions (Becket et al., 2001); KOF – Index of Globalization (Dreher, 2006 e Dreher et al., 2008); Freedom House - Freedom in the World; Institute for Health Metrics and Evaluation – University of Washington (Gakidou et al., 2010); PENN WorldTable 7.0 - Center for International Comparisons of Production, Income and Prices from Pennsylvania (Heston et al., 2011); Polity IV Project (Marshall & Jaggers, 2009); The Cingranelli-Richards Human Rights Dataset (Cingranelli & Richards, 2010) e o WorldBank (2012), World Development Indicators.

De entre os diversos indicadores do terrorismo selecionou-se como variável dependente o número total de incidentes terroristas, visto que é a variável mais abordada na literatura e constitui o principal indicador da ocorrência de terrorismo. No apêndice são descritas todas as variáveis explicativas consideradas no estudo, agrupadas por dimensão. Para evitar os inconvenientes associados à retrocausalidade - permitindo que um efeito preceda a sua causa, ou exista inversão de causalidade - as variáveis explicativas entraram em análise desfasadas num período de um ano ($n-1$). Este mesmo procedimento foi adotado, por exemplo, por Freytag et al. (2011); Kis-Katos et al. (2011) ou Krieger & Meierrieks (2010).

Técnicas de análise de dados

O campo do *data mining* surge da necessidade de extrair automaticamente informação potencialmente útil a partir de bases de dados de elevada dimensão e complexidade, consistindo na aplicação de técnicas estatísticas e de inteligência artificial para encontrar tendências ou padrões a fim de apoiar decisões (Furtado, 2002; Han & Kamber, 2001), através da construção de modelos (Rocha et al., 2008). Foi utilizada a metodologia CRISP-DM (Cross- Industry Standard Process for Data Mining), que é o resultado de estudo efetuado por vários especialistas no sentido da definição das melhores práticas e de um modelo processual *standard* para a sistematização da descoberta de conhecimento (Chapman et al., 2000).

Os dados recolhidos, provenientes de diversas fontes, foram minuciosamente analisados quanto à sua consistência, valores

omissos, *outliers* e sua distribuição ao longo dos anos. Foram analisadas as correlações entre as variáveis explicativas de cada dimensão, tendo-se em cada correlação eliminado um dos atributos quando o coeficiente era superior a 0,9, em termos absolutos, visto que a utilização conjunta dos dois atributos não iria acrescentar valia ao trabalho, acabando por dificultar interpretação do modelo.

A escolha da técnica de modelação a utilizar recaiu sobre as árvores de regressão, especialmente indicadas para a predição de valores numéricos, com o algoritmo CART. A escolha do algoritmo CART deveu-se ao facto de ser um dos algoritmos de árvores de decisão mais utilizado, que proporciona árvores binárias que são de simples leitura, gerando também medidas de importância relativa das variáveis explicativas (Breiman et al., 1984).

Ainda, no sentido de ter como entradas apenas os atributos de maior importância de cada uma das dimensões, foram geradas, com cariz exploratório, árvores de regressão parciais, tendo-se selecionado apenas as variáveis com importância relativa acima de 40% na explicação do número total de incidentes terroristas, com exceção da dimensão económica em que esse valor mínimo foi de 30%. Na construção das árvores foi utilizada a parametrização constante da Tabela 2, tendo-se limitado a profundidade da árvore a 5 níveis.

Com os procedimentos adotados foram excluídas 13 variáveis com a análise das correlações e 35 como resultado das árvores parciais.

Assim, identificadas as variáveis explicativas mais importantes em cada dimensão, geraram-se, então, oito modelos com diferentes critérios de parametrização,

quanto à profundidade e número de casos nos nós pai e filho, para explicar o número de atentados terroristas a partir de 27 indicadores (26 resultantes das árvores parciais e a região a que pertence o país). A avaliação da qualidade do modelo baseou-se na proporção da variação do número de atentados que é explicada pelo modelo, isto é, recorreu-se ao coeficiente de determinação (R^2). As estimativas da capacidade preditiva dos modelos foram obtidas sobre dados novos e não sobre os dados utilizados na construção do modelo, mediante um processo de validação cruzada «10-fold» (Santos & Azevedo, 2005).

O modelo final selecionado foi o que apresentou o melhor equilíbrio entre a capacidade explicativa na amostra e nos novos dados, tendo como regras de paragem: um nível máximo de profundidade de cinco níveis abaixo do nó raiz; um número mínimo de casos nos nós pais de quatro e nos nós filhos de dois; e um ganho mínimo na qualidade do modelo (decréscimo na variância da variável dependente resultando de uma nova ramificação) de 0,0001. A proporção de variação explicada pelo modelo para a totalidade da amostra é de 72,6% e de 55,1% considerando a validação cruzada (10-fold).

RESULTADOS

O modelo em árvore obtido (Figura 1) apresenta 45 nós, dos quais 23 são nós folha. A importância relativa das diferentes variáveis explicativas é apresentada na Tabela 3. A variável densidade populacional (pessoas por km² de área de terra) (n-1) é o fator com maior capacidade explicativa do número de incidentes terroristas. A taxa de participação laboral, mulheres (% da população do sexo feminino 15+) (n-1) é a

segunda variável com maior poder explicativo (75,8%) e constitui a primeira ramificação da árvore, correspondendo um ramo a uma taxa menor ou igual a 15,15% da população do sexo feminino com mais de quinze anos (nó 1) e o outro a uma taxa superior a 15,15% (nó 2). No nó 1 os países/anos tendem a apresentar uma média superior de incidentes terroristas (130,5) e o nó 2 uma média bastante menor, de 12,4 incidentes.

A análise ao modelo gerado permite dizer, por exemplo, que se taxa de participação laboral, mulheres (% da população do sexo feminino 15 +) (n-1) for menor ou igual a 15,15%, e a percentagem de exportações de combustíveis (% das exportações de mercadorias) (n-1) for menor ou igual a 98,32, e a durabilidade de regime for superior a meio ano, e se vigorar ditadura civil ou real (monárquica) e se verificar valores de fragmentação religiosa superiores a 0,0375 (de 0 a 1), então a média de incidentes previstos é de 8,3 (nó 30), valor relativamente baixo. Por outro lado, se um país pertencer à região do Sudeste Asiático, e tiver mais de 14,34 utilizadores de internet (por cada 100 pessoas) (n-1), e nível de democracia inferior ou igual a 6,71 (de 0 - baixo a 10 - elevado), e se verificar índice de direitos de integridade física (n-1) inferior ou igual a 1,5 (de 0 - nenhum, a 8 - total) e taxa

de participação laboral, mulheres (% da população do sexo feminino 15 +) (n-1) superior a 15,15%, então a média de incidentes previstos é de 683 (nó 35), valor bastante elevado.

A análise das ramificações da árvore permite identificar as variáveis densidade populacional (pessoas por km² de área de terra) (n-1) e quota de consumo do governo sobre o PIB per capita (n-1) como as que surgem mais vezes como ramificadoras, respetivamente, nos nós 4,7 e 16 e nos nós 15, 18 e 21. Para além da densidade populacional ainda se destacam com importâncias relativas acima de 50% as variáveis população, total (n-1), instituições em regime (n-1), durabilidade de regime (n-1), fracionamento político total (n-1), KOF - índice de globalização (0 a 100) (n-1) e área de superfície (km²) - área total geográfica do país (n-1). Assim, constata-se que acima de 40% se apuraram quatro variáveis económicas, três variáveis sociodemográficas, quatro políticas, quatro religiosas e duas variáveis de caracterização multidimensional. As dimensões que explicam melhor o número total de incidentes terroristas são a sociodemográfica, económica e política, com maior relevância das variáveis de caracterização sociodemográfica, seguidas das políticas.

Tabela 2: Parametrização das árvores de regressão

Parâmetro	CART
N.º máximo de níveis da árvore	5 níveis
N.º mínimo de observações em nó <i>pai</i>	2 observações
N.º mínimo de observações em nó <i>filho</i>	1 observação
Decremento mínimo de variância numa ramificação	0,0001

Tabela3. Importância das variáveis explicativas do número total de incidentes terroristas

Atributo Explicativo	Dimensão	Importância	Importância Relativa	Ordem
Densidade populacional (pessoas por km ² de área de terra) (n-1)	Sociodem.	1480,648	100,0%	1
Taxa de participação laboral, mulheres (% população do sexo feminino 15 +) (n-1)	Sociodem.	1122,643	75,8%	2
Combustíveis, % das exportações de mercadorias (n-1)	Económ.	1081,073	73,0%	3
População, total (n-1)	Sociodem.	1074,439	72,6%	4
Instituições em Regime (n-1)	Política	972,757	65,7%	5
Durabilidade de regime (n-1)	Política	866,653	58,5%	6
Fracionamento político total (n-1)	Política	837,125	56,5%	7
KOF - Índice de Globalização (0 a 100) (n-1)	Outras	766,773	51,8%	8
Área de superfície (km ²) - área total geográfica do país (n-1)	Outras	765,744	51,7%	9
Quota de consumo do Governo sobre o PIB per capita (n-1)	Económ.	737,137	49,8%	10
Índice de Direitos de Integridade física (n-1)	Política	694,027	46,9%	11
Religião Muçulmana (percentagem da população total) (n-1)	Religiosa	679,880	45,9%	12
Inflação, preços de consumo (% anual) (n-1)	Económ.	678,946	45,9%	13
Outras religiões (percentagem da população total) (n-1)	Religiosa	678,785	45,8%	14
Fragmentação religiosa (n-1)	Religiosa	619,524	41,8%	15
Crescimento do PIB (% anual) (n-1)	Económ.	618,748	41,8%	16
Religião Católica (percentagem da população total) (n-1)	Religiosa	614,544	41,5%	17
População urbana (% do total) (n-1)	Sociodem.	581,742	39,3%	18
Região	Outras	551,067	37,2%	19
População de 0-14 (% do total) (n-1)	Sociodem.	542,464	36,6%	20
Nível de democracia (0 a 10) (n-1)	Política	539,476	36,4%	21
Utilizadores de Internet (por cada 100 pessoas) (n-1)	Sociodem.	525,129	35,5%	22
Despesa total em saúde (% do PIB) (n-1)	Sociodem.	523,122	35,3%	23
Fragmentação étnica (n-1)	Sociodem.	455,391	30,8%	24
Crescimento populacional (% anual) (n-1)	Sociodem.	415,093	28,0%	25
População com 65 anos e acima (% do total) (n-1)	Sociodem.	333,703	22,5%	26
Despesas militares (em % do PIB) (n-1)	Outras	272,215	18,4%	27

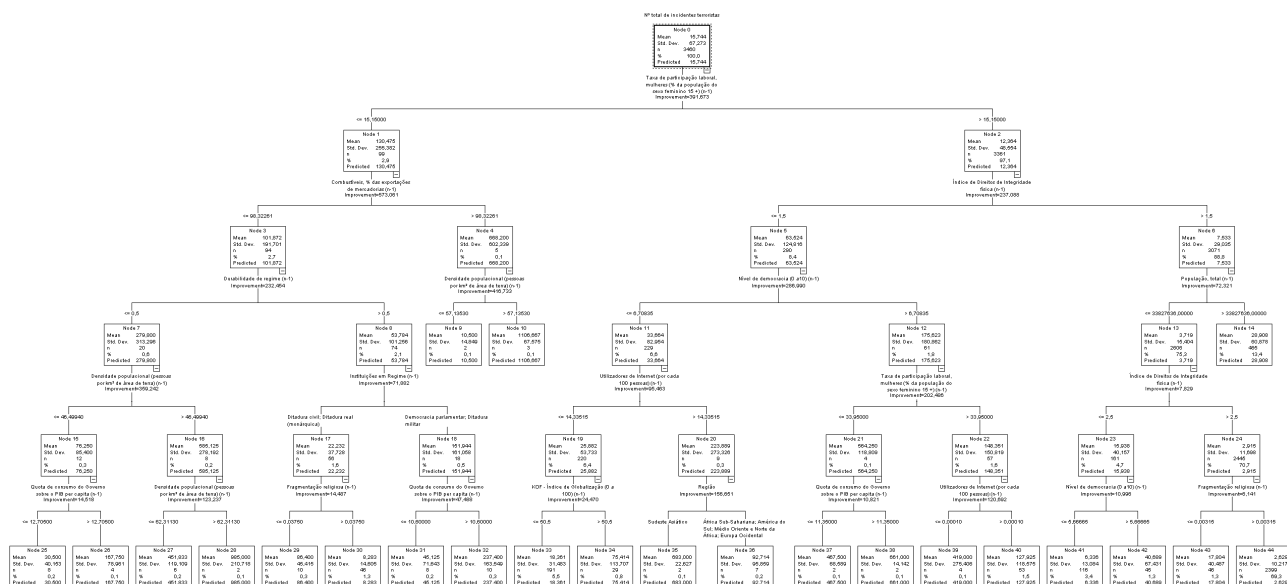


Figura 1. Modelo de árvore de regressão do número total de incidentes terroristas

DISCUSSÃO

A literatura analisada não identificou estudos anteriores em que tivesse sido utilizada a metodologia CART, o que invalida a comparação de resultados com base nas métricas usadas. A generalização dos fatores determinantes do terrorismo é uma tarefa de elevada complexidade tendo em conta que as diversas regiões e países têm contextos geopolíticos diferentes e que as motivações e ideologias dos vários grupos terroristas por todo o mundo são também bastante desiguais. Na avaliação sobre a proporção de variação do número de atentados terroristas explicada pelo modelo para toda a amostra, mas principalmente quando medida através da validação cruzada, ou seja, quanto à sua capacidade preditiva, não se expectavam valores altos, sendo considerados satisfatórios na previsão (valores acima dos 50%).

Na explicação do número de incidentes pode-se concluir que fatores económicos têm um papel relevante. O crescimento do PIB demonstrou ter relevância explicativa na ocorrência de terrorismo. Economias de menor estabilidade, de fraco crescimento e conducentes a fracas condições económicas demonstram assim ter impactos no aumento do terrorismo, o que vai ao encontro das conclusões de Azam & Delacroix (2006); Azam & Thelen (2008); Blomberg et al. (2004a, 2004b); Blomberg & Hess (2008a, 2008b); Feldmann & Perälä (2004); Frey & Luechinger (2003); Freytag et al. (2011); Goldstein (2005); Krieger & Meierrieks (2011); Krueger & Laitin (2008); Lai (2007) e Piazza (2011), contrariando por outro lado os resultados de Basuchoudhary & Shughart (2010); Krueger & Maleckova (2003); Kurrild-Klitgaard et al. (2006); Meierrieks & Gries (2012) e Plümper & Neumayer (2010), que não encontraram indícios de que o

crescimento económico possa influir de forma relevante nos padrões de terrorismo.

No que se refere à dimensão política foi possível concluir que a instabilidade política cria condições favoráveis ao crescimento do terrorismo, prevendo-se para regimes com duração inferior a meio ano números de terrorismo mais elevados, o que reitera os resultados de Gassebner et al. (2008); Gassebner & Luechinger (2011); Krueger & Maleckova (2003); Li (2005); Meierrieks & Gries (2012) e Piazza (2008b, 2009). A valores mais altos de despesas militares corresponde mais terrorismo, sendo que, tal como menciona Campos & Gassebner (2009), clima de guerra civil pode constituir igualmente ambiente ideal à implementação de campos de treino para potenciais terroristas.

Os resultados da presente investigação contrariam as conclusões de Krueger (2007) e Pape (2006), que afirmam que o terrorismo tem origem em sociedades que estão sob regimes repressores, enfatizando as causas políticas ao invés das económicas ou culturais. Pelo contrário, no presente estudo as dimensões sociodemográfica e económica detêm mais relevância na explicação do terrorismo do que a dimensão política. Relativamente ao tipo de regime político, pôde-se apurar que a níveis mais altos de democracia corresponde mais terrorismo. Resultado idêntico foi obtido por Frey & Luechinger (2003) e Li (2005), o que se poderá justificar com o facto de que a repressão política e ações militares contra grupos terroristas são menos prováveis quando governos têm que respeitar as liberdades civis e ter em conta uma ampla gama de interesses políticos. Contudo, Gassebner & Luechinger (2011) no seu estudo empírico não encontraram qualquer relação entre a democracia e o terrorismo.

Concluíram que a ausência de abusos no que se refere ao respeito pelos direitos humanos e direitos de integridade física está associado a menos terrorismo, o que vai ao encontro do estudo ora efetuado que revela que a índices de direitos de integridade física mais baixos correspondem valores de terrorismo previstos mais altos. Também se tem que ter em consideração, conforme referem Li (2005) e Drakos & Gofas (2006), que em países de baixo nível de desenvolvimento político, com regimes repressivos, existe maior suscetibilidade de controlo das notícias veiculadas na imprensa. Nesse sentido, a cobertura da informação sobre o terrorismo tende a ser restrita, e consequentemente diferente do número de incidentes relatados e posteriormente registrados nas bases de dados de terrorismo, e daí parecer haver menos terrorismo nesses casos.

Relativamente à existência de mais terrorismo nos países com valores muito elevados de exportação de combustíveis, este resultado acompanha as conclusões de LeBillon (2001), Tavares (2004), Bravo & Dias (2005) e Sambanis (2008), que encontraram uma relação positiva no que se refere à importância da existência de recursos naturais (minerais) estratégicos no surgimento de conflitos armados, onde se inclui o terrorismo. No modelo explicativo do número total de incidentes terroristas a globalização, medida através das variáveis KOF - Índice de Globalização e utilizadores de internet, demonstrou revelar menos terrorismo em níveis mais baixos de globalização. A globalização e modernização acarretam mudanças económicas, novas formas de comunicação e estilos de vida pelo avanço das novas tecnologias, urbanização, e novas ideias ou ideologias. Estes fatores podem criar sentimentos de revolta e injustiça quando associados a tensões sociodemográficas e económicas. O uso das

novas tecnologias pode ser um obstáculo para muitos, e para as organizações terroristas um meio favorecedor e disseminador de ideologias e incitamento ao recrutamento, como concluíram Robison et al. (2006).

Blomberg & Hess (2008a, 2008b); Drakos & Gofas (2006); Koch & Cranmer (2007) e Kurtil-Klitgaard et al. (2006) também encontraram fortes evidências da influência da globalização no aumento do número de terrorismo, ao contrário de Braithwaite & Li (2007); Bravo & Dias (2005); Burgoon (2006); Campos & Gassebner (2009) e Li & Schaub (2004) que nos seus estudos não apuraram significâncias relevantes no que se refere à globalização como fator explicativo do terrorismo.

A dimensão populacional mostrou ser um relevante fator explicativo do terrorismo, com maiores números de terrorismo a corresponder a maiores níveis populacionais, o que confirma resultados de estudos anteriores que demonstraram uma correlação positiva com o terrorismo (Burgoon, 2006; Freytag et al., 2008; Gassebner & Luechinger, 2011; Krieger & Meierrieks, 2011; Krueger & Laitin, 2008; Krueger & Maleckova, 2003; Lai, 2007; Meierrieks & Gries, 2012; Piazza, 2008b e Plümper & Neumayer, 2010). Tal relação pode justificar-se pelo facto de em alguns casos serem países maiores e haver maior probabilidade de ataques por disporem de mais potenciais alvos, vítimas, ou perpetradores, ou até por uma grande população poder refletir maior captação de recursos para o policiamento em detrimento de maior investimento em contraterrorismo, ou poder ser alvo de maiores níveis de tensão demográfica. Apenas nos estudos de Azam, J. & Delacroix (2006) e Azam & Thelen (2008) a dimensão populacional não demonstrou ter relação com o terrorismo. Variáveis ligadas à dinâmica populacional, como o crescimento

populacional, a dimensão e densidade populacional, a estrutura etária, ou a urbanização (população urbana), que apresentaram capacidades explicativas relevantes, também revelaram fortes evidências como determinantes do terrorismo nos estudos de Braithwaite & Li (2007); Burgoon (2006); Campos & Gassebner (2009); Drakos & Gofas (2006); Dreher & Gassebner (2008); Koch & Cranmer (2007); Krueger & Laitin (2008); Krueger & Maleckova (2003); Lai (2007); Li (2005); Li & Schaub (2004); Piazza (2006, 2008a, 2008b); Plümper & Neumayer (2010); Sambanis (2008) e Tavares (2004).

A educação é um fator que na literatura demonstra diversas posições antagónicas quanto à sua relação com o terrorismo. Berrebi (2007), Krueger & Maleckova (2003) e Krueger (2008) encontram uma relação positiva entre terrorismo e educação, apesar da significância ser baixa os autores concluem que o capital humano é um preditor positivo da participação no terrorismo. Freytag et al. (2011) detetaram um efeito significativo entre o número de anos de estudo e o terrorismo. Alguns outros autores ainda encontraram na educação um fator determinante para o terrorismo como Azam & Thelen (2008), Bravo & Dias (2005) e Tavares (2004). Contudo uma grande parte das análises empíricas teve neste campo resultados idênticos à investigação em análise, ou seja, a educação, analisada através das variáveis anos de educação e frequência escolar, não demonstrou ter relevante capacidade explicativa do terrorismo, não constituindo desta forma fator preditivo do desenvolvimento do terrorismo.

As variáveis de caracterização religiosa demonstraram ter importância na explicação do terrorismo, porém com relevância inferior às dimensões sociodemográfica, política e

económica. Na maioria dos estudos encontrados na revisão da literatura foi possível constatar fracas evidências de correlações significativas entre religião e terrorismo. Piazza (2006) concluiu que existe significativa relação entre fatores ligados à religião e os níveis de terrorismo. Também Gassebner & Luechinger (2011) encontraram uma relação positiva entre as tensões religiosas e o terrorismo. Contudo, diversos foram os autores que não detetaram relação significativa entre a religião e o terrorismo, como Pape (2006), ou relação fraca como Abadie (2006), Blomberg & Hess (2008a, 2008b), Bravo & Dias (2005), Krueger & Laitin (2008), Krueger & Maleckova (2003), Kurtil-Klitgaard et al. (2006) e Tavares (2004).

Uma visão global sobre a totalidade dos estudos revistos permitiu apurar que os fatores sociodemográficos foram os que obtiveram maiores evidências como potenciais determinantes do terrorismo. Em segundo lugar destacam-se os fatores económicos, que surgem intrinsecamente ligados à dimensão social, pela influência que a melhoria ou decréscimo das condições económicas tem na vivência da população. Seguidamente, mas também com relevância, figuram os fatores de cariz político. Os fatores religiosos demonstraram uma fraca significância como determinantes do terrorismo. A dimensão que demonstrou mais controvérsia nos resultados foi a económica, destacando-se contudo a vertente que destaca a sua importância. Os fatores sociodemográficos foram distintamente os que reuniram mais consenso no âmbito de todos os estudos analisados. De forma geral, os resultados acompanham as grandes linhas apresentadas, embora obtidos recorrendo a uma técnica ainda não utilizada nos estudos analisados, e vêm confirmar, por vezes, resultados de outros estudos, e noutros, vêm

contrariar, o que evidencia que mais investigação deve ser desenvolvida e que as diferentes amostras (países e anos) utilizadas em cada estudo podem conduzir a resultados diferentes.

CONCLUSÕES

A investigação desenvolvida procurou constituir uma abordagem ao estudo do terrorismo no sentido de estabelecer mais um passo para a compreensão dos processos ou indicadores subjacentes à radicalização nas suas formas mais extremas. Tomaram-se como objetivos a identificação dos fatores determinantes do terrorismo e a conceção de um modelo explicativo para a ocorrência de incidentes terroristas. A possibilidade de junção de uma vasta série de variáveis explicativas revelou-se uma mais-valia, obrigando, contudo, a um elevado esforço de uniformização e validação dos dados, que tendo origens diferentes traziam também formatação e organização heterogéneas. Com base nestas fontes abertas conseguiu-se uma grande amostra, com 3460 observações, correspondentes a 173 países, ao longo de 20 anos decorridos entre 1990 e 2010. Perante uma grande amostra e uma elevada quantidade de atributos potencialmente explicativos do terrorismo (74), agrupados em cinco dimensões, económica, sociodemográfica, política, religiosa e de carácter multidimensional, as técnicas de *data mining*, nomeadamente as árvores de regressão com o algoritmo CART, foram consideradas as adequadas.

Os objetivos foram atingidos e a técnica de análise utilizada demonstrou ser eficaz para a concretização deste e de futuros estudos na área do terrorismo. Foram identificados diversos fatores considerados como determinantes do terrorismo,

pertencentes às cinco dimensões de variáveis caracterizadoras dos países. O modelo explicativo não traduziu capacidades explicativa e preditiva muito elevadas, mas consideradas aceitáveis dada a complexidade e subjetividade que envolve a área do terrorismo. O terrorismo é um fenómeno demasiado complexo para ser reduzido a apenas uma causa, ou mesmo a um conjunto de causas amplamente generalizáveis, visto que as dinâmicas específicas de cada país ou mesmo região, ou período temporal, podem gerar diferentes conclusões. Contudo, torna-se possível reunir um conjunto de características que podem per si e interagindo com outras constituir um ambiente favorável ao aparecimento e fomento do terrorismo.

O terrorismo é sempre um tema atual e em permanente evolução, pelo que a inclusão neste estudo dos dados mais recentes disponíveis (até 2010), a agregação num estudo global das variáveis utilizadas em diversos estudos e a introdução de uma nova técnica de análise de dados nesta área contribuíram para o aumento do conhecimento sobre o tema. O maior conhecimento sobre os fatores determinantes do terrorismo fornece argumentação teórica e evidência empírica que proporcionam bases conducentes à elaboração de diretrizes para projetar e melhorar as intervenções para a prevenção, detenção e reversão dos processos de radicalização onde ela possa vir a gerar atos de violência. A complexidade e interdisciplinaridade que envolve o tema do terrorismo exigem o dispêndio e investimento de mais meios e tempo no sentido da concretização de estudos de nível mais aprofundado.

REFERÊNCIAS

- Abadie, A. (2006). Poverty, political freedom, and the roots of terrorism. *American Economic Review*, 96(2), pp. 50–56.
- Abadie, A. & Gardeazabal, J. (2003). The economic costs of conflict: a case study of the Basque Country. *American Economic Review* 93(1), pp. 113–132.
- Abadie, A. & Gardeazabal, J. (2008). Terrorism and the world economy. *European Economic Review*, 52, pp. 1–27.
- Alesina, A.; Devleeschauwer, A.; Easterly, W.; Kurlat, S. & Wacziarg, R. (2003). Fractionalization. *Journal of Economic Growth*, 8: pp. 155–194.
- Araz-Takay, B.; Arin, K. & Omay, T. (2009). The endogenous and non-linear relationship between terrorism and economic performance: Turkish evidence. *Defence and Peace Economics* 20(1), pp. 1–10.
- Azam, J., & Delacroix, A. (2006). Aid and the delegated fight against terrorism. *Review of Development Economics*, 10(2), pp.330–344.
- Azam, J. & Thelen, V. (2008). The roles of foreign aid and education in the war on terror. *Public Choice*, 135(3), pp. 375–397.
- Azam, J. & Thelen, V. (2010). Foreign aid versus military intervention in the war on terror. *Journal of Conflict Resolution* 54(2), pp. 237–261.
- Basuchoudhary, A. & Shughart, W. (2010). On ethnic conflict and the origins of transnational terrorism. *Defence and Peace Economics* 21(1), pp. 65–87.
- Beck, T.; Clarke, G.; Groff, A; Keefer, P. & Walsh, P. (2001). New tools in comparative political economy: The Database of Political Institutions. 15:1, pp. 165–176 (September), *World Bank Economic Review*.
- Berman, E. & Laitin, D. (2008). Religion, terrorism and public goods: testing the club model. *Journal of Public Economics*, 92(10–11), pp. 1942–1967.
- Berrebi, C. (2007). Evidence about the link between education, poverty and terrorism among Palestinians. *Peace Economics, Peace Science and Public Policy*, 13(1), Article 2.
- Blomberg, S., Hess, G. & Weerapana, A. (2004a). An economic model of terrorism. *Conflict Management and Peace Science* 21(1), pp. 17–28.
- Blomberg, S., Hess, G. & Weerapana, A. (2004b). Economic conditions and terrorism. *European Journal of Political Economy* 20, pp. 463–478.
- Blomberg, S. & Hess, G. (2008a). The Lexus and the olive branch: globalization, democratization and terrorism. In P. Keefer e N. Loayza (Eds.), *Terrorism, economic development, and political openness*. Cambridge: Cambridge University Press, pp. 116–147.
- Blomberg, S. & Hess, G. (2008b). From (no) butter to guns? Understanding the economic role in transnational terrorism. In *Economic Development, and Political Openness*, edited by P. Keefer and N. Loayza. Cambridge: Cambridge University Press, pp. 83–115.
- Blomberg, S. & Rosendorff, B. (2009). A gravity model of globalization, democracy and transnational terrorism. In G. D. Hess (Ed.), *Guns and butter*. Cambridge: MIT Press, pp. 25–156.

- Braithwaite, A., & Li, Q. (2007). Transnational terrorism hot spots: identification and impact evaluation. *Conflict Management and Peace Science*, 24(4), pp. 281–296.
- Bravo, A. & Dias, C. (2005). Os fatores determinantes do terrorismo num contexto geopolítico. *PROELIUM, Revista da Academia Militar* (ISSN 1645/ 8826), 6ª Série, nº 2, Janeiro.
- Braz, J. (2009). *Investigação Criminal, a organização, o método e a prova, os desafios da nova criminalidade*. Edições Almedina S.A.
- Breiman, L.; Friedman, J.; Olshen, R. & Stone, C. (1984). *Classification and Regression Trees*. Chapman and Hall/CRC Press.
- Burgoon, B. (2006). On welfare and terror: social welfare policies and political-economic roots of terrorism. *Journal of Conflict Resolution*, 50(2), pp. 176-203.
- Campos, N. & Gassebner, M. (2009). International terrorism, political instability and the escalation effect. CEPR Discussion Paper 7226.
- Capul, J. & Garnier, O. (1998). *Dicionário de Economia e Ciências Sociais*. Tradução: Germano Rio Tinto, 1ª Edição, Lisboa, Plátano Edições Técnicas.
- Chapman, P.; Clinton, J.; Kerber, R.; Khabaza, T.; Reinartz, T.; Shearer, C. & Wirth, R. (2000). *CRISP-DM 1.0 - Step-by-step data mining guide*, CRISP-DM Consortium. URL: <http://www.crisp-dm.org>, accessed in January 2012.
- Cheibub, J.; Gandhi, J. & Vreeland, J. (2009). Democracy and dictatorship revisited. *Public Choice*, 143(1-2), pp. 67-101.
- Cingranelli, D. & Richards, D. (2010). *The Cingranelli-Richards (CIRI) Human Rights Dataset*. Versão 2010.05.17, available on: <http://www.humanrightsdata.org> (accessed in February 2012).
- Crain, N. & Crain, W. (2006). Terrorized economies. *Public Choice* 128, pp. 317–349.
- Crenshaw, E.; Robison, K. & Jenkins, J. (2007). The “roots” of transnational terrorism: a replication and extension of Burgoon. Paper presented to the annual meetings of the American Sociological Association, New York City (August 2007).
- Drakos, K. & Gofas, A. (2006). In search of the average transnational terrorist attack venue. *Defence and Peace Economics* 17(2), pp. 73-93.
- Dreher, Axel (2006). Does Globalization Affect Growth? Evidence from a new Index of Globalization. *Applied Economics* 38(10), pp. 1091-1110.
- Dreher, A. & Fischer, J. (2010). Government decentralization as a disincentive for transnational terror? An empirical analysis. *International Economic Review*, 51(4), pp. 981-1002.
- Dreher, A. & Fischer, J. (2011). Does government decentralization reduce domestic terror? An empirical test. *Economics Letters*, 113(3), pp. 223-225.
- Dreher, A. & Gassebner, M. (2008). Does political proximity to the US cause terror? *Economics Letters*, 99(1), pp. 27-29.
- Dreher, A.; Gaston, N. & Martens, P. (2008). *Measuring Globalisation - Gauging its Consequences* (New York: Springer).

- Dreher, A.; Krieger, T. & Meierrieks, D. (2011). Hit and (they will) run: the impact of terrorism on migration. *Economics Letters* 113, pp. 42-46.
- Eckstein, Z. & Tsiddon, D. (2004). Macroeconomic consequences of terror: theory and the case of Israel. *Journal of Monetary Economics* 51, pp. 971-1002.
- Enders, W. & Sandler, T. (1996). Terrorism and foreign direct investment in Spain and Greece. *Kyklos* 49(3), pp. 331-352.
- Eyerman, J. (1998). Terrorism and democratic states: soft targets or accessible systems? *International Interactions*, 24(2), 151-170.
- Feldmann, A. & Perälä, M. (2004). Reassessing the causes of nongovernmental terrorism in Latin America. *Latin American Politics and Society* 46(2), pp. 101-132.
- Freedom House (2010) Freedom of in the World 2010: the annual survey of political rights and civil liberties. Washington: Freedom House, available on: <http://www.freedomhouse.org> (accessed in February 2012).
- Frey, B. & Luechinger, S. (2003). How to fight terrorism: alternatives to deterrence. *Defence and Peace Economics* 14(4), pp.237-249.
- Frey, B.; Luechinger, S. & Stutzer, A. (2009). The life satisfaction approach to valuing public goods: the case of terrorism. *Public Choice*, 138, pp. 317-345.
- Freytag, A.; Krüger, J.; Meierrieks, D. & Schneider, F. (2008). The origins of terrorism: Cross-country estimates on socio-economic determinants of terrorism. CIE Working Paper 2009-01, University of Paderborn.
- Freytag, A.; Krüger, J.; Meierrieks, D. & Schneider, F. (2011). The origins of terrorism: Cross-country estimates of socio-economic determinants of terrorism. *European Journal of Political Economy* 27, pp. 5-16.
- Furtado, V. (2002). *Tecnologia e gestão da informação na segurança pública*. Editora Garamond.
- Gakidou, E.; Cowling, K.; Lozano, R. & Murray, C. (2010). Increased educational attainment and its effect on child mortality in 175 countries between 1970 and 2009: a systematic analysis. *Lancet*, 376: pp. 959-974.
- Gassebner, M.; Jong-A-Pin R. & Mierau, J. (2008). Terrorism and electoral accountability: one strike, you're out! *Economic Letters*, 100, pp. 126-129.
- Gassebner, M. & Luechinger, S. (2011). Lock, stock, and barrel: a comprehensive assessment of the determinants of terror. *Public Choice* (149), pp. 235-261.
- Goldstein, K. (2005). Unemployment, inequality and terrorism: another look at the relationship between economics and terrorism. *Undergraduate Economic Review*, 1(1), Article 6.
- Gries, T.; Krieger, T. & Meierrieks, D. (2011). Causal linkages between domestic terrorism and economic growth. *Defence and Peace Economics* 22(5), pp. 493-508.
- Han, J. & Kamber, M. (2001). *Data Mining, Concepts and Techniques*. Academic Press.
- Heston, A.; Summers, R. & Aten, B. (2011). *Penn World Table Version 7.0*. Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, June.

- Kis-Katos, K.; Liebert, H. & Schulze, G. (2011). On the origin of domestic and international terrorism. *European Journal of Political Economy*, 27, pp. 17-36.
- Koch, M. & Cranmer, S. (2007). Testing the “Dick Cheney” hypothesis: do governments of the left attract more terrorism than governments of the right? *Conflict Management and Peace Science*, 24(3), pp. 311-326.
- Krieger, T. & Meierrieks, D. (2010). Terrorism in the Worlds of Welfare Capitalism. *Journal of Conflict Resolution*. 54(6) pp. 902-939.
- Krieger, T. & Meierrieks, D. (2011). What causes terrorism? *Public Choice* 147, pp. 3-27.
- Krueger, A. (2007). *What Makes a Terrorist*. Princeton: Princeton University Press.
- Krueger, A. (2008). What makes a homegrown terrorist? Human capital and participation in domestic Islamic terrorist groups in the U.S.A. *Economics Letters*, 101, pp.293-296.
- Krueger, A. & Laitin, D. (2008). Ktokogo? A cross-country study of the origins and targets of terrorism. In P. Keefer e N. Loayza (Eds.), *Terrorism, economic development, and political openness*, pp. 148-173. Cambridge: Cambridge University Press.
- Krueger, A. & Maleckova, J. (2003). Education, poverty and terrorism: is there a causal connection? *Journal of Economic Perspectives* 17(4), pp.119-144.
- Krueger, A. & Maleckova, J. (2009). Attitudes and action: public opinion and the occurrence of international terrorism. *Science*, 325(5947), pp. 1534-536.
- Kurrild-Klitgaard, P.; Justesen, M. & Klemmensen, R. (2006). The political economy of freedom, democracy and transnational terrorism. *Public Choice* 128, pp. 289-315.
- La Porta, R.; López-de-Silanes, F.; Shleifer, A. & Vishny, R. (1999). The Quality of Government. *Journal of Law, Economics and Organization*, 15(1): pp. 222-279.
- LaFree, G. (2010). The Global Terrorism Database (GTD): Accomplishments and Challenges. *Perspectives on Terrorism*, vol.4, Issue 1, March, pp.24-46.
- Lai, B. (2007). “Draining the swamp”: an empirical examination of the production of international terrorism 1968–1998. *Conflict Management and Peace Science*, 24(4), pp. 297-310.
- Larocque, D.; Lincourt, G. & Normandin, M. (2010). Macroeconomic effects of terrorist shocks in Israel. *Defence and Peace Economics* 21(4), pp. 317-336.
- Le Billon, P. (2001). “The political ecology of war: natural resources and armed conflicts”. *Political Geography* 20 (3), pp. 561-584.
- Li, Q. (2005). Does democracy promote or reduce transnational terrorist incidents? *Journal of Conflict Resolution* 49(2), pp. 278-297.
- Li, Q. & Schaub, D. (2004). Economic globalization and transnational terrorism: a pooled time-series analysis. *Journal of Conflict Resolution*, 48(2), pp. 230-258.
- Llorca-Vivero, R. (2008). Terrorism and international tourism: new evidence. *Defence and Peace Economics* 19(2), pp. 169-188.

- Marshall, M. & Jaggers, K. (2011). Polity IV Project: Political Regime Characteristics and Transitions, 1800-2010. University of Maryland, available on: <http://www.systemicpeace.org/polity/polity4.htm> (accessed in February 2012).
- Meierrieks, D. & Gries, T. (2012). Economic Performance and Terrorist Activity In Latin America. *Defence and Peace Economics*, pp. 1-24.
- Mirza, D. & Verdier, T. (2008). International trade, security and transnational terrorism: theory and a survey of empirics. *Journal of Comparative Economics*, 36, pp. 179-194.
- Neumayer, E. & Plümper, T. (2009). International terrorism and the clash of civilizations. *British Journal of Political Science*, 39(4), pp. 711-734.
- Newman, E. (2006). Exploring the "Root Causes" of Terrorism. *Studies in Conflict e Terrorism*, 29-8, pp. 749-772.
- Nitsch, V. & Schumacher, D. (2004). Terrorism and international trade: an empirical investigation. *European Journal of Political Economy* 20, pp. 423-433.
- Pape, R. (2006). *Morirpara Ganar - Las estrategia del terrorismo suicida*. Barcelona: Editora Paidós Ibérica.
- Piazza, J. (2006). Rooted in poverty? Terrorism, poor economic development, and social cleavages. *Terrorism and Political Violence*, 18(1), pp. 159-177.
- Piazza, J. (2007). Draining the swamp: democracy promotion, state failure, and terrorism in 19 Middle Eastern countries. *Studies in Conflict and Terrorism*, 30(6), pp. 521-539.
- Piazza, J. (2008a). Do democracy and free markets protect us from terrorism? *International Politics*, 45(1), pp. 72-91.
- Piazza, J. (2008b). Incubators of terror: do failed and failing states promote transnational terrorism? *International Studies Quarterly* 52, pp. 469-488.
- Piazza, J. (2009). Economic development, poorly managed political conflict and terrorism in India. *Studies in Conflict and Terrorism* 32, pp. 406-419.
- Piazza, J. (2011). Poverty, minority economic discrimination, and domestic terrorism. *Journal of Peace Research* 48 (3), pp. 339-353.
- Pletka, D. (2003). Iraq, Conflict, and Beyond. available on: <http://www.aei.org/article/foreign-and-defensepolicy/regional/middle-east-and-north-africa/iraq-conflict-and-beyond/>, (AEI - American Enterprise Institute For Public Policy Research).
- Plümper, T., & Neumayer, E. (2010). The friend of my enemy is my enemy: international alliances and international terrorism. *European Journal of Political Research*, 49(1), pp. 75-96.
- Powers, M. & Choi, S-W. (2012). Does Transnational Terrorism Reduce Foreign Direct Investment? Business-Related Versus non-Business-Related Terrorism. *Journal of Peace Research*, pp. 1-16.
- Robison, K.; Crenshaw, E. & Jenkins, J. (2006). Ideologies of violence: the social origins of islamist and leftist transnational terrorism. *Social Forces*, 84(4), pp. 2009-2026.
- Rocha, M.; Cortez, P. & Neves, J. (2008). *Análise Inteligente de Dados-*

- algoritmos e implementação em java.
FCA - Editora de Informática.
- Sambanis, N. (2008). Terrorism and civil war. In P. Keefer & N. Loayza (Eds.), *Terrorism, economic development, and political openness*. Cambridge: Cambridge University Press, pp. 174-208.
- Santos, F. & Azevedo, C. (2005). *Data Mining - Descoberta de Conhecimento em Bases de Dados*. FCA – Editora Informática.
- Savun , B. & Phillips, B. (2009). Democracy, foreign policy, and terrorism. *Journal of Conflict Resolution* 53(6), pp. 878-904.
- Tavares, J. (2004). The open society assesses its enemies: shocks, disasters and terrorist attacks. *Journal of Monetary Economics* 51, pp. 1039-1070.
- Teorell , J.; Samanni, M.; Holmberg, S. & Rothstein, B. (2011). *The Quality of Government Dataset*, versão 6Abr11. University of Gothenburg: The Quality of Government Institute, available on:
<http://www.qog.pol.gu.se>
(accessed in February 2012).
- Testas, A. (2004). Determinants of terrorism in the Muslim world: an empirical cross-sectional analysis. *Terrorism and Political Violence*, 16(2), pp. 253-273.
- Urdal, H. (2006). A clash of generations? Youth bulges and political violence. *International Studies Quarterly*, 50(3), pp. 607-629.
- Ventura, J. (2003). *Terrorismo, a Criminalidade Organizada e a Segurança Doméstica*. Polícia e Justiça, Loures, N.1 (Janeiro-Junho 2003), pp.113-126.
- Walsh, J. & Piazza, J. (2010). Why respecting physical integrity rights reduces terrorism. *Comparative Political Studies*, 43(5), pp. 551-577.
- World Bank (2012). *World Development Indicators*. The World Bank Group. Washington DC, available on: <http://www.worldbank.org/> (accessed in February 2012).

Apêndice: variáveis explicativas

Económicas
Combustíveis, Exportações de (% das exportações de mercadorias) - Fonte: World Bank (2012), World Development Indicators Proposto por: Gassebner, M. e Luechinger, S. (2011) e Sambanis, N. (2008)
Combustíveis, Importações de (% das importações de mercadorias) - Fonte: World Bank (2012), World Development Indicators - Proposto por: Este artigo
Comércio (% PIB) - Fonte: World Bank (2012), World Development Indicators Proposto por: Blomberg, S. e Hess, G. (2008a, 2008b); Blomberg, S. e Rosendorff, B. (2009); Braithwaite, A. e Li, Q. (2007); Bravo, A. e Dias, C. (2005); Burgoon, B. (2006); Campos, N. e Gassebner, M. (2009); Crenshaw, E. et al. (2007); Drakos, K. e Gofas, A. (2006); Freytag, A. et al. (2011); Gassebner, M. e Luechinger, S. (2011); Gries, T. et al. (2011); Kis-Katos, K. et al. (2011); Kurriild-Klitgaard, P. et al. (2006); Li, Q. e Schaub, D. (2004); Li, Q. (2005); Meierrieks, D. e Gries, T. (2012); Powers, M. e Choi, S-M. (2012) e Robison, K. et al. (2006)
Crescimento do PIB (% anual) - Fonte: World Bank (2012), World Development Indicators Proposto por: Blomberg, S. et al. (2004b); Campos, N. e Gassebner, M. (2009); Drakos, K. e Gofas, A. (2006); Dreher, A. e Fischer, J. (2010); Dreher, A. e Gassebner, M. (2008); Feldmann, A. e Perälä, M. (2004); Freytag, A. et al. (2011); Gassebner, M. e Luechinger, S. (2011); Krueger, A. e Laitin, D. (2008); Kurriild-Klitgaard, P. et al. (2006); Li, Q. (2005); Meierrieks, D. e Gries, T. (2012); Piazza, J. (2006); Powers, M. e Choi, S-M. (2012); Tavares, J. (2004) e Urdal, H. (2006)
Crescimento do PIB per capita (% anual) - Fonte: World Bank (2012), World Development Indicators Proposto por: Basuchoudhary, A. e Shughart, W. (2010); Gries, T. et al. (2011); Kis-Katos, K. et al. (2011) e Meierrieks, D. e Gries, T. (2012)
Despesa de consumo final (% PIB) - Fonte: World Bank (2012), World Development Indicators - Proposto por: Freytag, A. et al. (2011)
Despesa geral de consumo final do Governo (% PIB) - Fonte: World Bank (2012), World Development Indicators Proposto por: Burgoon, B. (2006); Crenshaw, E. et al. (2007); Gassebner, M. e Luechinger, S. (2011) e Robison, K. et al. (2006)
Despesa Nacional Bruta (% PIB) - Fonte: World Bank (2012), World Development Indicators - Proposto por: Este artigo
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Inflação, deflator do PIB (% anual) - Fonte: World Bank (2012), World Development Indicators Proposto por: Feldmann, A. e Perälä, M. (2004); Gassebner, M. e Luechinger, S. (2011) e Piazza, J. (2006)
Investimento estrangeiro directo, entradas líquidas (% PIB) - Fonte: World Bank (2012), World Development Indicators Proposto por: Gassebner, M. e Luechinger, S. (2011); Li, Q. e Schaub, D. (2004); Powers, M. e Choi, S-M. (2012) e Robison, K. et al. (2006)
PIB per capita, PPP (paridade do poder de compra) - Fonte: World Bank (2012), World Development Indicators Proposto por: Abadie, A. (2006); Azam, J. e Delacroix, A. (2006); Azam, J. e Thelen, V. (2008, 2010); Basuchoudhary, A. e Shughart, W. (2010); Berman, E. e Laitin, D. (2008); Blomberg, S. e Hess, G. (2008a, 2008b); Blomberg, S. e Rosendorff, B. (2009); Blomberg, S. et al. (2004a, 2004b); Braithwaite, A. e Li, Q. (2007); Campos, N. e Gassebner, M. (2009); Crenshaw, E. et al. (2007); Dreher, A. e Fischer, J. (2010, 2011); Dreher, A. e Gassebner, M. (2008); Freytag, A. et al. (2011); Gassebner, M. e Luechinger, S. (2011); Goldstein, K. (2005); Kis-Katos, K. et al. (2011); Krueger, A. e Laitin, D. (2008); Krueger, A. e Maleckova, J. (2003); Kurriild-Klitgaard, P. et al. (2006); Lai, B. (2007); Li, Q. (2005); Li, Q. e Schaub, D. (2004); Meierrieks, D. e Gries, T. (2012); Neumayer, E. e Plümper, T. (2009); Piazza, J. (2007); Plümper, T. e Neumayer, E. (2010); Powers, M. e Choi, S-M. (2012); Robison, K. et al. (2006); Sambanis, N. (2008); Savun, B. e Phillips, B. (2009); Tavares, J. (2004); Testas, A. (2004); Urdal, H. (2006) e Walsh, J. e Piazza, J. (2010)
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E escolarização, ensino secundário (% bruto/total matrículas para essa faixa) - Fonte: World Bank (2012), World Development Indicators Proposto por: Azam, J. e Thelen, V. (2008, 2010); Drakos, K. e Gofas, A. (2006); Gassebner, M. e Luechinger, S. (2011) e Kurriild-Klitgaard, P. et al. (2006)
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Expectativa de vida ao nascer, total (anos) - Fonte: World Bank (2012), World Development Indicators Proposto por: Drakos, K. e Gofas, A. (2006) e Gassebner, M. e Luechinger, S. (2011)
Fragmentação étnica (Valor de probabilidade entre 0 e 1) - Fonte: Alesina, A. et al. (2003) Proposto por: Abadie, A. (2006); Azam, J. e Thelen, V. (2010); Basuchoudhary, A. e Shughart, W. (2010); Bravo, A. e Dias, C. (2005); Drakos, K. e Gofas, A. (2006); Dreher, A. e Fischer, J. (2010); Gassebner, M. e Luechinger, S. (2011); Goldstein, K. (2005); Kurriild-Klitgaard, P. et al. (2006); Lai, B. (2007); Piazza, J. (2006); Sambanis, N. (2008); Savun, B. e Phillips, B. (2009) e Tavares, J. (2004)
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Média de Anos Educação (Mulheres) - Fonte: Institute for Health Metrics and Evaluation - University of Washington (Gakidou, E. et al., 2010) Proposto por: Este artigo

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População, total - Fonte: World Bank (2012), World Development Indicators - Proposto por: Azam, J. e Delacroix, A. (2006); Azam, J. e Thelen, V. (2008, 2010); Braithwaite, A. e Li, Q. (2007); Burgoon, B. (2006); Campos, N. e Gassebner, M. (2009); Crenshaw, E. et al. (2007); Dreher, A. e Fischer, J. (2010, 2011); Dreher, A. e Gassebner, M. (2008); Eyerman, J. (1998); Freytag, A. et al. (2011); Gassebner, M. e Luechinger, S. (2011); Kis-Katos, K. et al. (2011); Koch, M. e Cranmer, S. (2007); Krueger, A. e Laitin, D. (2008); Krueger, A. e Maleckova, J. (2003); Lai, B. (2007); Li, Q. e Schaub, D. (2004); Li, Q. (2005); Meierrieks, D. e Gries, T. (2012); Neumayer, E. e Plümper, T. (2009); Piazza, J. (2006, 2007, 2008a, 2008b, 2011); Plümper, T. e Neumayer, E. (2010); Robison, K. et al. (2006); Sambanis, N. (2008); Savun, B. e Phillips, B. (2009); Urdal, H. (2006) e Walsh, J. e Piazza, J. (2010)
Rácio de Mortalidade Materna (por 100.000 nascidos vivos) - Proposto por: Este artigo Fonte: Institute for Health Metrics and Evaluation - University of Washington (Gakidou, E. et al., 2010)
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Utilizadores de Internet (por cada 100 pessoas) - Fonte: World Bank (2012), World Development Indicators - Proposto por: Bravo, A. e Dias, C. (2005)
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Competitividade da Participação Política - Fonte: Polity IV Project: Marshall, M. e Jaggers, K. (2009) Proposto por: Kis-Katos, K. et al. (2011) e Piazza, J. (2011)
Democracia / Democracia Institucionalizada / Nível de Democracia Fonte: Cheibub, J. et al. (2009) / Polity IV Project: Marshall, M. e Jaggers, K. (2009) / Freedom House - Freedom in the World Proposto por: Basuchoudhary, A. e Shughart, W. (2010); Blomberg, S. e Hess, G. (2008a, 2008b); Blomberg, S. e Rosendorff, B. (2009); Blomberg, S. et al. (2004b); Braithwaite, A. e Li, Q. (2007); Bravo, A. e Dias, C. (2005); Burgoon, B. (2006); Campos, N. e Gassebner, M. (2009); Crenshaw, E. et al. (2007); Drakos, K. e Gofas, A. (2006); Dreher, A. e Fischer, J. (2010, 2011); Dreher, A. e Gassebner, M. (2008); Freytag, A. et al. (2011); Gassebner, M. e Luechinger, S. (2011); Kis-Katos, K. et al. (2011); Koch, M. e Cranmer, S. (2007); Kurrild-Klitgaard, P. et al. (2006); Lai, B. (2007); Li, Q. e Schaub, D. (2004); Li, Q. (2005); Meierrieks, D. e Gries, T. (2012); Neumayer, E. e Plümper, T. (2009); Piazza, J. (2006, 2007, 2008b); Plümper, T. e Neumayer, E. (2010); Powers, M. e Choi, S-M. (2012); Sambanis, N. (2008); Savun, B. e Phillips, B. (2009); Testas, A. (2004); Urdal, H. (2006) e Walsh, J. e Piazza, J. (2010)
Direitos Políticos - Fonte: Freedom House - Freedom in the World Proposto por: Abadie, A. (2006); Basuchoudhary, A. e Shughart, W. (2010); Feldmann, A. e Perälä, M. (2004); Gassebner, M. e Luechinger, S. (2011); Goldstein, K. (2005); Kurrild-Klitgaard, P. et al. (2006); Newman, E. (2006); Robison, K. et al. (2006) e Tavares, J. (2004)
Direitos Políticos da Mulher - Fonte: The Cingranelli-Richards Human Rights Dataset - Proposto por: Este artigo
Durabilidade de regime - Fonte: Polity IV Project: Marshall, M. e Jaggers, K. (2009) Proposto por: Campos, N. e Gassebner, M. (2009); Eyerman, J. (1998); Freytag, A. et al. (2011); Gassebner, M. e Luechinger, S. (2011); Li, Q. (2005); Kis-Katos, K. et al. (2011); Meierrieks, D. e Gries, T. (2012); Piazza, J. (2007, 2008a, 2008b, 2011) e Savun, B. e Phillips, B. (2009)
Fracionamento político total (Valor de probabilidade entre 0 e 1) - Fonte: Database of Political Institutions (Beck, T. et al., 2001) - Proposto por: Dreher, A. e Fischer, J. (2010, 2011); Dreher, A. e Gassebner, M. (2008); Gassebner, M. e Luechinger, S. (2011); Koch, M. e Cranmer, S. (2007) e Piazza, J. (2006)
Índice de direitos de integridade física - Fonte: The Cingranelli-Richards Human Rights Dataset Proposto por: Feldmann, A. e Perälä, M. (2004); Gassebner, M. e Luechinger, S. (2011) e Walsh, J. e Piazza, J. (2010)
Instituições em Regime - Fonte: Cheibub, J. et al. (2009) - Proposto por: Bravo, A. e Dias, C. (2005)
Liberdades Cívicas - Fonte: Freedom House - Freedom in the World Proposto por: Basuchoudhary, A. e Shughart, W. (2010); Feldmann, A. e Perälä, M. (2004); Gassebner, M. e Luechinger, S. (2011); Krueger, A. e Laitin, D. (2008); Krueger, A. e Maleckova, J. (2003); Kurrild-Klitgaard, P. et al. (2006); Li, Q. (2005); Newman, E. (2006) e Robison, K. et al. (2006)
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Liberdade de expressão - Fonte: The Cingranelli-Richards Human Rights Dataset - Proposto por: Este artigo
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Restrições Executivas (As regras de decisão) - Fonte: Polity IV Project: Marshall, M. e Jaggers, K. (2009) Proposto por: Li, Q. (2005) e Piazza, J. (2008b, 2011)
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Tortura - Fonte: The Cingranelli-Richards Human Rights Dataset - Proposto por: Este artigo
Religiosas
Fragmentação religiosa - Fonte: Alesina, A. et al. (2003) Proposto por: Abadie, A. (2006); Blomberg, S. e Hess, G. (2008a, 2008b); Dreher, A. e Fischer, J. (2010); Freytag, A. et al. (2011); Gassebner, M. e Luechinger, S. (2011); Goldstein, K. (2005); Piazza, J. (2006, 2008a) e Tavares, J. (2004)
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Religião: Muçulmana - Fonte: La Porta, R. et al. (1999) - Proposto por: Bravo, A. e Dias, C. (2005); Freytag, A. et al. (2011) e Kurrild-Klitgaard, P. et al. (2006)
Religião: Outras - Fonte: La Porta, R. et al. (1999) - Proposto por: Kurrild-Klitgaard, P. et al. (2006)
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Área terrestre (km²) - Fonte: World Bank (2012), World Development Indicators - Proposto por: Este artigo
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KOF - Índice de Globalização - Fonte: Dreher, A. (2006) e Dreher, A. et al. (2008) - Proposto por: Gassebner, M. e Luechinger, S. (2011)

CORPORATE IDENTITY AND BRANDING: WHY CARITAS SHOULD TAKE CARE OF IT?

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ABSTRACT

Charities are increasingly facing environmental challenges, such as, more complex operating environments, amplified competition for funding, dependence on lower levels of government financial support, and overall competition amongst services providers of social action. Consequently, such charities look for new ways to address the environment and their publics. The underlying idea of this paper is that charities need to adopt differentiation strategies and to efficiently use marketing instruments such as branding. In fact, the adoption of social marketing enables charities to better implement their mission and values, consistently communicating with the various publics. This paper illustrates the management project of a charity branding. This project became a coherent organizational framework, and led to an increased engagement in communicating with the various publics. Findings suggests that, through the management of branding, the brand value of a charity can be enhanced, spreading the social development of the charity ideas and attract new resources. Such posture also encourages different stakeholders to take positive positions towards the organization. And, overall to enrich the charity value towards the society in general.

Keywords: non-for-profit sector, social marketing, charity branding

INTRODUCTION

The current world and European situation shows how several countries are experiencing financial crises, with serious consequences both at the economic and social levels. At the same time, we are witnessing the construction of a new society: senior people are rising as one of the major demographical groups in our societies, young population is decreasing in the society as a whole, households of one single member are growing as also we witnessed new types of families, and, at last, we can point out as a social and economical challenge like the displacement of people from inland towards the coastal areas of the country.

This present situation persists in an environment witnessing the escalation of unemployment and also tinted by diverse

problems such as bankruptcy, debt, social breakdown, poverty or social exclusion.

The financial difficulties are leading different states to a complex dichotomy concerning the need of charitable and social support on one hand, and the financial breakdowns, on the other hand; in fact, the entirely world watches the reduction of the State's financial participation in social problems. And, in opposition, the governments become responsible for ensuring a response to those in need, turning out the present state of affairs harder for those in rule.

The complex situation we are living on, stress the importance of the not-for-profit organizations as a unique answer to the growing societal and economical problems.

Charities are increasingly on the spot: they are being urged by the most basic human needs, such as hunger or the lack of

shelter, being these dramatic situations victimizing the most vulnerable groups like the children, the elderly and the disabled. And so there is an increase of material, human or financial resources, and the urgency of managing and governing these resources through processes as retention, acquisition and sharing. Thus, the charities are presently facing two major challenges: to organize and equip a bigger and better organizational capacity concerning both human skills and materials resources; and to efficaciously manage its relations with different stakeholders and, like this, successfully manage their opportunities of volunteering staff, patronage and accountability. These variables are determining new ways for fundraising, helping charities overcoming this age of uncertainty and difficulties (Andrade and Franco, 2007), and making them increasingly financial independent of state subsidies and intervention.

The real challenge is to design market-based solutions for improve the charities responsiveness to the societies needs. If truth be told, marketing remains a crucial tool for these charities responsiveness to these challenges. Marketing helps charities by identifying and knowing the different stakeholders (its various public), and showing them the importance of their mission and how they differ from other charities (creating, delivering and communicating the features of their services), and managing their confidence and consequently their donations.

Indeed, social marketing can be seen as virtuous, investigating how to develop sustainable strategies in that the social context. Social marketing principles and tools are an effective guide to strategy development highlighting the services value of the charities to its publics. And moreover social marketing creates the organization differentiation in relation to others (Keller et.al.2006), allowing its publics to effectively contribute to the

desired behavior change (poverty, social exclusion) through its support.

One of the key tools is social marketing lies in branding. In reality, the management of branding can lead to organizational success as it may be a route for organisational differentiation. The creation of a strong brand is a way to encourage stakeholders to take positive attitudes towards the organization. Consequently, it is necessary to understand the role and relevance of branding in pursuing organizational objectives and shaping the interaction with its environment. Moreover, brand management begins with the understanding of the organization's publics. Indeed, the image of a brand is a reflection of how the institution communicates its brand identity to their audiences, and how it is perceived by its users, and the experiences or mental definitions for the charity stakeholders.

STRATEGIC MARKETING IN THE NOT-FOR-PROFIT CHARITIES

Introduction

As the global recession has shaken the confidence of people for government's social support, charities have increasingly adjusted to a new economic reality and trying to serve society the face of adversity. As matter of fact, charities and several not-for-profit managers and also philanthropists have started to look to use their resources in more innovative ways: strategic marketing are nowadays largely employed within this sector.

Strategic marketing is playing a key role in stimulating and developing innovative social investment vehicles and funds, benefiting large groups of benefactors, and, at the same time, guiding a growing part of the population who are willing to engage in donations and volunteering.

The process of strategic marketing within the not-for-profit sector links, as an

example, corporate identity with nonprofits, good causes, and noteworthy social issues through cooperative marketing and social programs.

Strategic marketing within this sector can also organize corporate philanthropy around the marketing objectives of increasing social funding and, most of all, enhancing the charity identity and attending enhancing its mission.

Moreover, branding is nowadays a key variable of a successful plan of strategic marketing. Conversely, the strategic brand management has been looked as part of charities' successful strategies.

One of the key to successful branding is to create a relationship between the brand and the public's of the organization, which is, *per se*, an explanation of strategic managing the brand of a charity. Truth to be told, charities, and all the charities within the not-for-profit sector, have their identity and purpose in the relationships maintained with the public's they want to serve.

Branding In The Not-For-Profit World

Branding remains a crucial matter in the not-for-profit world (Venable, Rose et al. 2005), being it a growing strategic matter in this sector (Mort, Weerawardena et al. 2007).

Within the not-for-profit sector, brand is the key differentiator for creating value for the different publics (Laidler-Kylander and Simonin, 2009). Moreover, different authors pronounce branding as the most important competitive advantage for these charities, although it has been also overlooked or ignored by the academia (Ewing and Napoli, 2004; Tapp, 1996).

A brand is made up of tangible attributes, as the name, logo, signature, jingle, and moreover its benefits (Keller et. al. 2006); and also by its intangible attributes, such as its history, its heritage, the experiences that consumers have lived with the brand and also its values (Lindon et.al.: 179). Both attributes, coordinated, define the identity of the organization,

being this identity strategically created by the organization, and able to differentiating it from all others; and, at the same time, translating the set of benefits the organization can provide.

Consecutively, the brand image refers to how it is perceived by the organization publics, through the way the organization presents itself and the experiences benefactors and philanthropist feel while building it, and also from the relationship between the organization and its publics (Chernatony and Riley 1999).

Building Brand-Equity In The Not-For-Profit World

Creating and building a strong brand for not-for-profit charities is advocated by several authors as a vital task for the survival and relationship with its publics.

Within its internal publics, the organization strong brand creates a stronger force and purpose for the staff engagement. It motivates the staff to work for the cause of the charity, it helps on organization changing and adjustment, and guarantees a bigger professional engagement in this sector (Hankinson, 2000).

Within the external public, a strong brand enforces the link between the donations because of the public image of an organization. In fact, a charity positive image enhances higher contributions (Ewing and Napoli, 2004, Bendapudi et. al. 1996 and Harvey, 1990).

The question is then how to create a strong brand?

Kotler (Kotler, et.al., 2011) argues that by creating a unique identity, being it communicated through the of the organization's programs for the marketing mix, by the benefits outline, brand positioning, and so building expectations in the minds of their publics; when these expectations are met, they develop the charity integrity, turning this brand more authentic and stronger. And so, the

strength of a brand is associated with "keeping promises", an id moreover creating a trust relationship between the public's and the charity. Moreover, this relationship also creates the perception of the value, the loyalty and thereby increasing also value to the organization.

Therefore, a major goal of the brand management is to increase the brand value (Laidler-Kylander and Simonin, 2009) through the brand-equity, i.e., the purposive creation of the brand name impact, and though the development of customer preference for the charity.

But what is the importance of brand-equity in a third sector organization?

This higher impact of brand equity is indeed vital for a charity: a brand becomes more competitive through the loyalty of its donors and others publics relationship. It means that brand equity turns up a charity brand more valuable by the loyalty of its publics, because turns up the public's to be less sensitive to new or more support requests from other charities, and thus contributing for the increasing of the charities own funding. And so, a strong brand is built by its supremacy winning the loyalty of their publics (Kotler and Armstrong, 2007).

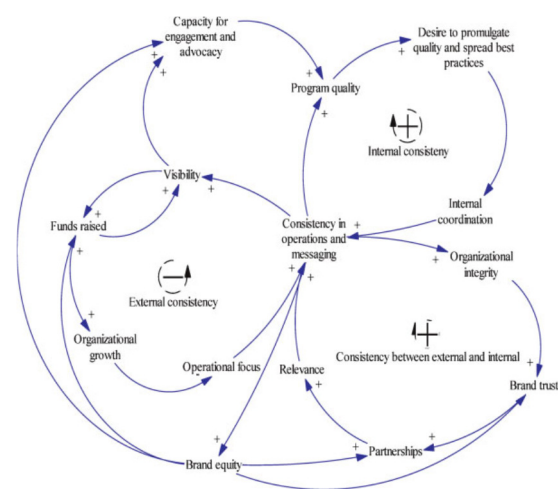
A model for building brand-equity identifies four main variables contributing to this impact: consistency, focus, trust and partnerships, as shown in Figure 1 (Laidler-Kylander and Simonin, 2009). This model also highlights the importance of brand consistency subdividing it into three stages: (1) internal consistency, (2) and external consistency (3) consistency between the two.

These authors begin by acknowledging the need for internal consistency of the brand: quality programs improvements iareoriginated through a consistency in the operation and message. Moreover, sharing the best practices leads to a bigger and better internal coordination, also causing a positive impact on the visibility of the organization. The increased visibility of a

charity has an impact on the internal brand, and, at the same time, increasing its capacity to mobilize for the cause, and leading to new internal quality programs and feeding back the internal consistency, and also the external level, and thereby increasing the propensity for fundraising.

The consistency of the external brand is essentially based on the focus of the brand is, despite the increasing of funds that may enable organizational growth: that is, it is important that the charity remains focused on its cause, once again supporting the consistency of its actions and its messages. However, it is not enough that each of these cycles is consistent by itself, it is essential that they are consistent through a cycle of enhanced consistency across the entire organization, by meeting the promised benefits (through organizational integrity), as also mentioned by Kotler (Kotler, et.al., 2011). We can then say that trust in an organization arises only if there is consistency between the internal and external brand, becoming this process critical in the development of brand equity. Meaning also that trust creates the charities partnerships and being it also closely linked with the relevance: the more relevant a brand becomes, the higher number of partners can attract.

Figure 1 - Causal loop diagram - consistency



Source: Laidler-Kylander e Simonin (2009)

In summary, this model shows how an institution can build value for its brand:

Through consistency of quality improvements and performance of its internal audience, increasing the visibility and mobilization for the cause;

Through visibility and consistency between promises made by the service to its customers and its efficative fulfillment, without conflicting with their main focus, their mission, and allowing increased funding and confidence.

The brand trust makes it relevant and allows more and better partnerships, influencing fundraising, image and organization's ability to differentiate, while maintaining, at the same time, a consistency in the messages and operations development.

In summary, the importance of brand equity reflected in this model is its unique ability to answer a broad range of organizational objectives for these institutions (visibility, trust, relevance, partnerships, funds) (Laidler-Kylander and Simonin, 2009). However, as already mentioned, this is indeed a critical success factor for the public loyalty, and the public are the ones assigning value towards the service, towards the brand or towards the charity.

Branding As A Strategic Tool In The Not-For-Profit World

Apart from the strategic management of the charity brand, other marketing tool can enable the brand comprehension through the perception of its public.

Brand orientation, originally proposed by Hankinson (2000), is a strategy stating the ability for the charities stating themselves as brands (Ewing and Napoli, 2004, Hankinson, 2000). The intangibility of services makes it difficult to dissociate between what is the value of the service for its technical characteristics, or as an attribute of its brand (Chernatony and Riley, 1999; Knisely 1979; Berry et al. 1988; Dobree and Page, 1990; Balmer,

1995; Peklo, 1995), causing difficulties in the association of perceived value to the service itself or as an attribute of the brand. As a result, these charities, as business services, look at themselves as the brand, ie, being this understood as the very organization itself (Hankinson, 2000).

Hankinson (2000) suggests that these charities, as a way to become stronger, must use a strategy of brand management, understanding the organization as their own brand, focusing on what it is, in their cause, and reinforcing the tangible and intangible attributes that are part of it.

The first definition of brand orientation used by Urde (1999), referred to a strategy in which the organization's processes are based on the creation and development of brand identity, and in its interaction with target audiences in order to achieve competitive advantage (Reid, et. al. 2005; Urde, 1999). The brand should thus be incorporated into all the organization activities, because its ultimate goal is the relationship with its stakeholders, both internal and external (Reid, et. al. 2005), and this relationship is the source of value for the brand.

Hankinson, Ewing and Napoli, and Apaydin (2001, 2004, 2011), fully agree on the following proposals: the necessity of understanding the brand image (feedback exterior), in the need of its communication, and also the monitoring of these two aspects, making it a dynamic strategy.

Hankinson (2000) proposes in its model the following:

1. The understanding of the brand, through an audit of the brand to meet the overall image of the brand as perceived by various stakeholders (whether their audiences recognize their functional attributes and symbolic, which values should be kept aligned with the values of their stakeholders and allowing for the construction of a satisfactory relationship).

2. The use of the brand as a strategic resource, targeting, and choosing targets and positioning the brand, communicating this positioning through visual communication tools, with particular relevance to the name and logo, press coverage, charity shops, and all site forms of printed material, but target at each of the segments.
3. Communicating the brand to its internal and external audiences, making all the action developed while considering the brand as the heart of the organization, within the communication of its authenticity, the values it represents, and communicating it clearly and consistently to different audiences.
4. Developing the management and controlling the brand. Based on the audit performance and after knowing the brand values for its stakeholders, combining them with the values of the brand and other brand elements such as name, logo, slogan and launch it internally and externally. Using different key messages depending on the audiences to which it is addressed, as press, volunteers, donors or power charities, ensuring that this multiplicity of messages communicate the brand consistently, ensuring its integrity. To control all this process, there should be constructed performance indicators, being them evidence of the brand's values in "action", i.e., their values being translated into measurable performance indicators and ensuring that these become a daily practice in the functions of each member of the staff.

In summary, we can say that third sector charities are turning out to the brand as "status" in terms of value and significance to their stakeholders, and that brand orientation stands for the "how

economy charities social consider themselves as brands and how they accept the theory and practice of branding "(Hankinson, 2000). After implementing this strategy, it is essential to measure the results through performance indicators for goods and services, capital, policy impact, reputation and donations (Apaydin, 2011; Chandler and Dumont, 2010), through the satisfaction of those who receive its services and the set of stakeholders. The reputation, or the esteem from its publics, is closely related to the donations, i.e., after the implementation of this strategy it is expected to create positive impressions in its audience's minds, and this will affect donations by the organization's stakeholders (Apaydin, 2011).

This study aims to study the key factors of the brand within the social marketing, in order to increase the competitiveness of a third sector organization through the management of marketing tools, proposing the construction of a model of development, management and control of the charity brand.

METHODOLOGY

For attaining the aims proposed in the last chapter, a two stage research was deemed as needed.

First of all, and after the literature review, the present situation of this charity related to its brand and brand image, was urged to be analysed. This reality should then be first acknowledged by the organization resources.

Accordingly, this study uses primary and secondary data (Barañano, 2008).

Secondary data was provided by the organization, the Diocesan Caritas of Coimbra, through various management documents, for the Mission, Vision and Values and Quality Policy site. The analysis of the information obtained via that documentation was done also through the content analysis. Content analysis was used as a technique for exploring

documents as the source for knowing the identity of the brand. For the primary data collection the method employed was a survey, using a questionnaire purposefully developed for this purpose.

For developing the questionnaire, 3 main assumptions/hypothesis were considered.

The Hypotheses were:

- H1 - Which brand image is perceived by your audience of potential donors?
- H2 - Does the brand has a consistent image in your audience mind?
- H3 - Does the global picture reflect an attraction for the public institution, limit in its competitiveness?

The survey was chosen after the exploratory research and the creation of the assumptions described above and aims to validate the same. In this case we chose the technique of questionnaire to validate the assumptions. This questionnaire aimed to identify the hallmarks of the Diocesan Caritas of Coimbra, and its consistency with its identity, and also to describe an overall image of the organization, by a specific public.

The questionnaire consists of 38 questions, 36 of multiple choice with scales of agreement / disagreement with a question rating the attributes and also with one open-response question. These questions are sought to investigate what the public thinks and feels about the brand and its corresponding product category (comparing it with other brands).

The sample chosen for this survey were the potential private donors that live in the geographical of the Diocese of Coimbra.

Regarding the to sample size, and given the large number of residents of the Diocese of Coimbra 545,000 (source website of the Diocese of Coimbra), a random sample was not an easy task to accomplishing. Moreover, the random sample was not considered as a vital process for avoiding a possible bias. Like

this, a purposive sample was considered to be the most convenient way for addressing this people.

The questionnaire was sent via Internet to a set of personal contacts, having been achieved 74 questionnaires correctly completed. Statistical analysis of the data obtained from the questionnaires was performed using the Statistical Package for the Social Sciences (SPSS) for Windows, model 17.0.

From the sample of 74 respondents, 62.16% are female and 37.84% are male. More than half of respondents are aged between 30 and 45 years (58.11%), and people aged less than 30 years and over 60 years account for less than 10% of the sample with 6.76% and 8.11%, respectively.

Regarding the profile of education, a biggest group has the bachelor degree (47.3%), and 2.7% has only attained the primary education. We can thus say that this sample corresponds to a profile like: active population, with higher academic qualifications, and enough income that may be considered as potential donors to this charity.

RESULTS

The results for the first hypothesis show that:

The organization is a recognized institution, with a name, a specific logo and specific features in the public's mind.

Also it can be concluded that its programs and actions is unknown by more than 50% of respondents, stressing the following intervention areas: elderly, community intervention, and homeless children and youth.

The features that are the most associated with the institution are: the quality, the fact of being an instrument of the Church and tradition.

The values most recognized as part of the core of the institution are: the

Commitment, the Professionalism, the Humanization and the Charity.

When comparing this institution to other institutions within this sector, despite being seen by a vast public as an organization that stands out from the others, its advantage are associated with diversity of supply, and its main disadvantage lies in its lack of competence.

For the second hypothesis, it was found that the consistency of the image was based on values like Commitment, Professionalism, Humanization, Charity and less consistently Creativity and Transparency, there is also a consistency of their performance (+ 50%), with a peak with regard to their mission and less to the actions of its employees.

Finally, regarding the third hypothesis, the overall image of the organization does not reflect the attraction of the public by its brand: with values 20% of respondents with no opinion, there is no relationship between this organization and the audience, not a preference of this by the institution, although they show willingness to learn more about its action and programs.

DISCUSION AND CONCLUSIONS

Given the literature review and the results of the study, it is concluded there is the need to provide the Diocesan Caritas of Coimbra with a set of strategic guidelines that allow this charity to create uniformity and consistency of its brand at the internal level. This can be achieved within the creation of programs for internal communication, being them able to create its own culture reflecting its the values and its mission.

It is also urgent to send a set of "signals" to the outside environment, in order to improve: the knowledge of the organization, its benefits and its positioning for its audiences, placing the brand at the "heart of the institution."

This improvement of the organizational performance will increase the trust and reputation of the institution, helping thus to deepen a relationship with their audiences, ensuring loyalty with them. This is the public that will create a positive relationship with the brand and like this will prefer it over others in the sector, making it the first choice for the service and the chosen one for receiving the public donation, which, in turn, creates value and allowing the institution sustainability.

In 3 years time, the aim is providing the Diocesan Caritas of Coimbra a strategy and a dynamic management based on brand management and also on the implementation of actions encouraging the achievement of its goals.

All these actions must be accompanied by messages of support consistent with each other and according to the targeted audience. After the implementation of the plan, it is essential that the organization evaluates its performances together their audiences (internal and external), the level of its services, and its impact on the community where it operates. The possible deviations from the expected results should lead to the correction of these deviations: the organization should review the defined policies and its processes of implementation, being the ultimate goal a correct implementation of this strategy, being achieved with a plan addressing a specific image and aiming a clear and consistent brand image in the minds of the target audiences.

This proposed plan of action follows the structural model proposed by Hankinson in and explained in the Literature Review, in terms of defining programs for action, includes the consistency model proposed by Laidler-Kylander and Simonin, which advocates cycles of internal consistency (Sharing of best practices, and program quality), external consistency (focus operational and organizational growth, which is based

on the institution and its mission) and the cycle of consistency between the two.

While proposing a strategy of value creation through brand orientation, it should be renowned that its success depends on the involvement and commitment of the institution leadership in order to sustain this challenge of brand management. In fact, an active brand management, given the importance of consistency in the creation of messages and operations, and given its strategic character, remains in the institution leadership responsibility.

Addressing the difficulties of this plan it should be noted the following:

One of the difficulties of implementation raised by this study lies in the need to integrate more than one type of model for differentiate the organization brand.

If different constraints arise when implementing the strategy, there would be a special attention is this model is too difficult to implement, and then propose a simpler version for its efficacious application.

REFERENCES

- Barañano, Ana Maria (2008), *Métodos e Técnicas de Investigação em Gestão*. Lisboa: Edições Sílabo, Lda.
- De Chernatony, Leslie; Dall'Olmo Riley, Francesca (1999), Experts' Views About Defining Services Brands and the Principles of Services Branding, *Journal of Business Research* Vol.46(2), p.181-192
- Drucker, Peter F. (2009), *O essencial de Drucker*. Lisboa: Actual Editora.
- Ewing, Michael T.; Napoli, Julie (2005) *Journal of Business Research* Vol.58, Issue 6, 841-853.
- Fahri Apaydin (2011), A Proposed Model of Antecedents and Outcomes of Brand Orientation for Nonprofit Sector, *Asian Social Science* Vol. 7, No. 9.
- Hankinson, P. (2000). "Brand Orientation in Charity Organizations: Qualitative Research into Key Charity Sectors", *International Journal of Nonprofit and Voluntary Sector Marketing*, 5(3), 207-219.
- Hankinson, P. (2001). "Brand Orientation in the Charity Sector: A Framework for Discussion and Research", *International Journal of Nonprofit and Voluntary Sector Marketing*, 6(3), 231-242.
- Keller, Kevin Lane Sternthal, Brian Tybout, Alice (2002), Three Questions You Need to Ask About Your Brand, *Harvard Business Review* Vol. 80 (9), p80-86.
- Kotler, Philip e Armstrong, Gary (2007), *Princípios de Marketing*. 12ª ed. São Paulo: Pearson Prentice Hall.
- Kotler, Philip e Keller, Kevin Lane (2006), *Administração de Marketing*. 12ª ed. São Paulo: Pearson Prentice Hall.
- Kotler, Philip et. Al. (2011), *Marketing 3.0*. Lisboa, Actual Editora.
- Kotler, Philip, Zaltman, Gerald (1971) Social Marketing: An Approach to Planned Social Change, *Journal of Marketing*, Vol. 35 Issue 3, 3-12.
- Laidler-Kylander, N. and Simonin, B. (2009), "How international nonprofits build brand equity", *International Journal of Nonprofit and Voluntary Sector Marketing*, 14, 57-69
- Lambin, Jean-Jacques (2000), *Marketing Estratégico*. 4ª Ed. Lisboa: McGraw-Hill de Portugal, Lda.
- Lindon, Denis et al. (2004), *Mercator XXI*. 10ª ed. Porto: Publicações D. Quixote
- Mort, G.S., J. Weerawardena, et al. (2007), "Branding in the Non-profit Context: The Case of Surf Life Saving Australia", *Australasian Marketing Journal* 2(15): 108-118.
- Reid, Mike ; Luxton, Sandra ; Mavondo, Felix. "The Relationship Between Integrated Marketing Communication, Market Orientation, and Brand Orientation", *Journal of Advertising*, Vol.34(4), p.11-23
- Urde, M. (1999). "Brand Orientation: A Mindset for Building Brands into Strategic Resources". *Journal of Marketing Management*, 15, 117-133
- Venable, B.,T., G., M. Rose, et al. (2005). "The role of brand personality in charitable giving: an assesment and validation", *Journal of the academy of marketing science* 33(3): 295-312.

CRITICAL SUCCESS FACTORS ON PRODUCTION ENGINEERING TEACHING: A STUDY WITH A QUALITATIVE APPROACH USING IN-DEPTH INTERVIEWING

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ABSTRACT

The main purpose of this paper is to describe the Critical Success Factors (CSF) for industrial engineering and management education in Higher Education Institutions. For that purpose a thorough literature review was conducted to identify and characterize the CSF followed by qualitative research with a group of professors from the selected HEI for the validation and refinement of the identified CSF. Findings reveal that the main CSF identified regard: the employability of students, and the quality of academic staff and of the facilities. University professors are not yet truly aware of the importance of marketing tools for a more in-depth dissemination of the work and projects developed in the courses.

INTRODUCTION

The strong demand for a qualified workforce, notably for engineering managers and other professionals creates increasing opportunities for private and public higher education institutions which offer such courses. However one should not disregard that this type of education involves very specific quality parameters. The conduction of in depth studies of higher education institutions (HEI) engaged in engineering education is therefore timely and crucial to gain understanding about how to leverage such opportunities in a sustainable way which addresses the quality expectations of its customers.

This study is focused on a HEI located in Belém-PA, in the north region of Brazil, which is developing an offer of engineering courses. We focus on the study of the course of industrial engineering and management, which is the first to be developed by the HEI, with the purpose of improving the management strategies to setup for the other courses which will be developed. In particular, the

study focuses on the identification of Critical Success Factors (CSF) of industrial engineering and management education, with the primary goal of providing contributions for strengthening the quality and sustainability of this course offer.

The main purpose of this paper is to describe the CSF for industrial engineering and management education in HEI. For that purpose a thorough literature review was conducted to identify and characterize the CSF followed by qualitative research with a group of professors from the selected HEI for the validation and refinement of the identified CSF.

Following the introduction, next sections provide a theoretical foundation for the present study. Then, the research methodology of the empirical study is described. Finally, results, implications, limitations, and suggestions for future research are presented.

CONCEPTUAL BACKGROUND

The study is supported by the prevalent concepts in the literature about Critical Success Factors (CSF), sustainability, quality and industrial engineering and management fields. In this section we present an overview of this conceptual background.

Critical success factors

Whereas CSF approach was initially developed in the context of strategic planning it gained an increased importance and scope of application in various industrial domains such as quality, logistics healthcare among others. CSF approach was firstly presented by Daniel (1961) in a paper addressing the crisis in information management. This paper did not identify the specific CSF, neither a detailed methodology for its identification and application, but highlighted the need to address the strategic management of information as a critical resource for organizational success.

Rockart (1979) provided a detailed characterization of the concept of CSF, therefore proposing a new methodological approach applied to the identification of the information needs of top management teams. Latter, other authors, such as Leidecker & Bruno (1984), presented new application of the methodology in the areas of planning and strategic business development.

CSF is an empirical methodology based on interviews and qualitative data analysis which provide a set of structured techniques to be used by researchers for the identification of management priorities. This approach provides results, which after validation, can be widely used in planning and in the specification of management systems, following a top down approach: company, departments, and individuals. Most managers use the concept of CSF in explicit and often implicit ways. However, if the CSF are

fully explicated the allocation of resources for their attainment can be more adequately defined (Rockart, 1978).

CSF are core elements which need to be adequately met to guarantee the success of a manager and organization. As such CSF correspond to management areas which must receive permanent attention to attain high performance. CSF are vital aspects for the success of current operational activities of an organization (Boynton & Zmud, 1984).

The study of CSF is important in the context of the provision of education for industrial engineering and management professionals. Corresponding to a limited number of management areas that need to be prioritized for the good performance and competitiveness of an organization (Rockart, 1979), CSF need to be addressed in order to meet quality standards. In a HEI the ability of meeting such standards is critical for the sustainability of the organization.

Rovai and Downey (2010) propose 7 items as CSF in the context of higher education courses:

Planning. The HEI needs to regard a profound internal knowledge about its weaknesses and strengths, its goals, its relevance of its courses, its brand strategies, efficiency and quality.

Marketing and Recruitment. Regards the differentiation of the HEI in the market towards its competitors. The image of the HEI towards society as well as the development and affirmation of its brand are key aspects for the marketing of the organization and for its ability to attract and recruit new students and partners.

Financial Management. Stands for the need to address which is the adequate financial approach for the HEI, which can range from a total integration of the institution towards models of split structures for departments or courses. The HEI needs to specify and adequate mode taking into account the heterogeneity of

results that can be provided by different courses.

Quality Assurance. This regards the work toward the attainment of the prevalent rules for course functioning, as well as for the satisfaction of the users of the HEI services. This includes measures to support the efficiency in service provision, the continuous improvement of facilities, the development of staff and procedures.

Student Retention. HEI need to move beyond the idea of ex-student towards the concept of alumni, with whom it is advantageous to maintain a relationship. The maintenance of communication between alumni and HEI is crucial for the strengthening of the relationship.

Academic Staff Development. This regards several issues including the provision of training to improve the teaching and the utilization of teaching resources, such as information and communication technologies. IT encompasses also the specification of incentives for academic production, and the development of a strategy to attract, integrate and retain good professors, in alignment with the organizational culture.

Course Project and Pedagogy. HEI need to pay particular attention to the planning of their courses, notably by defining how new courses will be implemented, its main goals, phases and directions. This work need to be supported by the operationalization of adequate pedagogical mechanisms, as well as by its further revision and update.

These seven items, defined by Rovai and Downey (2010) provide a base for a developing a HEI. The activities of the HEI need to be addressed and planned in accordance with the CSF.

Sustainability and Quality in Higher Education

Universities can be leaders in research and technology, teaching and learning and in the relationship with society. Universities aim to be spaces where ideas are freely

expressed, where paradigms are challenged, creativity takes place and new knowledge is generated. In the current context of environmental concerns, of which academicians are aware of, universities are called to lead the movement to prevent global environmental collapse (Moore, 2005).

Sustainability is no longer an issue which concerns only governments, industries or ONGs. HEI being responsible for the education and training of professionals and decision makers which will take roles in organizations, also need to engage in an active role regarding the sustainability issues, towards its collaborators, professors, managers and students. This regards an extended approach to sustainability, including not only aspects related to the environment but also issues related to the regulation context, the market and the structure of the organization itself.

Regulations and Norms in Higher Education

The provision of engineering and management courses in higher education needs to attend specific norms and regulations from various entities, such as the Ministries of Education, Professional Orders, and with respect to Brazil, Federal and Regional Engineering Councils, Unions, etc. These entities have a role in the specification of the functioning of engineering, management and other courses and the activities of engineering, managers or other professionals. As such they hold power in the definition of aspects such as the launching and the functioning of courses, they participate in periodical inspections to evaluate and to deliberate about the accreditation of the courses provided by HEIs. The sustainability of engineering or management courses is therefore linked to the ability to keep a certain degree of

conformity with the regulatory mechanisms.

Market and Financial Issues

The creation and provision of courses by private HEI is strictly linked with financial and market issues because they ultimately dictate the direction of the organization. The satisfaction of market demand and the adequate coverage of operational costs frame the activity of such organizations.

Ferns et al. (2007) highlight that the sustainability of courses offered by HEIs is linked to three key aspects: the quality of the course, its relevance and finally the viability of the course.

Quality: whereas it can be assessed based on several criteria it is nevertheless suggested that it must include a mix of feedback and evaluations from both internal and external customers, as well as post-graduation paths, entrance criteria and student approval and retention rates.

Relevance: is defined as the potential of the course to generate strategic advantages for the university such as the opportunity for partnerships with other organizations, the development of the HEI target market, the opportunities created for marketing and for addressing market needs driven by industries and organizations

Viability: the financial viability is strictly linked with cost indicators. The actions on this regards include the analysis of market trends and financial indicators. This usually is a key aspect which concerns HEI in their sustainability considerations.

Structural Issues

Not all HEIs have the necessary conditions to provide engineering courses because they involve substantial costs for implementation and sustainability. Engineering courses involve regular classes but also require labs for sessions for disciplines such as Physics, Chemistry, Informatics, Materials Science, etc. Moreover engineering education

regulations also can require the provision of specific labs for the training in engineering specific competencies. In the specific context of Brazil there are requirements for example from Abepro (2008) which refers to the need for labs for metrology, sustainability engineering, quality engineering, labour engineering and production engineering in general. Such labs should be equipped with specific software tools solve the problems of areas such as Production Planning and Control, Operations Research, Logistics, Plant Project, Production Processes, Statistical Process Control, Investment Analysis, Ergonomics, New Product Development, Maintenance, etc. Finally HEI need to consider the provision of adequate places for regular classes and for the staff, as well as for protocols with industry partners. Overall the volume and complexity of resources required to setup and maintain engineering education is very substantial. In fact, each course has its specificities and many require special structures.

METHODOLOGY

The study relied on the conduction of in-depth interviews. In-depth interviewing is “a non-structured interview, direct, personal, in which a single respondent is tested by an interviewer highly trained to identify motivations, beliefs, attitudes and sensations subjacent to a given topic” (Malhotra, 2001, p. 163). This methodology has proven to be very useful in exploratory research because it enables a personal analysis and understanding. According to Malhotra (2001, p. 165) such interviews can have great validity when the research problems require: the discussion of confidential topics, the detailed comprehension of a complex behaviour, or in the case of interviews with professionals and competitors.

The interviews were performed with one third of the academic staff enrolled in

the course of industrial engineering and management of the HEI, a total of seven professors. The interviews had duration of 43 minutes, on average. In the selection of the respondents, the research team aimed to maximize the diversity and representativeness of experiences and views about the course. As such the sample included professors engaged in the distinct terms of the course and in all the thematic areas of teaching, in order to guarantee a global coverage of the course experience. Moreover, the sample specifically included the course director, the coordinator of student internships and the member of the institutional evaluation commission.

The interview protocol included firstly detailed specifications for the selection of professors and the process of contact and invitation for the interview, the request of permission to record the conversation and a brief explanation about the interviewing process. In the interview a first set of questions addressed the identification of the professor, the role and length of work in the institution, and the courses ministered. This was followed by a set of guiding questions addressing the following topics:

“1- What do you understand by sustainability in higher education?; 2- What do you understand by sustainability in higher education regarding financial issues, quality and course relevance?; 3 – Which initiatives would be promoted in the HEI to achieve sustainability in the aspects of Social, Economical, Structural and Customer Support?; 4 – Which are the CSF for a course of industrial engineering and management which assure competitiveness and success of the HEI?; 5 – Which CSF are addressed by the HEI?; 6- How does the HEI address the CSF related to Planning, Marketing and Recruitment, Financial Management, Quality Assurance, Student Retention, Academic Staff Development, Course

Planning and Pedagogy?; 7 – Provide a comment about the course and the importance of the 15 teaching techniques for the case of industrial engineering and management education.”

Data analysis was applied to the transcribed interviews and involved the utilization of qualitative data analysis software, the tool WebQDA which was developed at the University of Aveiro, Portugal. The software was used to organize systematize and analyze the content of the interviews.

RESULTS

The results were organized in accordance with the conceptual framework described in this paper.

Sustainability in Higher Education

In what regards the understanding of sustainability in higher education, all professors defined it as a joint function of items related to environment, social and economic aspects. Nevertheless 42,87% of the respondents are unaware of the activities of the HEI on this regards, whereas 57,16 % don't know, or are not sure about what type of activities could be developed. Among the professors which know environmental related activities the comments were that they were conducted at a minimum level at that time, and were mostly connected to financial aspects. In short, the focus is placed in cost reduction concerns and any environmental impacts are a consequence of this.

This analysis suggests that a general understanding about the concept of sustainability is already present among the professors in the HEI, and that there's room for improvement in what regards its diffusion and the development of specific actions.

CSF and HEI

The professionals of industrial engineering and management are expected to have practical experience and to be able to use specific software tools as well as to have knowledge in fundamental scientific areas of engineering. These competencies are required right at the moment of the entrance of such professionals in the job market. In order to achieve such goal, and to provide adequate academic education to such professionals the respondents highlighted as CSF aspects related to the: employability of graduates along with the quality of the facilities and the academic staff.

In the interviews 71,45% of the respondents referred that is important for the HEI to have a tight relation with the industry, in order to develop means to provide practical experiences to students while still in their higher education path. This relationship was highlighted as one of the key CSF for an engineering course.

In what regards the aspects related to the facilities the highlighted elements included the quality of the buildings, notably the acclimatization issues, the number of administrative and services staff, and the availability of good equipment in the labs and of adequate collections in the HEI library.

Regarding the academic staff, 42,87% referred that it must be adequately selected and developed to work in accordance with the expectations and needs of the students. It was also referred the need to have a number of professors graduated in industrial engineering and management because it is believed that holding a post-graduation in the area is not enough for a full understanding of the specificities of the profession. Moreover, it was highlighted that students are more likely to identify themselves with professors which have a similar education as they wish to pursue.

Such CSF, together with quality assurance mechanisms, and an adequate planning for the course and pedagogy would be the necessary elements to achieve the sustainability of HEI for the course of industrial engineering and management.

Teaching techniques in education

The respondents were provided with a set of 15 teaching techniques (see table 1) and were asked to comment about them. These techniques were identified in the preliminary phase of literature review, as being the most relevant or the education o for the engineering and even management (Morais, Boiko, & Rocha, 2009). All respondents comment that the 15 techniques are important for the teaching and training of students, and referred that their specific application is tightly linked to the nature of each discipline. It was referred that in each discipline are applied about 3 to 5 of these techniques. Only one respondent commented the need to include another relevant technique: the production of mockups.

Respondents commented that the teaching techniques must, whenever possible, try to simulate the work environment that students will find in their profession. As such, the goal is to find ways to develop professional experiences while students are still enrolled in education. The purpose is to create teaching tools which can provide knowledge about the activities and roles that engineering graduates will have in the companies. Another aspect that was often mentioned regards the need to work fundamental disciplines, such as calculus and statistics, because such bases are regarded as valuable in their professional career. In table 2 we transcribe the main comments offered by the various respondents, for the sake of illustration of the results summarized here.

Table 1. Teaching Techniques in Industrial Engineering and Management

Expositive Cognitive Class	Directed Study	Seminar
Expositive Dialogue Class	Corporate Games	Simulation
Applied Research (e.g. project development)	Discussion List (electronic support)	Problem Solving
Case Study	Portfolio	Brainstorming
Text Study	Laboratory Practice	Technical Visits

Source: *Morais, Boiko, and Rocha (2009).*

Table 2. Transcript of Main Respondents' Comments

Questions	INTERVIEWEES			
	Interviewee-1	Interviewee-2	Interviewee-3	Interviewee-4
QUESTION-1 Sustainability in Higher Education	My vision of sustainability is to keep a service delivery over time, In a more optimized way.	It is the growth of the institution, both in terms of quantity of students, in financial terms, growth, huuuummm..infra structural, also growth in terms of research.	It is to maintain each course, and have the idea of how many students Are going to assure me a profitability and pay the employees and maintain the HEI	
QUESTION-2 Financial, Quality and Relevance	I honestly don't know.			
QUESTION-3 HEI's Initiatives			A student is causing trouble, we need to call his home...he missed a test, why did he miss it? There is a worry.	
QUESTION-4 CSF for teaching	Employability of graduates. This is a critical success factor.	Professors, I guess it is, mainly in the first levels...Infrastructure, having a basic structure; it does not need to be an exceptional structure, but a basic one in conditions.	The relation to the market is not yet 100%...we don't see a close relation with companies.	To make students make..practice is the priority critical factor.
QUESTION-5 CSF made on HEI				
QUESTION-6 Form CSF HEI				It is demanded that the course sell for itself...it lacks to evolve a lot in Marketing.
QUESTION-7 15 Technics	Mockups should be stimulated, the use of mockups justifying the physical approach and creation of specific abilities			

Table 2 . Transcript of Main Respondents' Comments (continuation)

Questions	INTERVIEWEES		
	Interviewee-5	Interviewee-6	Interviewee-7
QUESTION-1 Sustainability in Higher Education			The sustainable business needs to be economically viable, socially fair, environmentally balanced and culturally accepted.
QUESTION-2 Financial, Quality and Relevance		...We have little practice, little experience...Quality comes from a maturation to the reality of the institution, to the social reality where it is merged, to the economic reality...	
QUESTION-3 HEI's Initiatives	...It is to have professors graduated in Production Engineering... to have practice in the course,...and have a good basis in calculus.	Engagement in operations along companies,...research and a good infrastructure.	At short term are the Student Retention and Quality Assurance.
QUESTION-4 CSF for teaching			At medium term are Planning; Course Project and Pedagogy, and, at last, Faculty Development.
QUESTION-5 CSF made on HEI	I think it must be a professor graduated in Production Engineering, because just a post graduation does not give enough basis.	Infrastructure is adequate to the regional reality,..., If one compares to other institutions in other regions we don't have a strong partnership with any industrial sector.	
QUESTION-6 Form CSF HEI			
QUESTION-7 15 Technics			The most important is to define plans and objectives of the teaching and learning process. Techniques are consequence, they are just a mean to reach a determined end.

CONCLUSIONS

This study addressed the CSF in the context of HEI, notably for the case of industrial engineering and management courses. The study involved firstly a literature review to identify seven main CSF in the field of engineering and management education, and which revealed the importance of aligning quality with sustainability in order to make

courses more attractive and more viable for their socio-economic context. The study also involved the conduction of in-depth interviews with a sample of professors engaged in a course of industrial engineering and management in a private HEI in Brazil.

The results of the study suggest that the professors interviewed are aware that the concept of sustainability is ample, and that it embraces aspects from social and

economic domains, in addition to environmental concerns. Accordingly, sustainability practices are already in place in the HEI, such as: the use of online resources to support teaching activities, dental treatments for the HEI staff, scholarships, etc. However many other practices were absent (e.g. solar energy equipment, explicit procedures for energy saving, etc.) as well as a strong conscience and initiatives for energy savings and societal change.

The main CSF identified regard: the employability of students, and the quality of academic staff and of the facilities. It was observed that students have been finding good job placement opportunities; that there is a concern with the quality of the relationship between professors and students which results in a careful selection of professors with adequate skills and experience; that there are good infra-structures and facilities in the classes, labs and in the library, which have good equipment, software, book collections, etc. There was, however, one category of CSF which was not addressed in the HEI: the aspects related to the Marketing and Recruitment (of students). The HEI did not reveal strong concerns about this as it still relies very little in external dissemination and communication practices. Finally, in what regards the teaching techniques, the study revealed that the traditional approaches are more currently used, such as Expositive and Dialogue Classes, the Directed Study, Seminars, Case Studies and Laboratory Practices. Although these are important for the education in engineering, it would be important to achieve a greater openness of academic staff to the introduction of other practices such as Project Based Learning, the utilization of On-line Discussions and Corporate Games, for example.

Overall it is important to highlight that, for the management of the HEI, the utilization of marketing tools for a more in-depth dissemination of the work and

projects developed in the course can be more than a promotional activity, as it could enable other students and companies to get to know this work and exchange experiences. The results of this study provide a base for discussion for managers of HEI towards the improvement of our understanding about how to develop new courses which address ample economic and social goals.

The limitations of this study provide opportunities for future research. In this vein, we propose: (i) replicate the qualitative research in other institutions of higher education, private and public, in Brazil and other countries in order to capture the core elements of the teaching techniques and CSF and understand the differences among courses, institutions and countries; (ii) carry out interviews with other stakeholders, such as students, university staff, employers (iii) after these previous qualitative research, the findings could be converted into close questions and a quantitative approach could be done in order to collect a large sample and confirm the previous data.

REFERENCES

- ABEPRO. (2008). Laboratórios Recomendados para os Cursos de Engenharia de Produção. Comissão de Graduação da Abepro.
- Boynton, A. C., & Zmud, R. W. (1986). An Assessment of Critical Success Factors. *Sloan Management Review*, 25(4), 17-27.
- Leidecker, J., & Bruno, A. (1984). Identifying and Using Critical Success Factors. *Long Range Planning*, 17(1), 23-32.
- Daniel, D. R. (1961). Management Information Crisis. *Harvard Business Review*, September-October, 111-121.
- Ferns, S., Oliver, B., Jones, S., & Kerr, R. (2007). Course sustainability = relevance + quality + financial viability. *Proceedings of ATN Evaluation and*

- Assessment Conference 2007: Assessment and Evaluation for Real World Learning* (pp. 37-43). Brisbane, Queensland – Australia: Department of Teaching and Learning Support Services, Queensland University of Technology.
- Malhotra, N. K. (2001). *Pesquisa de Marketing: uma orientação aplicada* (3rd ed.). Porto Alegre: Bookman.
- Moore, J. (2005). Seven recommendations for creating sustainability education at the university level: A guide for change agents. *International Journal of Sustainability in Higher Education*, 6(4), 326-339.
- Mrais, M. F., Boiko, T. J. P., & Rocha, R. P. (2009). Avaliação das Técnicas de Ensino Utilizadas no Curso de Engenharia de Produção Agroindustrial da Fecilcam. In *XXIX Encontro Nacional de Engenharia de Produção*. Salvador-BA, Brasil.
- Rockart, J. F. (1978). *A New Approach to Defining the Chief Executive's Information Needs* (Working Paper n.37). Center for Information Systems Research, Sloan School of Management, Massachusetts Institute of Technology.
- Rockart, J. F. (1979). Chief executives define their own data needs. *Harvard Business Review*, 57(2), 81-93.
- Rovai, A. P., & Downey, J. R. (2010). Why some distance education programs fail while others succeed in a global environment. *Internet and Higher Education*, 13, 141-147.

ENVIRONMENTAL CERTIFICATIONS: ARE THEY REACHING THE CONSUMERS?

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ABSTRACT

Information asymmetry between companies and consumers are falling, due to the digital globalization and accessibility of data. In consequence, to achieve sustainable competitive advantages in the global market, companies must pursue environment friendly practices. We observe that a rising number of companies have obtained environmental certifications of their management systems, such as ISO 14001. Although ethical concerns are shared on both the supply and demand sides, companies' green practices may not be visible and understood by the consumers. Environmental certifications are usually included in all the company's communication, to raise awareness in all stakeholders. This study examines the consumers' awareness of the certification symbols of the biggest Portuguese hypermarket chains. Results show that although consumers consider very important to distinguish the difference between the symbols, they do not associate them to the right certification. Therefore, we confirm that companies are losing communication opportunities because the certification symbols do not provide immediate and clear information. The study provides suggestions that allow companies to enhance the certification communication, giving more confidence and a deeper explanation to the consumers.

Keywords: Certification symbols, Environmental Certification, Conscious consumption

INTRODUCTION

The certification practice in all kind of goods and services is crucial to achieve a competitive advantage. Nevertheless there is still lack of consensus about the impact of the certification labels and symbols in the consumer, namely regarding the store brands. According to Zhang et al (2012) "eco-certifications of services, which are voluntary environmental programs certifying sustainable features related to customer experience, are an area of emerging interest to operations management. Yet there is little consensus on how eco-certifications may influence customer experience and operational performance. Proponents argue that eco-certifications may enable customers to make informed decisions and promote sustainability through service co-production between the service providers and customers. However, critics caution that eco-certifications may be abused for misleading customers and contribute to green washing".

Nowadays the debate is much more focused on the "how", rather than on the "why" or "should go or not", as defended by Grupta (2012) when analysing the effect of the green practices in the sustainable competitive advantage management from the restaurant business. The green management orientation should balance the innovation with the maintenance of natural resources, reducing costs to business owners and improving the quality of the human life. However, it still remains a disparity between what customers say they value and the types of products that are being purchased, with some researchers arguing that the difference between the purchasing inconsistencies is more than merely price (Grupta, 2012, Tse, 2001). Furthermore, customers not always perceived the certification symbols and the green communication. Johansson (1998) argues that consumers have difficulty to interpret environmental symbols or notes of company's communications. In his research for the green restaurants, Grupta

(2012) suggests that the restaurants may effectively influence customers' ecological behaviour intention by conducting green advertisement, because although the company may perform excellent green practices, customers may under perceive the green image of the restaurant.

This study aims to give a contribution to the understanding of the consumer's knowledge about the certification symbols related to the store brand. More specifically, the study assess (I) the individuals' relevance and recognition about the certification symbols as well as ISO 14001 standard, (II) whether the respondents' perceptions about the different symbols of environmental certification are correct. Regarding the latter, three aspects are measured: (1) the image/symbol recognition; (2) the awareness of knowledge; and (3) the effective knowledge. (III) In addition, it is assessed whether the effective knowledge of the symbols is related to the effective knowledge about ISO 14001 standard.

It was developed and launched an online questionnaire during the summer of 2012, seeking to evaluate the largest possible degree of awareness and knowledge of citizens and consumers who performs with the food shopping for his household. The sample is composed by 460 valid answers.

THE CERTIFICATION SYMBOLS AND THE CONSCIOUS CONSUMPTION

Since nineties consumers and companies enhance their environmental awareness and begin to identify and relate to green brands and buy green products (Makower, 2008). Both companies and regulators feel the need to regulate the market, where each company previously took the environmental measures they consider adjusted to gain consumers. Consequently, the regulatory management system, Eco-

Management and Audit Scheme (EMAS) and International Organization for Standardization (ISO), arise early in this decade. The EMAS and the certificate ISO 14001 are based on the same objective, the promotion of effective environmental management, although they are considered competitors. ISO 14001 standardizes environmental management systems at World and various sectors while EMAS certifies only industrial firms in EU. The ISO 14001 certification was early successful, with at least 188.815 certificates issued during the year 2008 in 155 countries (ISO, 2009) and there has been a growth of 22%. (Marimon *et al*, 2011). According to the same source, the number of companies recognized by Community Regulation EMAS in 2009 (4.470 companies) was substantially lower compared with the ISO 14001 standard.

The trend motives companies to incorporate the environmental variable in their strategic decisions, in order to gain a competitive advantage. Thus, concern for the environment will become a condition and the absence of this will become an entry barrier in the global market of Fast Moving Consumer Goods (FMCG) (Miles *et al*, 1999). The marketing strategy for a product or service represents, the more and more, a real challenge for companies, because the consumer is extremely attentive and informed. With the globalization, the increased competition and the greater consumer awareness, the environmental variable has increasing importance. If companies do not respond to these questions, they enable to lose interest from the consumers (Ottman, 2011).

The consumer awareness about the environmental awareness has intensified over the last three decades (Makower, 2008) and has provoked the development of a new consumer profile that is ecologically and environmentally conscious. Ottman (2011) characterizes as being environmentally conscious the

consumer who seeks to consume only products and services that cause less or no environmental impact, by searching for information and advertising about products and services before buying them (Shrum *et al*, 1995). Hailes (2007) characterizes this as a consumer who associates the act of buying the possibility to act in accordance with the environment.

Companies have come increasingly to adopt the certification of its Environmental Management Systems (EMS) in accordance with the rules and regulations already on the market, as mentioned. Once certified, companies are keen to showcase their certificates as a way to forward all stakeholders (customers, suppliers, government organizations, among others) about his concern for environmental issues. Different certification symbols are presented in various media, such as brochures, billboards, television advertisements or product packaging. The certification symbols are no more than a vehicle of communication between the company and the consumer and wish to convey precisely its environmental responsibility. As such, the symbols of certification should reach consumers in a clear and fairly immediate way.

The certification symbols vary depending above all the certifier company and are generally composed of the certifier company logo and the certificate code, as shown in Figure 1. In this figure, we can see that only consumers who know what ISO 14001 means can clearly distinguish the symbols. In this example, it is observed that there is a concern of the company APCER in approaching the colour certification. However, for most certifier companies the only distinction between a certificate of quality, environment or hygiene, is the inscription on the symbol of the number/code or name of standard that certifies.

The ISO 14001 certification can only have an impact on consumers if that

information reaches them quite directly. Consumers have difficulty in evaluating the information in this type of certification and consequently, they need more information about this topic. Initially consumers also show sceptical of environmental appeals in advertising ads. This lack of confidence in the various ecological arguments/communications can cause rejection by consumers, as evidenced by Johansson (1998).

According to Shrum *et al* (1995), consumers are more aware and conscious seeking information about products and services before buying and are generally aware of the various advertising communications of the same, although most are sceptical in relation to advertising. Thus, there is potential for companies to announce that they hold a particular certification. Recent empirical studies show the influence of the quality certification labels on the consumers' purchase behaviour, such as regarding the choice of the stores own brands (Ku *et al*, 2012) or the choice of restaurants (Gupta, 2012) or the hotel industry (Zhang *et al*, 2012).

Engel *et al* (1993) suggest that the announcement made in the form of an advertising ad, the packaging of a product or an ecological appeal, constitutes a powerful tool of influence on consumer's behaviour and attitudes. Their study shows that although some individuals consider themselves involved with the brand or the product, when exposed to ads, their attitudes were affected by the presence of the ecological argument/certificate. Therefore, it is expected that the effects of green certificates themselves are connoted to purchase situations with low involvement. If the purchase is not important and the consumer feels that, he has little to lose with the same, thus his level of interest may increase due to the presence of visible symbols of certification or image that has certification for that brand / product.



Figure 1: Examples of Certification symbols

RESULTS AND DISCUSSION

Sample Characterization

Table 1 presents an overview of the sample characterization (not shown). There is a slight male supremacy (53%). Over half have between 35 and 59 years. There is also a predominance of respondents with higher education degree (48%). Regarding profession, respondents who are “Technicians/ middle-ranking employees” are the most frequent with 30.3% representation. Most respondents have a household composed by 3 or 4 elements (58%) and the average expenses on household are between 200 and 300 Euros (20%) and between 400 and 500 Euros (20%).

Knowledge of certification symbols

Table 2 presents a summary of descriptive measures for statements regarding the relevance attributed to the certification symbols and their perceived recognition level (not shown). Consumers consider that certification symbols must be clearly visible on the packaging and manufacturers’ brochures (mean value of 4.5) and in the stores and retailers’ communications (mean value of 4.3).

However, they recognize a median level of symbols knowledge (mean value of 3.0).

Descriptive measures presented in Table 3 show the respondents’ credibility level perceptions concerning the certification symbols and other symbol-related perceptions (not shown). The average level of agreement is very similar. Indeed, symbols convey credibility to consumers (mean value of 4.1) and environmental responsibility is the less associated perception with the certification symbols as it presents the lowest mean value (3.7).

The study also aims to validate whether the respondents’ perceptions about the different symbols of environmental certification are correct. As above mentioned, this analysis is performed regarding three aspects: (1) the image/symbol recognition (i.e. they have already seen the symbols, hence the symbols are not strange to respondents); (2) the awareness of knowledge; and (3) the effective knowledge of consumers. Therefore, in order to ascertain whether the consumers really know the certification symbols, we chose three different certificates of the certification companies. Figure 2 shows the SGS (certificate A), Bureau Veritas (certificate B) and APCER (certificate C) certification

symbols. All symbols certify the ISO 14001 standard, as printed in the different images.



Figure 2: Symbols of certifications A (SGS certification symbol) B (Bureau Veritas Certification Symbol) and C (APCER certification symbol)

More specifically, individuals were asked whether they recognized the symbols A, B and C, whether they knew what each certifies and the name of certificate. Consequently, it was possible to assess whether their perception was correct and what is the idea transmitted by the symbol to those that said not know the symbol. Figure 3 summarizes the distribution of these results. Values inside

the bars represent the percentages of respondents that recognize the symbol and know what it means and the values outside the bars represent the percentage of correct answers, i.e., the percentage of respondents who answered correctly about the certification symbols (the effective knowledge).

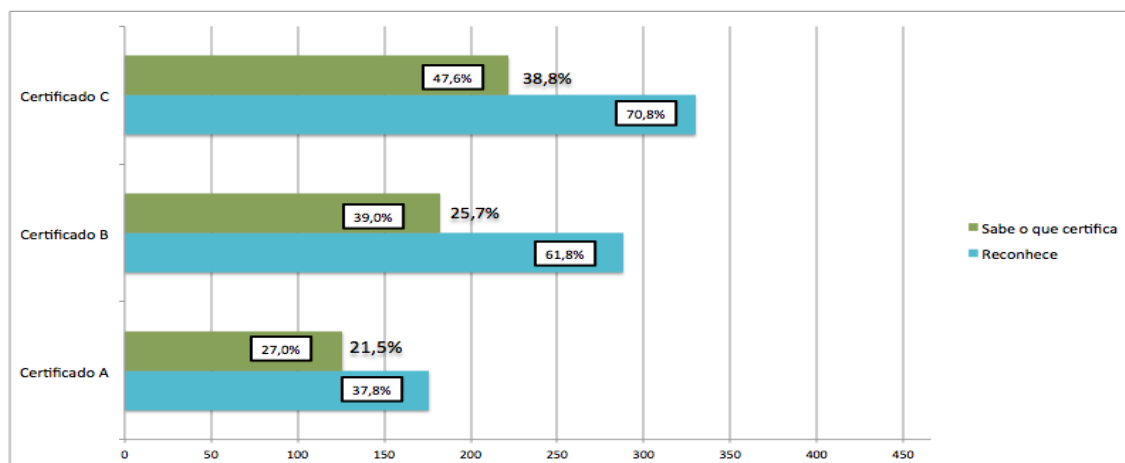


Figure 3: Awareness level of certification symbols

Regarding the image or symbol recognition, respondents demonstrate a higher level of recognition of the symbol C (70.8%), followed by the symbol B (61.8%). The percentage of Symbol A recognition is small (37.8%). Concerning the association of the symbol to its certification, 47.6%, 39% and 27% of

individuals claim that know what the symbols C, B and A certify, respectively. The differences in percentage between the different symbols are interesting since the three symbols certify the same standard (ISO 14001) which it is printed in the symbol. Therefore, it was expected that who claims to know at least what one of the

symbols certifies, should know what the other symbols certify.

Figure 3 also allows observing that there is a relevant difference between those who argue to know what the symbol certifies and those who really know what it certifies. Of the 47.6% who claimed to know what the symbol C certifies only 38.8% have the correct answer; of the 39% of respondents who know what the symbol B meant only 25.7% have the correct answer. Regarding the symbol A, of the 27% who reported to know the symbol meaning, the percentage

of respondents who answered correctly was 21.5%.

It is also important to realize how the symbols are distinguished and interpreted. Figure 4 shows that 51% of individuals distinguish the symbols by the icon or image and 37.1% by the certifying company, while only 25.9% of respondents argue that distinguish the symbols by number or code. Note that the standard number/code is what really distinguishes the great majority of certification symbols, as can be seen in figure 2.

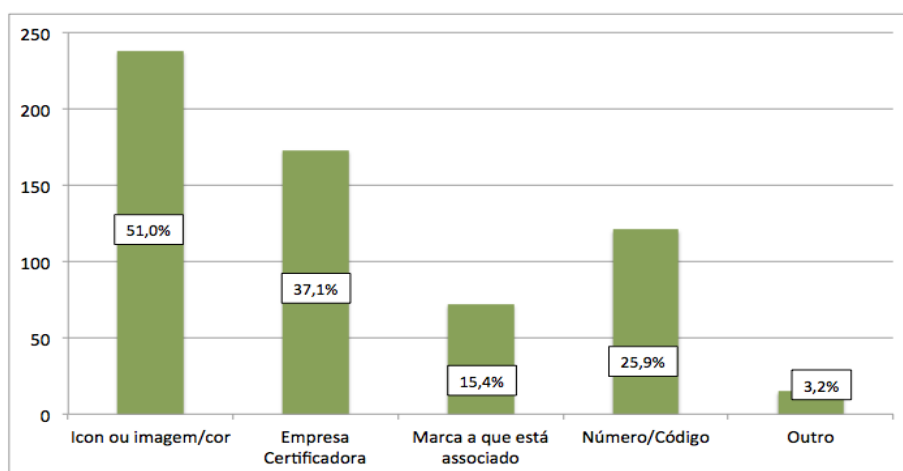


Figure 4: Distinction elements of certification symbols

Notoriety and relevance attributed to ISO 14001 standard

Regarding the ISO 14001 standard, 25.5% of individuals had never heard and 41.5% have a vague idea or have heard even without knowing what it certifies. Thus, only 33.0% of sample claims to know what the ISO 14001 standard certifies (Figure 5). By analysing the graph, the more knowledge about the standard is assumed, the more likely the respondent effectively knows what it certifies.

To assess whether the effective knowledge of the symbols is related to the effective knowledge about ISO 14001 standard, chi-square tests were performed for the different certificates, A, B and C. The values of the chi-square statistic for the 3 tests allow the conclusion that there is evidence of association between correct knowledge of certificates and correct knowledge of ISO 14001 standard. Observing table 1, we can say that the greater the knowledge of ISO 14001 standard, the greater knowledge of the certificates.

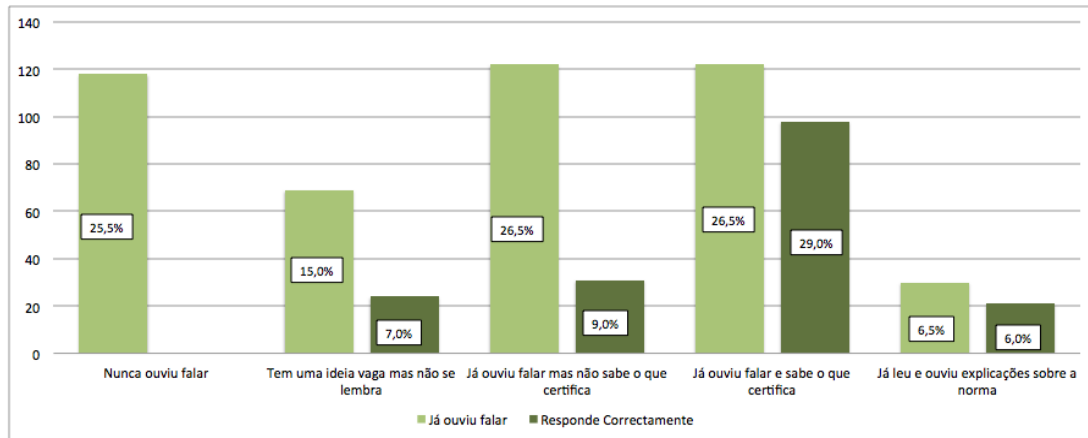


Figure 5: Notoriety of ISO 14001 standard (perceived vs effective knowledge)

Table 1: Effective knowledge of the certificate symbols vs effective knowledge of ISO standard

Effective Symbol	Knowledge about Symbol	Symbol A			Symbol B			Symbol C		
		Effective about ISO	Knowledge about ISO	Total	Effective about ISO	Knowledge about ISO	Total	Effective about ISO	Knowledge about ISO	Total
No	N	162	84	246	159	70	229	136	44	180
	% within Knowledge about Symbol	65.9%	34.1%		69.4%	30.6%		75.6%	24.4%	
	% within Knowledge about ISO	95.9%	48.3%		94.1%	40.2%		80.5%	25.3%	
	% of Total	47.2%	24.5%	71.7%	46.4%	20.4%	66.8%	39.7%	12.8%	52.5%
Yes	N	7	90	97	10	104	114	33	130	163
	% within Knowledge about Symbol	7.2%	92.8%		8.8%	91.2%		20.2%	79.8%	
	% within Knowledge about ISO	4.1%	51.7%		5.9%	59.8%		19.5%	74.7%	
	% of Total	2.0%	26.2%	28.3%	2.9%	30.3%	33.2%	9.6%	37.9%	47.5%
Total	N	169	174	343	169	174	343	169	174	343
	%	49.3%	50.7%	100.0%	49.3%	50.7%	100.0%	49.3%	50.7%	100.0%
Chi-square test		95.700 (P=0.000)			112.049 (P=0.000)			104.696 (P=0.000)		

CONCLUSIONS

There is an increasing level of environmental awareness from both firms and consumers, which is also demonstrated by the research about the positive change of consumers' behaviour. However, consumers still display some misunderstanding of the certification, showing a lack of knowledge and trust from the consumers (Gupta, 2012). Studies of hospitality and tourism services show the influence of the quality certification labels on the consumers' purchase behaviour, such as the choice of

the stores' own brands (Ku *et al*, 2012), of restaurants (Gupta, 2012), or hotels (Zhang *et al*, 2012). Indeed, a certification label is much less tangible of a store or restaurant than for organic alimentary food, for example.

Consumers have difficulty in evaluating the information in this type of certification and, consequently, they need better and more specific information. Initially, consumers are also sceptical of environmental appeals in advertising ads. Focused on the stores own brands of the biggest hypermarket in Portugal, this study aims to contribute to the

understanding of the consumer's knowledge about the certification symbols related to the store brand. Results allow concluding that (1) the distinction of certification symbols is a very important factor for most consumers; (2) The symbols notoriety varies depending on the certifier company, in contrast to what it was expected. There are relatively low rates of association between the symbol and his certification; (3) Despite the symbols recognition, most consumers do not know what the symbol certifies; (4) Consumers assume they distinguish symbols through the icon/colour or certifier company. As the symbols are mostly distinguished by number/code, it can be concluded that consumers are not able to distinguish the symbols efficiently; (5) The greater the knowledge of certification symbols, the greater the knowledge of ISO 14001. The notoriety of ISO 14001 is relevant, though most consumers do not know his meaning. The emphasis on environmental certification is significantly higher than the importance given to the certification of companies. In summary, most of Portuguese consumers go regularly to the stores, without notice the store's certification or ignoring that the firm did this certification effort, i.e. companies are losing communication opportunities because the symbols of certification do not reach consumers in a clear and fairly immediate way. As consumers argue they will succeed in distinguishing the different symbols and attach high levels of importance associated with certification of both companies and environmental management systems, it is suggested a redesign of the certification symbols so that they reach consumers clearly and immediately. The symbol should stress what it really certifies instead of the certifier company. In addition, it is important that there is an immediate association between the standard code and the respective certification, thus it is

advised that the symbol is also accompanied by the certification designation.

REFERENCES

- Engel, J., R. Blackwell and P. W. Minard. (1993), "*Consumer Behaviour*", 7th ed.) Fort Worth USA: The Dryden Press.
- Gupta, A. (2012). Sustainable Competitive Advantage in Service Operations: An Empirical Examination. *The Journal of Applied Business Research*, 28 (4), 735-742.
- Hales, J. (2007). "*The New Green Consumer Guide*", Simon & Schuster
- Makower, J. (2008). "*Strategies for the Green Economy: Opportunities and Challenges in the New World of Business*". McGraw-Hill
- Marimon, F., L. Josep and B. Merce. (2011). Comparative analysis of diffusion of the ISO 14001 standard by sector of activity, *Journal of Cleaner Production*, 19(15), October, 1734–1744.
- Miles, M.P., L.S. Munilla and T. McClurg. (1999). The impact of ISO 14000 environmental Management Standards on Small and Medium Sized Enterprises. *Journal of Quality Management*, 4(1), 111-122.
- Ottman, J. (2011). "*The New Rules of Green Marketing: Strategies, Tools, and Inspiration for Sustainable Branding*", Berrett-Koehler Publishers.
- Shrum, L.J., J.A. McCarty and T. Lowrey (1995). Buyer Characteristics of the Green Consumer and their Implications for Advertising Strategy. *Journal of Advertising*, summer, 24(2), 71-82.
- Tse, A.C.B. (2001). How much more are consumers willing to pay for a higher level of service? A preliminary survey. *Journal of Services Marketing*, 15 (1), 11-17.

- Ku, H., P-J Wang and C-C. Kuo (2012). Effects of product quality certification on quality perceptions of stores' own brands, *The Service Industries Journal*, 32 (5), April 2012, 807–820.
- Zhang, J.J., N. Joglekar and R. Verma, R. (2012). An Empirical Test of Eco-certification Signaling in Services, Working paper posted in Social Science Electronic Publishing, Inc, December 2012

EXPERIENCE MARKETING AND HOSPITALITY INDUSTRY: HOW HOTELS CAN AROUSE CUSTOMER'S SENSES AND EMOTIONS

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ABSTRACT

This study aims to understand the managers' perspective and efforts to create experiences to arouse customer's sense and emotions in luxury hotels. Therefore, first a literature review was made which lead us to adopted a model proposed by Gentile, Spiller and Noci et al. (2007), based on six components that sustain customer's experiences: sensorial, emotional, cognitive, pragmatic, lifestyle and relational. Then, in depth interviews were prepared and carried out with thirty luxury hotel managers. The findings reveal that personalized service, brand image, service quality, contact to client and adapt services are enhancers of customer experience in luxury hotels. These enhancers together with gastronomy, decoration, spa & wellness, staff and social networks are the most mentioned elements, confirming efforts of hotels in integrate experiences as an important role for hospitality industry.

Key words: experience marketing, tourism, luxury market, hospitality industry.

INTRODUCTION

Experiences are now in the core of attention. Marketing researchers and practitioners are regarding experience creation as the key for understanding customer needs and improve successful companies. Shaw and Ivens (2005) research shows that 85% of senior business managers believe that differentiating solely on the traditional elements, such as price, product and quality, is no longer a sustainable competitive advantage and even more senior managers hold the customer experience as the next competitive battleground. Moreover, in a recent survey of marketing professionals, 70% of the respondents report the experience factor as being very important to their organizations and indicated their intention to employ this factor more widely in the future (Bigham, 2008).

In this context, the experiential marketing emerges to supplant the idea of a consumer totally logical whose purchasing behavior is only based in rational decisions. In the experiential approach it's necessary to consider the

emotional and the irrational side, exploiting the intangible elements linked with emotional values (Holbrook & Hirschman, 1982). Thereby, a gap in luxury hospitality literature is the lack of understanding how luxury hotel managers deal with the creation of a luxury experience, an environment to arouse customer's senses and emotions. In order to contribute to reducing the gap, this study conducted in depth interviews with managers of thirty luxury hotels.

Following the introduction, next sections provide a theoretical foundation pertaining to a brief review of previous research related to luxury travel industry, experience marketing and Gentile's et al. (2007) model. Then, the article describes the research methodology and results. Finally, the last sections present discussion, implications, limitations, and suggestions for future research.

Luxury Travel Industry

The luxury concept is considered a refinement of basic human needs, but can also be a subjective concept changing from person to person. For example, sugar

in Western Europe began as luxury good, but lost their luxury status and become goods for mass consumption. Kemp (1998) features that the perception of what is necessity and what is luxury does vary from society to society, despite the apparently nature of basic human needs; this idea could be transferred to social perception being possible for different people to disagree what is luxuries or not.

Traditionally luxury goods, such as watches, cars, clothes and cosmetics, always represented an important part of consumption market, characterized by loyal customers, with particular needs and high purchasing power. According to Bain & Company (2011) annual report, the luxury industry had grown three pp from 2009 to 2010, with good future perspective based largely in emergent markets as China and Brazil. The emergent markets also prove their importance as impellers of decreasing markets as European. Because of the crisis many luxury companies changed their focus to invest in the market of foreign tourists (mainly from BRICs, Brazil, Russia, India and China), as an alternative to stagnation of domestic market. Therefore, luxury travel market also follows the trend. According to World Tourism Organization (UNWTO, 2011), luxury tourists represents three percent of all tourist who circulate in the world. The spent of these tourists, represents twenty five percent of the money in circulation on international travels, moreover according to International Luxury Travel Market (ILTM, 2011) they spent per day, eight times more than usual tourists.

Inside the luxury travel industry there is also a demand changing for destinations. Europe in spite of being the mainly destination which receive tourists (lead by France and Italy) is competing with emergent destinations, as in: Asia (Hong Kong and Singapore), Oriental Europe (Moscow, Saint Petersburg and Prague), Middle East (Abu Dhabi, Beirut and

Marrakesh), as in Latin America (Sao Paulo, Rio de Janeiro and Buenos Aires).

The discovering of new destinations is directly connected by the new characteristics of this travel customer. According to ILTM (2011), the leading trend of the luxury tourist is characterized by travelers who know exactly what they want and are not looking for ostensible luxury anymore; they want a discrete luxury and trips with focus in authentic experiences.

In luxury market, some elements as price and status are indispensable (Husic & Muris, 2009). However, other factors have been identified. For Lee and Hwang (2011) the concept of luxury is based in three dimensions: functionalism, experiential symbolism and symbolic interaction. The functionalism represents the idea that luxury goods solve problems and necessities of customers, the experiential symbolism represents the idea of sensorial pleasure and finally the symbolic interaction refers to the real satisfaction to customers' needs.

Vigneron and Johnson (1999), otherwise, define five behavior values of luxury consumers combined with their motivations. Thus, hedonists and perfectionists consumers are more interested in pleasure derived from the use of luxury products. They are less interested in quality, price and product performance. This type of consumer knows what he/she wants by his/her own judgment, while price exists only as a proof of quality. Additionally, for consumers who are influenced by snob and bandwagon effects, they considered price as an important factor. In this case a higher price indicates a greater prestige. These consumers usually buy rare products to stress status sense.

In a luxury travel perspective, the ILTM (2011) identified the main characteristics of luxury travel services:

- Privacy: for tourists a calm style without ostentation is preferred.

- Personalization: the tourist must be treated as the only one and the service must have a differentiation.
- Simplicity and perfection: services must work without mistakes; its important quality in all the processes.
- Authenticity: it's growing the desire for exotic destinations and the searching for different culture is also a trend.
- Comfort and safety: despite the trend of new destinations, tourists do not give up of these elements.

Experience Marketing and Tourism

The experience has been used as a vehicle to describe the meaning of various leisure and tourism activities and events. For Otto and Ritchie (1996) tourism, more than any other service industry, holds the potential to elicit strong emotional and experiential reactions by consumers. They stress that utilitarian and rational information processing schemes which focuses on functional or purely attribute-based elements are incommensurate with leisure and tourism. Pine and Gilmore (1999) consider tourism as part of the experience industries, considering that one thing the hospitality, attractions, retail, events, destination management and transport sectors have in common is that they all exist to provide consumers with experiences.

In a marketing approach, a tourist experience is seen as a consumer experience because the marketing significance of the tourist activity is based in tourist's consumption. But the tourist consumption goes beyond of simply material things; when considering all the emotional aspects involved, it's possible to understand that tourists consume experiences during the entire journey (Mossberg, 2007). That's why focusing in affective and cognitive components is important, even when tourism sectors have a clear functional component to them, as do accommodation and transportation

services, experiential benefits will remain a critical part of the process evaluation and consequently of the tourist experience.

In concept, the experience is made inside the person depending on the individual's mood, state of mind, and how he/she reacts to the interaction with the staged event. Therefore, for a provider of tourism services get success it is fundamental to know how companies can provide circumstances to enhance customer's experiences.

Mossberg (2007) argues that tourism could be also called as an experience industry linked with the creative industries. The author defines the creative industries as organizations with a creative approach which its main task is to create or deliver experience in some form, could be examples, entertainment and cultural industries with some variation in sectors included.

In this scenario it's assumed that tourism is important for all sectors within the creative industries, as the tourism services linked with creative services could be tools for co-create an experience for tourists.

Gentile's et al. Model Applied to Hotels Analysis

In pursuit of turn the concept of customer experience into a framework, many researchers approached experience marketing to "real world" through models that could help marketers to "create" experiences for customers. Considered one of most relevant, Schmitt's model, published in 1999, left paths for managers create an environment of experiences for customers. Schmitt's (1999) model is based on five strategic experience modules: sense (create experiences through hearing, smell, touch and sight; cognitive (appeals to intellect); feel (appeals to feelings); act (refers to physical experiences) and relational (influence of relationships of family and friends).

Following Schmitt, some years later Gentile, Spiller, and Noci (2007) develop a framework to sustain customer experience. Differently from the first model presented, Gentile's et al. (2007) model considers a more actual perspective, where experiences are a co-creation between firms and customers. Thus, the model is based on the idea of customer experience as an interaction, originated from several personal interactions between a customer and a product or a company. The interaction implies the customer's involvement at different levels (rational, emotional, sensorial physical and spiritual) and "its evaluation depends on the comparison between a customer expectations and the

stimuli coming from the interaction with the company and its offering in correspondence of the different moments of contact or touch-points" (Gentile et al, 2007, p.3).

Considering this perspective of customer experience that can be created or "co-created" Gentile et al. (2007) evolve Schmitt's strategic experience modules, creating a framework of six components: sensorial, emotional, cognitive, pragmatic, lifestyle and relational, as explained in table 1. Even believing that the experience is strictly personal the authors considered that companies can create a propitious environment to develop those experiences for customers.

Table 1. Components of customer's experience

Components	Description
Sensorial	Affects the senses, addresses to sight, touch, smells and hearing and also relates to esthetical pleasure, excitement, satisfaction, sense of beauty.
Emotional	Involves one's affective system through the generation of moods, feelings, emotions.
Cognitive	Connected with thinking conscious mental processes; an offering may engage customers in using their creativity or in situations of problem solving
Pragmatic	Relates to practical terms, pragmatic component includes, but is not exhausted by, the concept of usability
Lifestyle	Comes from the affirmation of the system of values and the beliefs of the person often through the adoption of a lifestyle and behaviors.
Relational	Involves the person his/her social context and relationship with other people. An offering can leverage this component by encouraging consumption together with other people or lead the creation of a community or still a tribe of fans.

Source: Based on Gentile et al. (2007).

Drawing from the extant theories on value creation and co-creation the Gentile's et al. (2007) conceptual framework comprehend concepts of customer experience and exchanged value are encapsulated in their mutual relations and the inter-relations with the main entities (the company and the consumer). Therefore, intending go further in understanding the experience in tourism context, this research foment experience marketing for luxury hotels based on Gentile's et al. (2007) model, but focusing on company side, identifying how hotels create an environment to develop experiences for customers.

METHODOLOGY

The current exploratory research focuses on hotel managers' perspective. In depth interview allow researchers to explore the views of individual respondents for more precise interpretation. Therefore, using this technique the hotel managers are able to discuss feelings, believes (Hair et al., 2003) and knowledge about how experience is co-created with the customer and lived in the hotel. In depth interviews provide the opportunity for building of trust between the interviewer and interviewee, which contributes to improve the quality of the data Interviewees are

selected for their knowledge and experience on create luxury hotel experience (Cooper & Schindler, 2006).

The selection of the hotels starts in booking.com. This website has about 250.00 registered hotels in 177 countries and allows search hotels by region and

theme. For the purpose of this study, hotels in Brazil and Portugal (see table 2) that has luxury as their main concept (regarding the service, includes resorts, village and also charm hotels and not only rating by stars) were selected.

Table 2. Sample- Hotels in Brazil and Portugal

Country	Region	Main cities	Total of hotels	Nº of luxury hotels
Brazil	Southeast	São Paulo, Rio de Janeiro	2320	144
	Northeast	Salvador, Fortaleza	1287	77
	South	Florianópolis, Alegre	643	49
Portugal	Center	Lisbon	464	107
	South	Albufeira	641	94
	North	Porto	618	88

After search by online platform it was made a list of 270 luxury hotels in Brazil and 289 in Portugal, from this total were selected randomly 100 of each country to contact and check the information sowed in website. During this process the researchers explain the intentions of the research and try to agenda the day and hour for the interviews.

The in depth interviews were conducted through videoconference (during April to July of 2012) with marketing managers of 30 luxury hotels, half in Portugal and half in Brazil. Respondents have between 25 and 50 years, from 2–15 years of experience in their position, highly educated and approximately equal from male and female (60% male and 40% female). The interviews began with the explanation of the purpose of the research and the request to record, following by the planned questions. The questions were designed to encourage the flow of information and ensure that they are focused on the topic. The average time for each interview was 60 minutes. All the participants are voluntary without any kind of monetary incentive, and the atmosphere in all interview sessions was informal and

relaxed, identity of the respondent and the hotel he or she represents was also preserved. As the final step, the data was transcribed from the recording, preserving the words spoken, and then analyzed by a content analysis system, using ATLAS TI software.

The interview guide consists of open ended questions which are designed to gain the participant's view and experience about create a luxury hotel experience and to clarify and further investigate the concepts identified in the literature review. The interviews are based on six components according to Gentile's et al. (2007) model (sensorial, emotional, cognitive, pragmatic, lifestyle and relational) that appear along thirteen questions and provide the direction for the interview.

RESULTS

To accomplish the purpose of this study, variables found as results are divided in two types: enhancers – that is how managers explains what is important to develop an environment to customer's experience; and tools – practical examples that managers relates to *enhancers*

variables. Of the six experience components analyzed, two stand up as most important in creating a luxury experience in luxury hotel: sensorial component and emotional components.

The findings reveal that sensorial component comprises engaging customer's senses and arousing aesthetical aspect. Emotional component groups stimulating customer's feelings and changing customer's mood.

Sensorial component demonstrates how hotels managers engage customer's senses and arouses aesthetical aspects by its services. All respondents highlight the importance of instigate guests by senses and show special care with aesthetical aspect. For instance, hotel managers and staff care about visual aspects, as decoration, but also with music and smells to stimulate guests through whole environment. Other important elements are the services related to food and beverage. Therefore, gastronomy plates should not only arouse guest's tastes but have a perfect visual presentation.

Part of the interviews illustrates how CEOs manages sensorial components:

"We manage aroma, flavors, textures, colors and music in a very personalized way to engage guests and create sensory memories of our hotel." (Hotel CEO 9)

"The hotel has its own aesthetical personality, not only in decoration but in all aspects during service offering." (Hotel CEO 4)

Analysis shows that luxury hotels try to engage customer's senses through three main enhancers of experience: service quality, personalized service and appeal to imaginary, respectively cited in interviews by ranking showed in figure 1. First of all, **service quality** appears as been essential to all services in hotels, then **personalization** is always cited as important to involve customer's senses through his/her individual aspect, and finally, **appeal to imaginary** appears as an important point when managers cites their

effort to involve customer's sense through hedonic services.

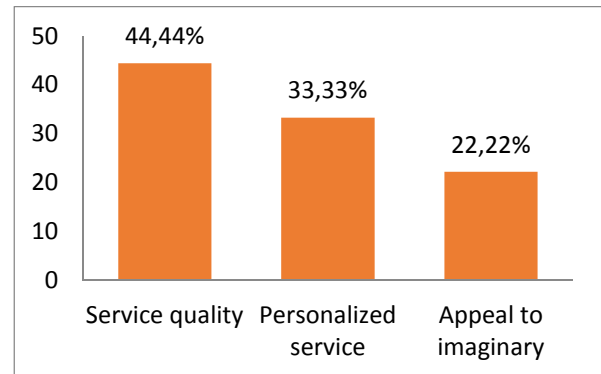


Figure 1. Enhancers to engage customer's senses

As practical examples of how managers develop the variables in sensorial component, figure 2 shows in ranking: decoration, gastronomy, massage, music, smells and recreation. **Decoration** for luxury hotels visual aspect could represent one of most important aspects. Managers use several words to allude to the decoration, such as: light, design, colors. **Gastronomy** is a way of engaging customers not only by taste, but also an opportunity to join other senses as smell and vision. **Massage** is an example of how spa & wellness services are important for hotels that wants to arouse touch and sense. **Music** and **smells** are ranked in fourth and fifth place, respectively, and are mentioned by managers as important complements of a good hotel ambiance. **Recreation** involves customer's sense in a playful way.

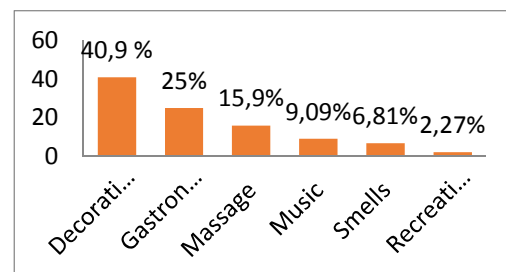


Figure 2. Tools to engage customer's senses

Regarding enhancers variables for managers to arouse aesthetical aspect in services, brand image and service quality are the most cited (figure 3). Brand image regards managers' efforts to pursuit aesthetical aspect by marketing and advertisement and service quality is mentioned in words like perfection and details.

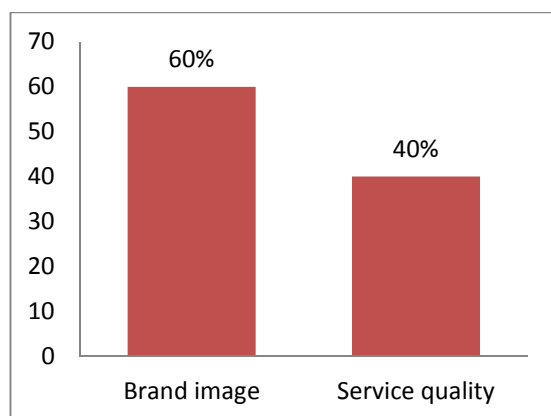


Figure 3. Enhancers to arouse aesthetical aspect

Representing the most important variable of aesthetical aspect, the decoration of luxury hotels appears as the core element. For hotel managers the **decoration** of luxury hotels could be the best way to enhance perception of esthetical aspect for guests, followed by the **gastronomy**. In third place, cleanliness appears as an important aspect of esthetics. Cleanliness is high lightened in third place as an important care for managers. Then **simplicity**, **comfort** and attention to **details** appear as characteristics that have also to be focused in this component (see figure 4).

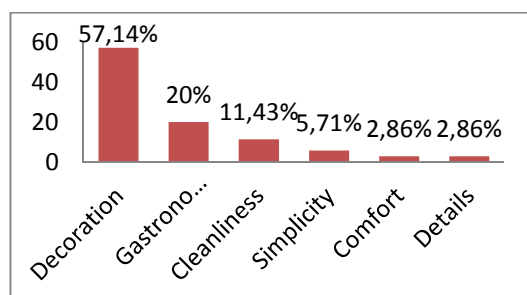


Figure 4. Tools to arouse aesthetical aspect

Emotional component explains how luxury hotels stimulate customer's feelings and how they try to change customer's mood through its services. For this component, all respondents highlighted services, especially in hotelier, and relations to emotional aspects. They consider a personal service as an important point to create memorable experiences for guests. It is also important to mention that many managers perceive customer surprise through services as a good way to connect with customers emotionally. Some excerpts of interviews solidify what is mentioned above:

"We want to touch and to create memorable histories to our clients. Our emotional link is fundamental, considering that competitive difference is few for hotels." (Hotel CEO 9)

"We are sure that emotional aspect is important. A trip is usually planned considering time and money, so something unexpected could irritate the guest, in this case is important to surprise guests in a positive way." (Hotel CEO 13)

Many ways to stimulate customer's feelings are pointed out by managers (figure 5): personalized services, brand image, contact to client, perfect service and create experience, are examples as managers try to aware to customer's needs. **Personalized services** is the most mentioned as a way for clients feel like unique, second most cited is **brand image**, where managers think as an important point to stimulate guests even before arrival in their hotel. After that a **perfect service** promotes more involvement and connection o customer's feelings. Finally, **contact to client** shows the importance of a direct relation with customers.

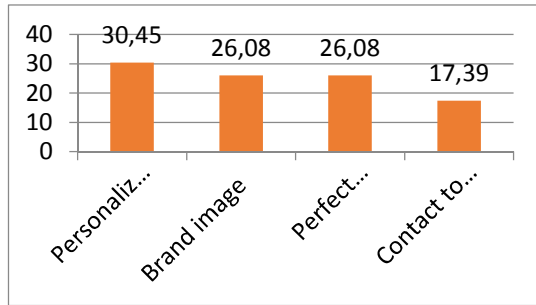


Figure 5. Enhancers to stimulate customer's feelings

As main examples of how to stimulate customer's feelings in luxury hotels (figure 6) arise staff, decoration, gastronomy, spa & wellness, localization, originality and comfort. Managers mention that staff is an important element to care in hotels, because they contact and interact directly to customers. Attention to design and how visual aspects arouse customer's feelings decoration are other important points. Then, services such as **gastronomy** and **spa & wellness** (includes spa, gym and hairdresser) come as prominent variables, as well as, **localization, originality and comfort**.

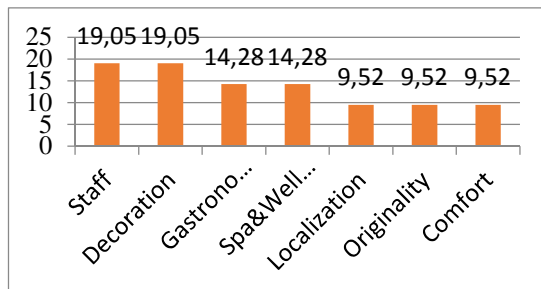


Figure 6. Tools to stimulate customer's feelings

Concerning to change customer's mood through services, respondents almost divide their attention between **personalized services** and **surprising customers** (figure 7). Managers understand importance of hotel services to change customer's mood that come stressed of everyday live. The personalized contact is the first step, then be surprised through services could also help.

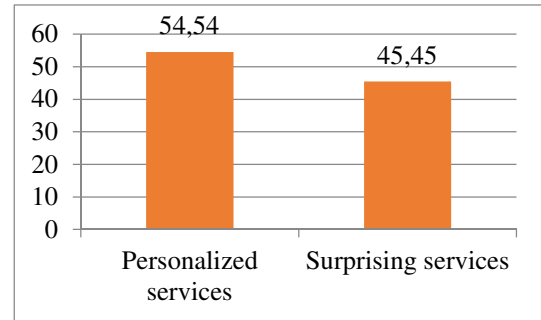


Figure 7. Enhancers to change customer's mood

As tools to change customer's mood (figure 8) **staff** emerges as important elements followed by **gastronomy**, which includes actions to surprise customers, for examples a welcome drink or offer **tickets** for concerts or theater. Offer a **massage** (or have the whole material and ambiance for a massage prepared), followed by a **limousine** service, and offer **tours** around the city are other important factors.

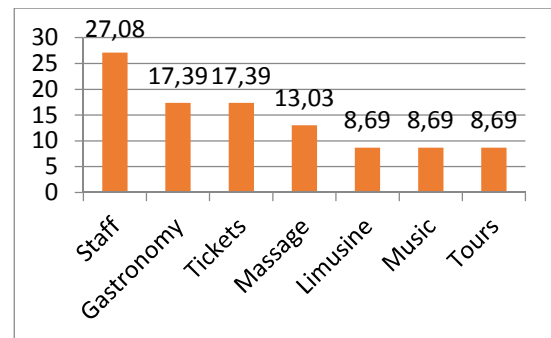


Figure 8. Tools to change customer's mood

DISCUSSION

According to Gentile's et al. (2007) model, the six components of experience contribute to the whole experience and each component has its own particularities. However, the findings of this study reveal that from managers' point of view of luxury hotels, the strength of the contribution of sensorial and emotional components is higher than other components. In sum, as enhancers to create an environment to arouse customer's experience in luxury we may point out:

1. **Personalized Service:** treat customers (guests) as unique; hotels are aware to individual needs and wishes, which should be reflected in hotel's services. Mentioned as the main enhancer of customer experience, a personalized service is a great step to create memorable experiences.
2. **Brand image:** to enhance customer's experiences, manager and staff are concerned to stimulate connection with guests even before their arrival; this way brand image is important not only to transmit to customers the hotel identity and distinction, but also to reach hotel target.
3. **Service quality:** in luxury hotels service quality is more than important, is essential and has to be in the core of set offer. Excellence, perfection and special attention to details are characteristics that have to be presented in hotel set offer.
4. **Contact to client:** a personal contact with customers could enhance a good environment to develop customer's experience. A close relationship with customers help in getting a quick feedback from them about the hotel experience and allow to listen the customer about their wishes and complaints, which is indispensable to arouse memorable experiences.
5. **Adapt services:** adapt services is important to provide customer with the "something more" factor and to surprise him/her. Managers and staff have to understand customers to adapt services focusing in each hotel target, which could be a way for differentiation.

In this vein, when analyzed all components, managers mention some points in luxury hotels that are in the top of issues and deserve special attention. These variables are tools to create customer's experience:

1. **Gastronomy:** related to the food and beverage services, gastronomy is the

preferred tool that hotels use to engage customers through taste, smells and vision.

2. **Decoration:** an important tool to aesthetical composition of the hotel; decoration is related to design, sophistication and hotel image.
3. **Spa & Wellness:** included spa & wellness services, massage, hairdresser and gym; they are mentioned as important tools that hotels managers use to relax and change customer's mood.
4. **Staff:** Staff should be aligned with hotel identity and values and should always be ready to attend customers. A good connection between staff and guests is a big differential; human factor is a point that hotels should invest.
5. **Social networks:** Social networks (like facebook or other more professionals) are tools that hotels are investing. As a place to interact with customers, social networks allow managers to be in touch with customers, before and after the stay; being also a place to know more about the client and to have a quick feedback of the services.

CONCLUSIONS

Experience marketing has been in the core of research in the last years. Although a few efforts to understand experiences in tourism have been made in previous research, less has been added to tourism theory considering a marketing approach, and mainly, the business (luxury hotel) perspective as part of the process of co-creation experiences with customers. In this vein, the current research adds value in two ways: (i) through literature review, we discussed the relations between luxury travel industry and experience marketing; and (ii) through analyzing luxury hospitality market in order to create experiences for customers.

The main findings to be highlighted for luxury hotels are: personalized service, brand image, service quality, contact to client and adapt services. Most of these variables were associated in different components representing important issues to hotel managers. Considering the academic studies and the results of the current research we can also point out that despite all importance given to price component, the values as conspicuous, uniqueness, social, emotional and quality are either important to luxury market, propounding that different consumers have different desires. Moreover, luxury hotels are aware of the changing trends and are investing in singularity and brand image in order to differentiate among other brands by improving material quality, limited products and goes beyond the exclusivity.

Despite the rigor of the method applied in this research, we can point out some limitations regarding not only our study but also what we did not find in literature, which can also be suggestions for future avenues. First of all, we can mention as limitation, the scarce literature relating firms perspective concerning to creation of experience. In fact, most of research focuses only on customer side, but as described, experiences are a process of co-creation between firms and customers.

In addition, little was published in order to relate experience marketing and tourism industry, and less specifically, about relations of hospitality. Therefore, this research intends to arouse discussion about experience marketing approach for travel industry. This lack in literature also reflects limitations about specifically models to sustain customer's experiences applied to travel industry. In this manner more research in this field should be conducted in order to develop a model that considers specifications of tourism field and services related.

The reduced sample size could be also pointed as limitation. A larger sample,

including other countries and a deeper analysis, in order to consider cultural aspects, could be interesting for future research.

Finally, the difficulties to get a positive feedback from managers to be part of the research and schedule the meeting should be reported.

REFERENCES

- Bain & Company (2011). *Annual reports*. Retrieved from <http://www.bain.com/about/world-economic-forum/index.aspx>
- Benefiel, M. (2007). Pathfinders and trailblazers: Exploring the territory of spirituality in organizations. *Managerial Finance*, 33(12), 947-956.
- Cooper, D. R., & Schindler, P. S. (2006). *Business Research Methods* (9th ed.). New York: Mc Graw-Hill Irwin.
- Dent, E. B., Higgins, M. E., & Wharff, D. M. (2005). Spirituality and leadership: An empirical review of definitions, distinctions, and embedded assumptions. *The Leadership Quarterly*, 16, 625-653.
- Driscoll, C., & Wiebe, E. (2007). Technical spirituality at work: Jacques Ellul on workplace spirituality. *Journal of Management Inquiry*, 16(4), 333-348.
- Gentile, C., Spiller, N., & Noci, G. (2007). How to Sustain the Customer Experience: An Overview of Experience Components that Co-create Value with the Customer. *European Management Journal*, 25(5), 395-410.
- Hair, J. F., Jr., Babin, B., Money, A. H., Samuel, P. (2003). *Essentials of Business Research Methods*. New York: John Wiley and Sons.
- Holbrook, M. B., & Hirschman, E. C. (1982). The experiential aspects of consumption: Consumer fantasy, feelings and fun. *Journal of Consumer Research*, 9(2), 132-140.

- Husic, M., & Muris, C. (2009). *Luxury consumption factors. Journal of Fashion Marketing and Management*, 13(2), 231 – 245.
- ILTM (2011). International Luxury Travel Market. Retrieved from <http://www.iltm.net/>
- Kemp, S. (1998). Perceiving luxury and necessity. *Journal of Economic Psychology*, 19(5), 591-606.
- Lee, J. J., & Hwang, J. (2011). Luxury marketing: The influences of psychological and demographic on attitudes toward luxury restaurants. *International Journal of Hospitality Management*, 30, 658-669.
- Mossberg, L. (2007). A Marketing Approach to the Tourist Experience. *Scandinavian Journal of Hospitality and Tourism*, 7(1), 59-74.
- Otto, J., & Ritchie, J. R. (1996). The Service experience in tourism. *Tourism Management*, 17(3), 165-174.
- Pine, B. J., II, & Gilmore, J. H. (1999). *The experience economy: Work is theatre and every business is a stage*. Boston: HBS Press.
- Schmitt, B.H. (1999). *Experiential Marketing*. New York: The Free Press.
- Vigneron, F., & Johnson, L. (1999). A Review and a Conceptual Framework of PrestigeSeeking Consumer Behavior. *Academy of Marketing Science Review*, 1. Retrieved from <http://www.amsreview.org/articles/vigneron01-1999.pdf>
1. UNWTO (2011). World Tourism Organization. Retrieved from <http://www2.unwto.org/>

FINANCIAL RESOURCES AND MANAGERIAL PERSONAL CHARACTERISTICS AS ANTECEDENTS OF EXPORT PERFORMANCE

An ongoing process to propose a research model

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ABSTRACT

Exports is seen by governments as one of the most important keys for driving economic recovery. European countries encourage their firms to export when their primary markets are saturated and depressed. Exports are the preferred mode of entry into foreign markets for small and medium enterprises (SMEs). Financial resources are considered equally important for the large enterprises as well as for the SMEs. In that scenario, export financing assumes even greater importance in the context of the lack of liquidity of European countries such as Portugal, where a significant part of the SMEs are embracing exports to diversify their markets and boost the portfolio of clients, decreasing the dependence of domestic market. Perceived psychic distance, as well as networking orientation of the managers, is important values that might influence indirectly the export performance of the firms. This paper seeks to build a new conceptual framework proposing: i) psychic distance and networking orientation to have direct causal linkages with export financing resources, ii) the financing resources with innovation orientation and learning orientation, iii) to understand how those three constructs affect export intensity and iv) the impact on the export performance. Our approach is based on the existing literature, and is grounded on the resource-based view (RBV). The proposed conceptual model will be tested through a quantitative empirical research using data from export Portuguese SMEs. Once tested, it can lead to useful insights for the export firms as well as for the institutions responsible for ensuring higher extent of financing to Portuguese SMEs.

Keywords: Psychic distance, networking orientation; export financing resources; export performance

INTRODUCTION

There are several motivations for countries to export their production. Exports growth is seen by governments as being a driver to economic recovery (Griffith and Czinkota, 2012), and it also helps domestic industries to develop, improve productivity and create new jobs (Czinkota, 1994; Sousa and Bradley, 2009). Besides this, at the corporate level, exports can help firms to improve their prosperity and to expand into new markets (Leonidou, Katsikeas and Samiee, 2002). For their international expansion, firms and SMEs, in particular, use exports as the most simple, attractive and generalized approach to foreign markets (Lages and Montgomery, 2004).

Thus, in the recent decades, the idea that the exports are critical to successful businesses and the prosperity of the countries has assumed a great prominence in research (Diamantopoulos and Kakkos 2007; Katsikeas, Samiee and Theodosiou 2006).

Hence, it has been very important the study of the determinants of export performance. However, as referred by Sousa, Ruzo and Losada (2010), little research has been done about the impact of managers' individual values on the export performance of the firm. We believe that individual characteristics of the managers may help firms to access export financing resources and these resources have an influence in strategic choices, which in turn have implications on export performance. In such respect, the main

purpose of this study is to propose a model focusing on how managers' individual values affect directly the way firms access export financing resources and indirectly influence strategic choices and export performance.

CONCEPTUAL FRAMEWORK

The theoretical basis of this paper is developed through the review of the literature. The conceptual framework of this study is presented in this section.

Many authors consider the Uppsala Model as the theoretical starting point to explain the internationalization of SMEs (Andersson, Gabrielsson and Wictor, 2004).

Johanson and Vahlne (1977) developed a model to explain the processes of internationalization based on the gradual acquisition and use of knowledge in foreign markets as well as the successive increase of involvement in these markets. As said by this model, the international business involvement increases together with the knowledge about foreign markets and operations. The involvement is therefore measured by the commitment of resources to foreign operations, which grow with the experience. Thus, the perception of risk decreases and involvement tends to increase.

The dynamic of behaviour approach is driven by the growing purchasing information, accumulating experience, gradual consolidation of learning processes, training and involvement of knowledge of firm resources (Leonidou and Katsikeas, 1996).

To evaluate these relationships, it is proposed the drawing of a model based on five constructs: psychic distance, networking orientation, export financing resources, learning orientation, innovation orientation, and a mediator variable, export intensity.

The export performance has been studied with considerable attention in several research articles. Leonidou, Katsikeas and Samiee (2002) conducted a survey of different performance studies and identified twelve dimensions of export performance. More recently, Sousa, Martinez-Lopez and Coelho (2008) reviewed and synthesized the knowledge on the determinants of export performance, identifying key work in this area between 1998 and 2005, when it was shown that this is a rather complex issue.

The constructs of the model are presented below.

Psychic distance

The term psychic distance was introduced by Beckerman (1956) and Linnemann (1966), although, it is the internationalization process literature - Johanson and Wiedersheim-Paul (1975) and Johanson and Vahlne (1977) - that is known to be the starting point for the research on psychic distance.

In this paper we adopt the definition suggested by Sousa and Bradley (2006), who argue that the term psychic distance refers to the individual's perception of the differences between the home country and the foreign country in terms of economic development, climatic conditions, lifestyles, consumer preferences, language, education and cultural values.

The importance of the managers and their values and perception in the exports are deeply studied in the exporting literature (Piercy, Kaleka and Katsikeas, 1998; Dow and Karunaratna, 2006; Sousa e Lengler, 2009; Sousa, Ruzo and Losada, 2010).

As exporting occurs between two firms from different countries, the cultural and business distance are implicit and require a huge financial trust and support (Griffith and Czinkota, 2012).

According to the Uppsala School and its internationalization process, managers

have less experience and lower levels of competence when entering in psychologically distant countries.

According to the existing literature, psychic distance has an impact on firm performance (Sousa and Bradley, 2008). The assumption that firms will perform better in countries that are perceived to be psychologically close or similar (Johanson and Vahlne, 1977; Johanson and Vahlne 1990) was contradicted by other studies (Sousa and Lengler, 2009; Sousa, Ruzo and Lousada, 2010). Their findings suggest that export performance is higher in markets that are psychologically distant. It seems that firms, when exporting to psychologically distant countries, acquire new skills and resources and that results in a better performance. In the literature, this phenomenon has been referred to as the psychic distance paradox (O'Grady and Lane, 1996).

Networking orientation

In this paper we seek to study the importance of network management capability to exploit the social networks developed by the managers (Kenny and Fahy, 2011) and its relationship with the improvement of financing conditions and a better export performance.

To the best of our knowledge we are the first who want to research the relationship between networking and access to export financing resources. The forthcoming steps of the current study will address this gap in the literature and may have significant managerial implications for exporting firms. In a global environment where financial resources lead the exporter SMEs to a better position to face the constraints of the foreign markets, it is important to study whether social networks and cooperation among the firms are a facilitator factor to have access to funding sources.

On the other hand, as Ellis and Pecotich (2001) state, decision makers

who have cosmopolitan ties in foreign countries are better positioned, in comparison to the others, for export success. Moreover, Babakus, Yavas and Haahti (2006) demonstrate, in an empirical study with data collected from Finnish, Swedish and Norwegian SMEs, that SMEs which have networking with foreign entities present a better export performance to the others. Their findings recommend that managers should be proactive in establishing ties with foreign networking members and in visiting export markets to forge contacts that could be essential to export successfully.

Other important suggestion is that managers of export firms may find networking important to reduce risks.

Existing research recognizes the impact of manager's networking orientation and ties, that are established in foreign countries between the firms, on SMEs export performance (Ellis and Pecotich, 2001; Babakus et al., 2006).

Export financing

The working capital and financial liquidity required on export operations means that access to financial resources is an essential element for the success of exporters (Kaleka, 2011; Griffith and Czinkota, 2012). These resources allow to finance the production, in a stage that precedes exports and to get financing in advance since importers are often in arrears. These resources help exporting firms to be in effective competition in foreign markets.

The most important financial theory has been the Theory of Capital Structure (leverage), by the works of Modigliani and Miller (1958, 1963) and Myers and Majluf (1984).

After that, the prominent positions were assumed by the Static Trade-off Theory, the Agency Theory (Myers, 1977), the Pecking Order Theory (pioneered by Myers (1984), and developed by Myers and Majluf (1984))

and the Credit Rationing Theory (Stiglitz and Weiss, 1981). The Pecking Order Theory defends that firms have preference for internal sources of financing, then external debt and, as a last resource, new external equity. However, considering that exporting firms have growth strategies (Zahra, Ireland and Hitt, 2000), one could expect the need for more external equity capital.

Even today, it seems there are only a few published studies about the access financing to exporters (Riding et al., 2012). On the other hand, the OECD emphasizes that the limited access to external financing is an important obstacle faced by SMEs in many countries, especially by exporting firms (OECD, 2006). And, according to the OECD, the capacity to internationalise is often dependent on the available financing, especially for new exporters, because owners' personal and private sources are usually limited.

Moreover, SMEs are, in general, more informational opaque than larger firms, due to the differences in asymmetric information. Therefore, this type of enterprises rely more on banks and trade credits for financing (Bartholdy and Mateus, 2008).

Consequently, it seems important to understand how SMEs access the financial capital, particularly exporter SMEs, since entering into international markets requires extensive financial resources.

Riding et al. (2012) examine different sources of financing: external financing, external equity capital, external debt capital and trade credit, and their findings indicate that growth-oriented exporter enterprises are more likely to apply for financial capital.

Berger and Udell (1998) argue that there are different optimal capital structures according to the financial growth cycle of the firm (and with firm size and age). For small firms with high growth, venture capital, trade credit, short

and intermediate-term financial institution loans and mezzanine fund financing are the most typical sources of financing used. For medium-sized firms and large firms public equity and commercial paper are used.

Since the financial crisis of 2008, firms restarted to use trade financing instruments to mitigate the risk inherent to the payment of their exports.

IMF (2011) refers to the importance of the letters of credit (letters of credit are primarily used in international trade for large cross-border transactions), export credit insurance, trade-related lending, trade credit and the instruments promoted by multilateral development banks (MDBs) like the Trade Finance Facilitation Programs.

An additional type of SME financing available is the international factoring. Many exporters have added factoring to their list of financial sources because it could be very interesting. Under most factoring relationships the borrower outsources its credits and collections activities in addition to obtaining financing. This alternative is important, for example, in countries with weak information environments and weak commercial law on security interests (Berger and Udell, 2004).

Learning orientation

Learning orientation reflects firms' involvement in learning (Sinkula, Baker and Noordewier, 1997) and their open-minded and sharing view. The learning-oriented enterprises create and encourage a learning environment throughout the organization. Other authors contend that the higher the export competence developed by firms, the greater will be the ability to influence and to make appropriate use of knowledge (Cavusgil and Zou, 1994).

Ghoshal (1987) suggested that learning is an important target for firms

following international diversification. As presented before, in international business transactions there are different risks and payoffs and the exporter learns from previous experience (Ghoshal, 1987).

Firms with learning orientation learn from their successes and also from their mistakes and thus tend to achieve better performance (Zahra et al., 2000). The process of internationalization is a learning process for the enterprises. Some authors argue that, to operate in different markets and with different cultures help firms to generate knowledge and skills to deal with the new reality (Porter, 1990; Zahra et al., 2000).

Learning enables enterprises to enter into foreign markets and improve their performance. Many studies link learning orientation and business performance, although this relationship is neglected in researches on entrepreneurial business ventures (Kropp et al., 2006).

The recently revised model of Uppsala, Johanson and Vahlne (2009) demonstrate the importance of the network in the internationalization of enterprises. In this new model, the authors argue that enterprises need to learn and create new business relationships in order to exploit market opportunities.

Firms would benefit from becoming more learning-oriented because they could move up over the learning curve on what concerns new production processes (Salomon and Shaver, 2005). Large and more competitive markets might push exporters to become more efficient while the network widening of contacts - with clients, suppliers, competitors - could develop the generation of efficiency improvements and the wider length of international markets could provide the scale economies.

Innovation orientation

The concept of innovation seems to have appeared with Schumpeter (1954) through

creativity, R&D activities, development of new processes, new products and services and technological leadership (Kropp et al., 2006). The innovation orientation relates to R&D activities, development of new processes, new products and services (Calantone et al., 2002) and new markets (Kropp et al., 2006). The international innovation emerges as a dimension related to the ability to develop and introduce new processes, new products and ideas in international markets (Kandemir and Hult, 2005) and consequently enables firms to offer internationally competitive products (Zhao and Zou, 2002).

While the model developed by the Scandinavian School pointed out the different stages of a firm involved in the internationalization process (Johanson, Wiedersheim-Paul, 1975), other current authors have focused on the internationalization process of the firm under the perspective of innovation (Andersen, 1993). Leonidou and Katsikeas (1996) identified three generic stages: pre-export, initial export and advanced export.

Export intensity

According to Cavusgil (1984), the decision to start exporting is an important commitment for domestic firms and an important step towards internationalization. To Shoham (1998), export earnings can be represented by the set of export intensity (export revenues and total revenues), the absolute amount of export revenues and market share. Export intensity is a variable that provides information on the firms' orientation to export and is measured as the weight of international sales as a percentage of total sales - *international sales/total sales* - (Filatotchev and Piesse, 2009).

Calof (1994), Zhao and Zou (2002) define export behaviour as consisting of two dimensions: the export propensity - whether the firm will export - and the export intensity - the proportion of export

production. Export intensity is a ratio between a firm's export value and the production output value (Zhao and Zou, 2002).

Export performance

Considering the importance that exports hold in the world's economies, theory indicates the importance of studying the export performance (Morgan, Kalela and Katsikeas, 2004; Lages and Montgomery, 2004; Sousa and Lengler, 2009; Lengler et al., 2013).

Thus, despite some complexity in its measurement (Lages and Montgomery, 2004), the literature states that export performance can be operationalized from several perspectives (Diamantopoulos and Schlegelmilch 1994). Zou and Stan (1998) consider three types of export performance: financial, strategic and managerial satisfaction.

Another perspective presented as a result of the research is a three-dimensional export performance: export revenue, profitability and growth. It was underlined that the definition of export performance should be consistent with the definition of firm performance in general (Shoham, 1998). Therefore, if companies use sales growth as a performance measure, the measure of export performance should be the growth in export sales.

Export performance is a multidimensional construct that needs multidimensional conceptualizations and operationalizations for a consistent evaluation of the construct (Sousa, 2004). Nevertheless, Sousa and Bradley (2009) utilized three items: export market share, overall satisfaction and how competitors rate the firm's export performance.

Julian and Ali (2009) measure export performance in three different ways: economically, strategically and financially. The first measure is the one that is being increasingly used and

includes indicators such as sales and market share. Strategically, performance can be measured by an increase in market share, achieving a competitive position in export markets. In financial terms, the performance is measured through attitudes or perceptions, such as perceived export success or satisfaction with operations in foreign markets (Cavusgil and Zou, 1994).

Lages, Lages and Lages (2005) considered five aspects of export performance: financial performance, strategic performance, achievement of objectives, contribution of individual unit of export (country-product-customer) for the export operations of the firm and satisfaction with the overall performance of export venture level.

The determinants on export performance are both external and internal to the firm (Grandinetti and Mason, 2012).

Greenaway et al. (2007), in a study of the British firms during the period of 1993-2003, concluded that there is a direct relationship between participation in foreign markets and the increase of *ex-post* financial performance of firms. The results of this study suggest that export promoting policies could be useful to reduce the level of financial constraints faced by firms and to indirectly increase their investment and productivity. This latter effect may be particularly relevant for SMEs, whose investment is often limited by lack of funding.

In a recent study on Portuguese product exporters, Silva (2012) offered a postulation also supported by other researchers (Ganesh- Kumar *et al.* (2001), Greenaway *et al.* (2007)), according to which exports may have a positive effect on firm financial performance due to a revenue diversification effect and through the signal given to financial markets (reducing informational asymmetries), which is, "only the best achieve to export". This way, firms improve the ability to obtain financing and reduce their

dependence on suppliers. Another research conducted with companies in the Czech Republic (Manole and Spatareanu, 2010) shows that only *ex ante* firms will have sufficient liquidity to export.

Based on a review of the literature produced between 1998 and 2005 on the determinants of export performance, Sousa *et al.* (2008) concluded that the existence of programs sponsored by governments and non-government agencies positively contribute to the performance of export enterprises. Also researchers Sousa and Bradley (2009) concluded that the use of export assistance programs is a major determinant of the export performance of Portuguese firms. Therefore, the mentors of public policy should continue to invest in these programs and encourage firms to use these programs.

RESEARCH PROPOSITIONS AND THEORETICAL MODEL TO BE TESTED

Based on the literature review and on the importance of export financing resources, innovation orientation and learning orientation for export performance, nine theoretical propositions have been suggested. Those propositions take into account the managerial characteristics and their influence on firm's decision to undertake funding investments on its export operation. Also, the conceptual framework of the model to be developed is based on the resource-based view (RBV) theory. This theory emphasizes the resources as the core capability for the firm to achieve competitive advantage and thereby improving its performance.

This research regards the export performance as the dependent variable of the conceptual model and considers three independent variables – export financial resources, learning orientation and innovation orientation - and export intensity as mediator variable.

With the future empirical study, we expect to contribute to a better understanding of the impact of export financial resources on export performance improvement.

The proposed model shall be tested in the future with a survey which will be conducted with Portuguese exporting SMEs. An overview of the complete conceptual framework is presented in Figure 1.

Both the traditional literature on international business (Buckley and Casson, 1976) and the latest literature on entrepreneurship (Zahra *et al.*, 2000) suggest that internationalization should be driven by firms' efforts to leverage its innovation capabilities and learning orientation.

This research aims to investigate if the managerial personal characteristics are related with financing resources used by the Portuguese SMEs in their export operations. We examine the psychic distance and networking orientation and their indirect impact on the export performance.

Frequently, exporting happens between two firms that are not familiar to each other and with significant psychic distance. In spite of this, firms develop international trade business and to support that, it is essential to have a large degree of financial trust. According to Griffith and Czincota (2012), this support is indispensable to guarantee the seller that he will receive the payment from the buyer and, moreover, is important to assist the exporter firm to have working capital and liquidity to produce the goods and offer the importer firm credit terms in competitive conditions.

Thus, our first proposition is as follows:

P1: The higher the level of psychic distance, the greater the level of financial resources committed to support export.

Networking orientation could facilitate firms to have access to different sources of export financing due to multiple different sources of funding and better financing conditions. The rationale for this approach is that firms can take advantage from better financial conditions from lenders due to the lower perceived risk because the networking and contacts can help managers to select and interpret information in a more complete way.

Thus, we propose the following:

P2: The higher the level of networking orientation, the greater the level of export financial resources.

Wiklund and Shepherd (2005) argue that financial resources seem to have a great importance to small firms and they have also found that entrepreneurial and learning strategies require considerable financial resources to have success.

Moreover, as financial resources are liquid and flexible, firms can re-affect them into new initiatives. The fundamental reason for this argument is that firms can benefit from learning when they have more financial resources into their approach to international markets, which may lead to the knowledge of the different risks, payoffs and other conditions of markets abroad.

Thus, the following proposition will be tested in the future research:

P3: The higher the level of export financial resources, the greater the learning orientation of the firm.

Since the pioneering work of Schumpeter (1954) on innovation, the role of financial resources in attaining superior levels of innovation has been pointed out by different authors. King and Levine (1993) argued that better access to financial systems improves the degree of innovation. The rationale behind that argument is that firms can benefit from innovations when they manage to channel more financial resources into their

process, which may lead to the creation of the correct set of processes to enhance firm's innovative capacity.

This leads us to the fourth proposition:

P4: The higher the level of financial resources committed to export support, the greater the innovation orientation of the firm.

Sousa et al. (2008) identified a positive influence of programs sponsored by governments and non-governmental agencies on the export intensity. These resources are used by firms, mostly as extra resources. Our review of previous studies has identified an important gap. Besides these programs, empirical research on the financial support to exports is limited. One of the few studies concluded that the availability of financial resources for export activities affect export venture performance outcomes (Morgan *et al.*, 2004).

Some firms may have deferred growth and exporting goals because of financing constraints (Riding *et al.*, 2012; Griffith and Czinkota, 2012). It is interesting to study the relationship between financing resources and export intensity (measured as the percentage of sales revenues obtained from exports). The essential reason for this is because firms that gained the financial capital to produce products for exportation, with working capital and liquidity requirements, are better positioned to improve the level of exports.

Thus, the fifth proposition is:

P5: The higher the level of financial resources committed to export support, the greater the export intensity.

Amine and Cavusgil (1986), in a study of the British firms from clothing sector, concluded that there was a positive relationship between export intensity and export performance.

Lu and Beamish (2001) studied the effects of internationalisation on the SMEs

performance, identifying how firms become more competitive as they expand internationally their businesses. The strategies studied were exports and foreign direct investment in listed Japanese SMEs. The authors found that higher export intensity contributed positively to firm performance, considering the effect of exchange rate (the results could change because of the fluctuations of exchange rate). The conclusion is consistent when the yen was weaker. The rationale behind that argument is that export performance can increase from export intensity when firms manage to increase their export volume of sales and production in the extended geographic markets, which may guide to gains related to scale and scope economies.

This leads us to the following proposition:

P6: Export intensity positively affects export performance.

Learning oriented firms learn from their previous success and from their mistakes as well and tend to achieve better performance (Zahra et al., 2000). Learning enables firms to create new products with higher technology and access to new markets, improving their performance. Kropp et al. (2006) tested a positive relationship between learning orientation and IEBV (international entrepreneurial business venture). As firms learn from export markets, they might increase the involvement of exports due to the knowledge and the intelligence that they incorporate into their activities (Castellani, 2002).

Thus, based on the learning importance in the export processes and ultimately on its export performance, we shall test the following proposition:

P7: Learning orientation positively affects export intensity.

Several scholars have compared the internationalization process with stages of

production, considering each subsequent stage as the firm's innovation, essentially in the SMEs exporting process (Gankema, Snuif and Zwart, 2000). The various stages of Model-I are usually operationalized by the ratio of export sales in total sales. This ratio represents the involvement of firms with export activity. Depending on industry or on the comparative advantages of a country, positive or negative relationships between innovation and export intensity have been found. For example, Pla-Barber and Alegre (2007) results, based on a sample of firms from the French biotechnology industry, confirm a positive and significant link between innovation and export intensity. However, if firms researched belong to a country that is known for its comparative advantage related with low labour and production costs, such as China, the results could be the opposite (Zhao and Zou, 2002). Based on an empirical study, Filatotchev and Piesse (2009) show a positive and significant correlation between R&D and export intensity. Calantone et al. (2002) defend that the ability to innovate is the most important determinant of business performance. Consequently, this leads to the following proposition:

P8: Innovation orientation is positively related to the increase of export intensity.

According to several authors, there is a link between learning orientation and innovation orientation (Calantone et al., 2002). It is defended that there are three ways in which this link is established: the first is related to technological innovation, the second is related to the emergence of new markets and the ability to understand and anticipate the recent demand of consumers, and the third way says that an organization committed to learn is more innovative than their competitors.

outputs of the interviews, the questionnaire will be pre-tested by some export managers to reach the final version of the survey.

The research setting is the country of Portugal. The population is made of SMEs Portuguese exporters of goods. These SMEs appear in the official database of *Instituto Nacional de Estatística (INE)*.

The population consists of 33,861 exporting firms, representing 9.7% of the total Portuguese SMEs and their turnover represents 40% of all SMEs in Portugal (INE, 2011). The most representative sectors of exporting SMEs are trade, manufacturing and construction, which, together, represented 84% of total exports and 89% of turnover generated by the exporters in 2009. Regionally, the north of Portugal is the region that generates more exports (13%), followed by the centre with 11% and the Lisbon region with 8% of the total.

A representative sample of exporting SMEs will be randomly generated from the INE database.

Once it will be necessary to test the relationships between the different constructs simultaneously, structural equations modelling will be used.

REFERENCES

- Amine, L.S. and Cavusgil S.T. (1986). Export marketing strategies in the British clothing industry. *European Journal of Marketing*, 20(7), 21–33.
- Andersen, O. (1993). On the internationalization process of firms: A critical analysis. *Journal of International Business Studies*, 24(2), 209–231.
- Andersson, S., Gabrielsson, J. and Wictor, I. (2004). International Activities in Small Firms: Examining Factors Influencing the Internationalization and Export Growth of Small Firms. *Canadian Journal of Administrative Sciences*, 24(1), 22–34.
- Babakus, E., Yavas, U. and Haahti, A. (2006). Perceived uncertainty, networking and export performance. *European Business Review*, 18 (1), 4–13.
- Baker, W. E. and Sinkula, J. M. (1999). The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of the Academy of Marketing Science*, 27(4), 411–427.
- Bartholdy, J and Mateus, C. (2008). Financing of SME's: An Asset Side Story. *SSRN Working Papers Series*, 1–47.
- Beckerman, W. (1956). Distance and pattern of inter-european trade. *The Review of Economics and Statistics*, 38 (1), 31–40.
- Berger, A. N., and Udell, G. F. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking and Finance*, 22(6–8), 613–673.
- Berger, A. N. and Udell, G. F. (2004). A more complete conceptual framework for SMEs Finance. *World Bank*, MC 13–121.
- Bradley, F. (2005). *International Marketing Strategy*. 5nd ed. UK: Prentice Hall
- Buckley, P. J. and Casson, M. (1976). *The future of the multinational enterprise*. Londres: Macmillan Books.
- Calantone, R. J., Cavusgil, S. T and Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31, 515–524.
- Calof, J.L. (1994). The relationship between firm size and export behavior revisited. *Journal of International Business Studies*, 25, 367–387.
- Cavusgil, S.T. (1984). Differences between exporters based on their degree of internationalization, *Journal of Business Research*, 18 (2), 195–208.

- Cavusgil, S. T. and Zou, S. (1994). Marketing strategy-performance relationship: An investigation of the empirical link in export market ventures. *Journal of Marketing*, 58 (jan), 479-506.
- Castellani, D. (2002). Export Behavior and Productivity Growth: Evidence from Italian Manufacturing Firms, *Review of the World Economy* 138(4), 606-628.
- Churchill, G. A. (1979). A Paradigm for Developing Better Measures of Marketing Constructs, *Journal of Marketing Research*, 16 (1), 64-73.
- Czinkota, M.R. (1994). A national export assistance policy for new and growing businesses, *Journal of International Marketing*, 2 (1), 91-101.
- Diamantopoulos, A. and Schlegelmilch, B. B. (1994). Linking export manpower to export performance: a canonical regression analysis of European and US data, in Cavusgil, S.T. and Axinn, C. (Eds), *Advances in International Marketing*, JAI Press, Greenwich, CT, 6, 161-81.
- Dow, D. and Karunaratna, A. (2006). Developing a multidimensional instrument to measure psychic distance stimuli. *Journal of International Business Studies*, 1-25.
- Ellis, P. and Pecotich, A. (2001). Social factors influencing export initiation in small and medium-sized enterprises. *Journal of marketing Research*, 38 (1), 119-130.
- Filatotchev, I. and Piesse, J. (2009). R&D, internationalization and growth of newly listed firms: European evidence. *Journal of International Business Studies*, 40, 1260-1276.
- Ganesh-Kumar, A., Sen, K. and Vaidya, R. (2001). Outward Orientation, Investment and Finance Constraints: A Study of Indian Firms, *Journal of Development Studies*, 37 (4), 133-149.
- Gankema, H, Snuif, H., and Zwart, P. (2000). The internationalization process of small and medium-sized enterprises: An evaluation of stage theory. *Journal of Small Business Management*, 38(4), 15-27.
- Ghoshal, S. (1987), "Global strategy: an organizing framework", *Strategic Management Journal*, 8 (5), 425-40.
- Grandinetti, R. and Mason, M.C. (2012). Internationalization modes other than exporting: The missing determinant of export performance. *European Business Review*, 24 (3), 236-254.
- Greenaway, D., Guariglia, A. and Kneller, R. (2007). Financial factors and exporting decisions. *Journal of International Economics*, 73(2), 377-395.
- Griffith, D. A. and Czinkota, M. R. (2012). Release the constraints: solving the problems of export financing in troublesome times. *Business Horizons*, 55, 251-260.
- INE - Instituto Nacional de Estatística (2011). *O perfil exportador das PME em Portugal – 2007/2009*, in Estudos sobre Estatísticas Estruturais das Empresas 2007-2009.
- Johanson, J. and Vahlne, J. E. (1977). The internationalization process of the firm-A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8(1), 23-32.
- Johanson, J. and Vahlne, J. E. (1990). The mechanism of internationalization. *International marketing Review*, 7 (4), 11-24.
- Johanson, J. and Vahlne, J. E. (2009). The Uppsala internationalization process model revisited: From Liability of foreignness to liability of outsidership. *Journal of International Business Studies*, 40 (9), 1411-1431.
- Johanson, J. and Wiedersheim-Paul F. (1975) .The Internationalization of the firm - four Swedish cases. *Journal of Management Studies*, Out, 305-322.
- Jordan, J., Lowe, J. and Taylor, P. (1998). Strategy and Financial Policy in U.K.

- Small Firms. *Journal of Business Finance & Accounting*, 25(1-2), 1-27.
- Julian, C. C. and Ali, M. Y. (2009). Incentives to export for Australian export market ventures, *Journal of Small Business and Enterprise Development*, 16(3), 418-431.
- Kaleka, A. (2011). When exporting manufacturers compete on the basis of service: resource and marketing capabilities driving service advantage and performance. *Journal of International marketing*. 19 (1), 40-58.
- Kandemir, D. and Hult, G. T. (2005). A conceptualization of an organizational learning culture in international joint ventures. *Industrial Marketing Management*, 34(5), 440-446.
- Katsikeas, C. S., Samiee, S. and Theodosiou, M. (2006). Strategy fit and performance consequences of international marketing standardization. *Strategic Management Journal*, 27 (9), 867-90.
- Kenny, B. and Fahy, J. (2011). Network resources and international performance of high tech SMEs. *Journal of Small Business and Enterprise Development*, 18 (3), 529-555.
- King, R.G. and Levine, R. (1993). Finance, entrepreneurship and growth. *Journal of Monetary Economics*, 32 (5), 513-542.
- Kropp, F., Lindsay, N. J., and Shoham, A. (2006). Entrepreneurial, market, and learning orientations and international entrepreneurial business venture performance in South African firms. *International Marketing Review*, 23(5), 504-523.
- Lages, L. F. Lages, C., and Lages C. R. (2005). Bringing export performance metrics into annual reports: the APEV Scale and the PERFEX Scale. *Journal of International Marketing*, 13(3), 79-104.
- Lages, L. F. and Montgomery, D. B. (2004). Export performance as an antecedent of export commitment and marketing strategy adaptation: Evidence from small and medium-sized exporters. *European Journal of Marketing*, 38(9/10), 1186-1214.
- Lengler, J. F. B., Sousa, C. M. P. and Marques, C. (2013). Exploring the Linear and Quadratic Effects of Customer and Competitor Orientation on Export Performance. *International Marketing Review. Forthcoming*.
- Leonidou, L. C. and Katsikeas, C. S. (1996). The Export Development Process: An Integrative Review of Empirical Models. *Journal of International Business Studies*, 27 (3), 517-51.
- Leonidou, L. C., Katsikeas, C. S. and Piercy, N. F. (1998). Identifying Managerial Influences on Exporting: Past Research and Future Directions. *Journal of International Marketing*, 6 (2), 74-102.
- Leonidou, L. C., Katsikeas, C. S. and Samiee, S. (2002b). Marketing strategy determinants of export performance: a meta-analysis. *Journal of Business Research*, 55(1), 51-67.
- Linnemann, H. (1966). *An econometric study of international trade flows*. Amsterdam: North Holland Pub Co.
- Lu, J. W. and Beamish, P. W. (2001). The Internationalization and Performance of SMEs. *Strategic Management Journal*, 22 (6/7), Special Issue: Strategic Entrepreneurship: Entrepreneurial Strategies for Wealth Creation, 565-586
- Manole, V. and Spatareanu, M. (2010). Exporting, capital investment and financial constraints. *Review of World Economics*, 146(1), 23-37.
- Modigliani, F. and Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, 48(3), 261-297.
- Modigliani, F. and Miller, M. H. (1963). Corporate Income Taxes and the Cost

- of Capital: a Correction. *The American Economic Review*, 53(3), 433-443.
- Morgan, N. A., Kaleka, A. and Katsikeas, C. S. (2004). Antecedents of Export Venture Performance: A Theoretical Model and Empirical Assessment, *Journal of Marketing*, 8 (January 2004), 90-108
- Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, 39(3), 575-592.
- Myers, S. C. and Majluf, N. S. (1984). Corporate Financing and Investment Decisions when Firms have Information that Investors do not have. *Journal of Financial Economics*, 13, 187-221.
- OECD (2006). *Removing barriers to SME access to international markets*. Paris
- O'Grady, S. and Lane, H. W. (1996). The psychic distance paradox. *Journal of International Business Studies*, 27 (2), 309-333.
- Piercy, N. F., Kaleka, A., and Katsikeas, C. S. (1998). Sources of competitive advantage in high performing exporting companies. *Journal of World Business*, 33(4), 378-393.
- Pla-Barber, J. and Alegre, J. (2007). Analysing the link between export intensity, innovation and firm size in a science-based industry. *International Business Review*, 16 (3), 275-293.
- Porter, M. E. (1990). *The competitive advantage of nations*. Free Press. New York.
- Riding, A., Orser, B.J., Spense, M. and Belanger, B. (2012). Financing new venture exporters. *Small Business Economics*, 38, 147-163.
- Ruigrok, W., Wagner, H. (2003). Internationalization and performance: an organizational learning perspective. *Management International Review*, 1 (43), 63-83.
- Salomon, R. and Shaver, J. M. (2005). Learning by exporting: new insights from examining firm innovation, *Journal of Economics and Management Strategy*, 14 (2), 431-460.
- Schumpeter, J.A. (1954). *History of Economic Analysis*, Oxford University Press, New York, NY.
- Shoham, A. (1998). Export performance: A conceptualization and an empirical assessment. *Journal of International Marketing*, 6(3).
- Silva, A. (2012). Financial constraints and exports: evidence from Portuguese manufacturing firms. *International Journal of Economic Sciences and Applied Research*, 4(3), 7-19.
- Sinkula, J. M., Baker, W. E. and Noordewier, T. (1997). A framework for market-based organizational learning: Linking values, knowledge, and behaviour. *Journal of the Academy of Marketing Science*, 25(4), 305-318.
- Sousa, C. M. P. (2004). Export performance measurement: An evaluation of the empirical research in the literature. *Academy of Marketing Science Review* at <http://amsreview.org/articles/sousa09-2004.pdf> (accessed December 15, 2012).
- Sousa, C. M. P. and Lengler, J. (2009). Psychic distance, marketing strategy and performance in export ventures of Brazilian firms. *Journal of Marketing Management*, 25(5-6), 591-610.
- Sousa, C. M. P. and Bradley, F. (2006). Cultural Distance and psychic distance: two peas in a pod?. *Journal of International Marketing*, 14 (1), 49-70.
- Sousa, C. M. P. and Bradley, F. (2009). Effects of Export Assistance and Distributor Support on the Performance of SMEs: The Case of Portuguese Export Ventures. *International Small Business Journal*, 27(6), 681-701.
- Sousa, C. M. P., Martínez-López, F. J. and Coelho, F. (2008). The determinants of export performance: A review of the research in the literature between 1998 and 2005. *International Journal of Management Reviews*, 10(4), 343-374.

- Sousa, C. M. P., Ruzo, E. and Losada, F. (2010). The key role of managers' values in exporting: influence on customer responsiveness and export performance. *Journal of International Marketing*, 18 (2), 1-19.
- Stiglitz, J. E. and Weiss, A. (1981). Credit Rationing in Markets with Imperfect Information. *The American Economic Review*, 73(June), 393-409.
- Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*, 80, 190-207.
- Wiklund, J. and Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configuration approach. *Journal of Business Venturing*, 20, 71-91.
- Zahra, S. A., Ireland, R. D. and Hitt, M. A. (2000). International expansion by new venture firms: international diversity, mode of market entry, technological learning, and performance. *Academy of Management Journal*, 43 (5), 925-950.
- Zhao, H. and Zou, S. (2002). The Impact of Industry Concentration and Firm Location on Export Propensity and Intensity: An Empirical Analysis of Chinese Manufacturing Firms. *Journal of International Marketing*, 10(1), 52-71.
- Zou, S. and Stan, S. (1998). The determinants of export performance : a review of the empirical literature between 1987 and 1997. *International Marketing Review*, 15(5), 333-356.

GOVERNANÇA NAS INSTITUIÇÕES DE ENSINO SUPERIOR: UM ESTUDO DO PRINCÍPIO DA PRESTAÇÃO DE CONTAS/ACCOUNTABILITY NAS IFES

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RESUMO

No contexto de que governança atinge as diversas entidades, dentre elas, as Instituições Federais de Ensino Superior (IFES), tem-se como problema de pesquisa: as Universidades Federais do sul do Brasil evidenciam políticas de governança que cumpram o princípio da prestação de contas/accountability? O objetivo geral deste estudo é identificar a evidenciação de políticas de governança voltadas ao princípio da prestação de contas/Accountability, nas Universidades Federais do sul do Brasil à luz das entidades que tratam do tema, especificamente para as IES. Trata-se de uma pesquisa exploratória e descritiva, a partir de estudo prático de lógica dedutiva, pautado na investigação da realidade de três Universidades Federais do sul do Brasil (UFPR, UFSC e UFRGS). A coleta parte de dados secundários e a análise é preponderantemente qualitativa. Trata-se de uma pesquisa bibliográfica e de multicase utilizando-se da Escala de Likert para tratar os dados. A análise e interpretação final dos dados se deram a partir do cálculo da média das frequências da mesma escala. Concluiu-se que o princípio da prestação de contas/accountability atingiu a média de 3,19 e que as IFES estudadas apresentaram um grau aceitável de evidenciação das recomendações de governança, considerando o princípio da prestação de contas/accountability.

Palavras-chave: governança. Ensino superior. Universidades federais. Princípios de governança. Prestação de contas/accountability.

INTRODUÇÃO

A necessidade da sociedade em acompanhar de maneira efetiva o que ocorre na gestão pública faz com que temas como governança no setor público mostrem-se importantes para pesquisa ultrapassando as associações iniciais de que governança cabe somente ao setor privado. Portanto, governança nas organizações ganha destaque e passa a envolver não apenas os aspectos econômicos de uma organização, mas principalmente seus aspectos sociais e ambientais, ações estas cada vez mais evidenciadas.

A governança, mesmo que, numa fase inicial, tenha obtido mais popularidade no setor privado, hoje remete-se também ao setor público no sentido de considerar a participação da sociedade, a equidade, a transparência e assegurar a accountability dentro das entidades

públicas. Na administração pública, especificamente, a governança é revelada pela capacidade de gerenciar os recursos econômicos e sociais, gerando resultados que atendam às necessidades da coletividade da melhor forma possível (Sousa, Ribeiro e Nascimento, 2004; Almeida, 2006; Marques, 2007).

Vale ressaltar, portanto, que o tema governança não se restringe às corporações, pois também atinge as diversas entidades, dentre elas, as IFES e, consequentemente, as Universidades Federais que, com suas peculiaridades, fazem com que as informações operacionais e orçamentárias assumam complexidade significativa, exigindo, ao mesmo tempo, transparência quanto às informações institucionais e quanto ao desempenho. Em Portugal, por exemplo, as universidades do setor público são exemplos de instituições que adotam e

comunicam boas práticas de governança (Marques, 2007; Platt Netto e Cruz, 2009).

Os aspectos relacionados com a teoria da agência e a prestação de contas dos atos governamentais representam alguns dos desafios encontrados pelos gestores públicos. Levando essas considerações para as universidades públicas, sem desprezar a relação desses fatos com as demais IES que também vivem num ambiente de mudanças a desafiar suas tradicionais estruturas e estratégias, tem-se que, como entidades que compõem a estrutura da administração pública brasileira e obrigadas pela Constituição Federal a prestar contas, é notória a necessidade de transparência de suas contas e respeito ao princípio da publicidade, entre outros princípios da administração pública, principalmente considerando-se o contraste dos princípios estabelecidos pelas boas práticas de governança, com relatórios extensos publicados pelas universidades, pouco práticos para consultas de usuários não especializados. Enfim, é notória a necessidade de uma política de governança (PLATT NETO, CRUZ e VIEIRA, 2004; OLIVEIRA, 2006; SLOMSKI, 2007; PLATT NETO e CRUZ, 2009).

Nesse contexto, tem-se como problemade pesquisa: as Universidades Federais do sul do Brasil evidenciam políticas de governança que cumpram o princípio da prestação de contas/*accountability*? O objetivo geral deste estudo é identificar a evidenciação de políticas de governança voltadas ao princípio da prestação de contas/*accountability*, nas Universidades Federais do sul do Brasil à luz das entidades que tratam do tema, especificamente para as IES. Para tanto tem-se como objetivos específicos: (i) Identificar as entidades que tratam de políticas de governança especificamente para as Instituições de Ensino Superior (IES); (ii) listar as recomendações de

políticas de governança voltadas ao princípio da Prestação de Contas/*Accountability*; (iii) classificar cada recomendação de acordo com o seu grau de atendimento e evidenciação para cada IFES.

Esta pesquisa limita-se à investigação das IFES dos três estados do sul do Brasil, Paraná, Rio Grande do Sul e Santa Catarina, com base nos dados de 2010 destas Universidades. Baseia-se nas recomendações orientadas especificamente às IES, não sendo consideradas as recomendações de governança para as corporações, para fundações ou para demais entidades que não sejam as de ensino superior. No que se refere aos procedimentos para análise e interpretação dos dados a pesquisa utiliza a Escala de Likert de forma nominal e não ordinal.

Políticas de Governança para o Ensino Superior

Segundo Matias-Pereira (2010), o Banco Mundial, no início da década de 1990, já destaca estudos e relatórios que definem governança como a maneira pela qual o poder é exercido pela administração dos recursos econômicos e sociais, tendo em vista o desenvolvimento.

A governança é um termo que vem sendo usado em diferentes contextos e com significados, muitas vezes, distintos. Boas práticas de governança são capazes de proporcionar maior transparência, equidade, prestação de contas e responsabilidade para os seus *stakeholders*, mantendo, assim, a competitividade das diversas entidades com funções básicas de ordem social. Governança nas organizações representa os diferentes modos de coordenação de ações ou forma básica de ordem social distintas de orientação política e de maneira mais cooperativa (Enders, 2004; Marques e Costa, 2006; Ibgc, 2009).

As práticas de governança estabelecem o monitoramento e o conjunto de mecanismos de controle para a gestão e para o desempenho da organização, definindo funções e atribuições. É o estudo do governo da empresa e da estrutura societária de qualquer sociedade, cujas formas de atingir os objetivos e de monitorar os resultados são bem definidas. Essa estrutura de governança permite maior controle sobre as missões institucionais, políticas e de orçamento (Knott e Payne, 2004; Teferra e Altbach, 2004; Bianchi et al., 2009; Almeida et al., 2009; Rossoni e Machado-Da-Silva, 2010).

Para Almeida (2006), uma boa governança contribui para a aproximação entre agentes formuladores das políticas públicas do cidadão e, ainda, reduz a eventual assimetria informacional.

Os principais documentos norteadores das políticas de governança são: o Relatório *Cadbury* (Cadbury, 1992); os princípios de Governança Corporativa da *Organization for Economic Co-Operation and Development* (OECD, 2004); a Cartilha de Recomendações sobre Governança Corporativa da Comissão de Valores Mobiliários (CVM, 2002); o Código das Melhores Práticas de Governança Corporativa do Instituto Brasileiro de Governança Corporativa (IBGC, 2009); os Segmentos Diferenciados de Governança da Bolsa de Valores, Mercadorias e Futuros (BM & FBOVESPA, 2012); as Recomendações de Governança para o Setor Público do *study 13* do *International Federation of Accountants* (IFAC, 2001) e o *Australian National Audit Office* (Anao, 2002); o estudo da Rede de Informação sobre Educação na Europa (Eurydice, 2008); e, o Guia de Governança do *Committee of University Chairs* (CUC, 2009), sendo os dois últimos direcionados especificamente à governança no ensino superior.

Os princípios básicos de governança corporativa, segundo o IBGC (2009), são

a transparência, a equidade, a prestação de contas (*accountability*) e a responsabilidade corporativa.

Para Matias-Pereira (2010), tais princípios básicos, que ele destaca como transparência (*disclosure*), equidade (*fairness*), cumprimento das leis (*compliance*), prestação de contas (*accountability*) e conduta ética, norteiam os rumos tanto dos segmentos dos setores privados como dos setores públicos.

A prestação de contas é atribuída pelo IFAC (2001) como um princípio de governança que tem como efeito a obrigação de responder por uma responsabilidade atribuída, ou ainda, o processo pelo qual as entidades e os indivíduos dentro dela são responsáveis por suas decisões e ações, incluindo a gestão de fundos públicos e todos os aspectos de desempenho. Essa prestação de contas, segundo o IBGC (2009), faz com que os agentes de governança assumam integralmente as consequências de seus atos e de suas omissões. Matias-Pereira (2010) define prestação de contas ou *accountability* no setor público como o conjunto de mecanismos e procedimentos que levam os decisores governamentais a prestar contas dos resultados de suas ações, garantindo maior transparência.

De acordo com o IFAC (2001), as entidades do setor público estão sujeitas a formas de prestação de contas com uma complexidade que atinge objetivos políticos, econômicos e sociais para vários intervenientes que, de certa forma, podem diferenciar-se da prestação de contas de uma empresa do setor privado.

Nesse contexto, considera-se, para efeito desta pesquisa o princípio da Prestação de contas/*accountability* onde suas principais características são definidas por: responsabilidade pelas decisões e ações; responsabilidade pela gestão de fundos, recursos e aspectos de desempenho; responsabilidade por assumir atos e omissões; procedimentos que levam à transparência; e, relação entre

as partes interessadas e os responsáveis pela gestão.

Portanto, diante da complexidade inerente à estrutura organizacional das universidades públicas e da necessidade de revelar-se explicitamente à sociedade sobre a utilização eficaz e eficiente de seus recursos e da relevância de suas atividades para o mercado de trabalho, tem-se que assuntos relacionados à boa governança, seus princípios e recomendações, representam um fator essencial para a implementação de estratégias e ações capazes de cumprir a missão de interesse público, às quais as IES públicas se propõem. No entanto, boas práticas de governança não acontecem simplesmente. Uma estrutura de governança adequada é produto de um esforço penoso que envolve processos, mudanças e reestruturações (Trakman, 2008; Mainardes, Alves e Raposo, 2011).

METODOLOGIA

No que se refere ao enquadramento metodológico, trata-se de uma pesquisa exploratória e descritiva, um estudo prático de multicase pautado na investigação da realidade das Universidades Federais do sul do Brasil e, ainda, de uma pesquisa documental baseada em relatórios emitidos por essas universidades que, provavelmente, já foram analisados de alguma forma (GIL, 2009). A lógica da pesquisa é dedutiva,

pois avança do conhecimento dos fatos para a compreensão destes (Richardson, 2008) e o processo de coleta considera dados secundários com uma abordagem preponderantemente qualitativa. Quanto ao resultado, trata-se de uma pesquisa aplicada, pois objetiva gerar conhecimento sobre as recomendações de governança, a fim de identificar políticas de governança nas Universidades Federais estudadas.

Para coleta e tratamento dos dados tem-se: (i) a escolha intencional das três instituições que formam o universo da pesquisa, quais sejam: Universidade Federal do Paraná (UFPR), Universidade Federal de Santa Catarina (UFSC) e Universidade Federal do Rio Grande do Sul (UFRGS), as quais pertencem à região sul do Brasil, sendo uma (a mais antiga) de cada estado; (ii) a busca das principais entidades que tratam de governança; (iii) a elaboração de uma lista de verificação (*checklist*) com as recomendações de políticas de governança que se aplicam às IES e que se referem ao princípio da prestação de contas/*accountability*; (iv) a busca dos relatórios, conforme Quadro 1, e demais informações publicadas nos sítios da internet de cada objeto de estudo, e, neles, a busca do atendimento e/ou evidencição de cada recomendação identificando políticas de governança em cada uma delas a partir do *checklist* elaborado.

Quadro 1 – Relatórios utilizados na pesquisa

Relatórios Primários

- Plano de Desenvolvimento Institucional – PDI
- Estatuto
- Regimento Geral
- Relatório de Gestão
- Relatório de Atividades
- Demonstrativos Contábeis
- Balancete Contábil
- Relatório de Auditoria da CGU

Relatórios Secundários

- Normas de Execução Orçamentária e Financeira
- Regimento do Conselho Universitário
- Regimento do Conselho de Ensino, Pesquisa e Extensão
- Regimento do Conselho de Curadores
- Regimento do Conselho de Planejamento e Administração
- Relatório Universidade em Números
- Parecer do Conselho de Curadores
- Manual de Execução Financeira e Orçamentária
- Manual de Rotinas do DCF
- Relatório da Auditoria Interna

Finalmente tem-se como procedimento para tratamento dos dados a medição do grau de atendimento e evidência de cada recomendação para cada IFESa partir da utilização da Escala

de Likert, conforme consta no Quadro 2que, segundo Cooper e Schindler (2003), consiste em classificar as afirmações expressas em favoráveis ou desfavoráveis.

Quadro 2 – Classificação e representação dos pontos da Escala de Likert

Pontos	Classificação	Representação
(5)	Atende e evidencia totalmente	Significa que a recomendação descrita na afirmativa está sendo atendida e evidenciada totalmente no contexto da IFES, considerando os relatórios publicados no sítio da internet da instituição, sejam eles de elaboração e de publicação obrigatória ou não e, ainda, de demais <i>links</i> de busca disponíveis no próprio sítio da internet.
(4)	Atende totalmente com evidência parcial	Significa que a recomendação descrita na afirmativa está sendo atendida totalmente no contexto da IFES, porém foi encontrada com dificuldade, necessitando de formas alternativas de buscas em outras fontes que não o sítio da internet da instituição pesquisada, logo, sua evidência foi considerada parcial pela dificuldade de acesso.
(3)	Atende parcialmente na maioria dos itens	Significa que, no contexto da IFES, a recomendação descrita na afirmativa está sendo atendida na maioria dos itens, porém não na sua totalidade, o que representa um ponto neutro na evidência da recomendação.
(2)	Não atende, porém cita alguns itens	Significa que, no contexto da IFES, a recomendação descrita na afirmativa não está sendo atendida. No entanto, cita alguns itens que, porém, não caracterizam com clareza o atendimento da referida recomendação.
(1)	Não atende	Significa que a recomendação descrita na afirmativa não está sendo atendida no contexto da IFES.
(0)	Não se aplica	Significa que a recomendação descrita na afirmativa não se aplica ao contexto da IFES ou precisa ser considerada nula.

A análise e interpretação de cada recomendação considera o confronto com as características estabelecidas ao princípio da Prestação de contas/*accountability*. Esse processo permitiu estruturar um *checklist* com 32 recomendações de governança baseado no estudo da Rede de Informação sobre Educação na Europa (EURYDICE, 2008) e o Guia de Governança do *Committee of University Chairs* (CUC, 2009), ambos direcionados especificamente à governança no ensino superior.

A etapa seguinte consiste na análise dos relatórios e demais informações publicadas nos sítios da internet de cada IFES estudada buscando o grau de evidência das recomendações constantes no *checklist*. Para tanto, o resultado foi representado pelos pontos atribuídos à Escala de Likert. Posteriormente tem-se a análise e interpretação dos dados a partir do cálculo

da média das frequências da Escala de Likert.

RESULTADOS

Dentre as principais entidades que tratam de governança, o EURYDICE (2008) e o CUC (2009) são os únicos específicos ao ensino superior. O CUC (2009), com a responsabilidade de promover as melhores práticas de governança no ensino superior, tem, em seu guia, recomendações claras de boas práticas de governança para este setor. Já o estudo da EURYDICE (2008) recolheu dados sobre a governança no ensino superior na Europa, sem a intenção de recomendar práticas ou políticas, e sim destacar situações e aspectos já existentes sobre o tema. Portanto, como resultado dessa busca tem-se um *checklist* com 32 recomendações de políticas de governança relacionadas ao princípio da Prestação de Contas / *Accountability*, aplicáveis à IES, criado a partir do que estabelece o *Guide*

for Members of Higher Education Governing Bodies in the UK, elaborado pelo CUC (2009) e com a corroboração e confirmação dos estudos feitos pelo EURYDICE (2008).

Das 32 recomendações 9 são atendidas e evidenciadas totalmente por todas as universidades estudadas. O Quadro 3 mostra o *Checklist* e a classificação de cada recomendação na Escala de Likert.

Quadro 3 – *Checklist*, classificação e médias das recomendações pela Escala de Likert

Nº	Recomendação	Classificação			Média da Frequência
		UFPR	UFRGS	UFSC	
1	As IES serão dirigidas por um órgão de governo eficaz e responsável por: supervisionar as atividades da instituição, determinar sua direção futura e garantir que se cumpra a missão institucional e a maximização do potencial de todos os estudantes.	5	5	5	5
2	É de responsabilidade do órgão de governo assegurar a solvência da instituição e proteger seus ativos.	2	2	3	2,33
3	É de responsabilidade do órgão de governo aprovar a estratégia financeira da instituição.	5	5	5	5
4	A instituição deve ter políticas claras para todo o sistema, incluindo gestão de tesouraria, gestão de investimentos, gestão de riscos, gestão de dívidas, subvenções e contratos. Estas políticas devem ser revistas e atualizadas periodicamente.	2	2	1	1,67
5	É de responsabilidade do órgão de governo aprovar os planos operacionais anuais e orçamentos que devem refletir o plano estratégico da instituição.	5	5	5	5
6	É de responsabilidade do órgão de governo a recepção e a aprovação das contas anuais e demonstrações financeiras devidamente auditadas.	5	5	5	5
7	O orçamento anual, elemento essencial da gestão financeira, deve ser aprovado pelo órgão de governo antes do início do exercício financeiro e identificar as estratégias necessárias, bem como as fontes de financiamento.	5	5	5	5
8	O órgão de governo é responsável pela fiscalização da gestão estratégica de terrenos e edifícios da instituição.	2	2	5	3
9	É de responsabilidade do órgão de governo considerar, aprovar e manter sob revisão uma estratégia de propriedade que identifique os requisitos de propriedade e o espaço necessário para cumprir os objetivos do plano estratégico da instituição e que também preveja um programa de manutenção.	2	2	5	3
10	É de responsabilidade do órgão de governo dirigir e supervisionar o regime de auditoria interna e externa da instituição.	5	5	5	5
11	A auditoria interna deve estar presente em todos os sistemas de negócios da instituição.	1	5	5	3,67
12	O órgão de governo da IES deve aprovar, a partir de declaração de responsabilidade publicada amplamente na internet e no relatório anual, juntamente com a identificação de indivíduos-chave, a missão e a visão estratégica da instituição, plano de negócios a longo prazo, indicadores-chave de desempenho e orçamentos anuais.	2	2	2	2
13	O órgão de governo da IES deve garantir, a partir de declaração de responsabilidade publicada amplamente na internet e no relatório anual, juntamente com a identificação de indivíduos-chave, que a missão e a visão estratégica da instituição, plano de negócios a longo prazo,	2	2	2	2

Nº	Recomendação	Classificação			Média da Frequência
		UFPR	UFRGS	UFSC	
	indicadores-chave de desempenho e orçamentos anuais satisfaçam os interesses de todas as partes.				
14	O órgão de governo da IES deve garantir, a partir de declaração de responsabilidade publicada amplamente na internet e no relatório anual, juntamente com a identificação de indivíduos-chave, o estabelecimento e o acompanhamento do sistema de controle e de responsabilização, incluindo controles financeiros e operacionais e avaliação de riscos.	1	2	2	1,67
15	As demonstrações financeiras auditadas devem incluir uma declaração que cubra as responsabilidades do órgão de governo em relação ao controle interno e à governança da instituição.	3	3	2	2,67
16	A IES tem de efetuar atualizações regulares nas bases de dados nacionais com informações sobre atividades, programas académicos, pessoal, estudantes matriculados, custo por estudante, diplomas conferidos, etc.	5	5	5	5
17	A reeleição do presidente do órgão de governo para além de dois mandatos de quatro anos, ou equivalente, deve ser considerada como excepcional. (O mandato dos membros de quase todos os órgãos varia entre dois e cinco anos).	1	5	1	2,33
18	A instituição deve ter regulamentos financeiros que especifiquem as responsabilidades financeiras e a autoridade do órgão de governo, suas comissões, comitês e demais órgãos.	5	5	1	3,67
19	A instituição deve ter procedimentos financeiros que especifiquem processos a serem seguidos em transações financeiras do dia a dia.	5	5	1	3,67
20	Deve ser designado um diretor financeiro, profissional responsável em administrar e aconselhar sobre questões financeiras, bem como um responsável pelos relatórios financeiros.	5	5	5	5
21	O órgão de governo deve assegurar que os fundos fornecidos pelo conselho de financiamento sejam utilizados em conformidade com os termos e condições específicas deste conselho.	1	1	1	1
22	O conselho de financiamento é responsável pela base legal, pelo financiamento público, pelos fins para os quais ele foi fornecido, pelo manejo adequado e eficaz da utilização do financiamento, pelos sistemas adequados de contabilidade que permitam o cumprimento destes requisitos e por salvaguardar a viabilidade financeira da instituição.	2	2	2	2
23	O órgão de governo deve estabelecer um comitê de nomeação para procurar e recomendar membros para o órgão.	1	1	1	1
24	A partir de estatutos, decretos e demais regulamentos da instituição, o órgão de governo tomará todas as decisões finais em assuntos de interesse fundamentais para esta.	5	5	5	5
25	É de responsabilidade do órgão de governo considerar e aprovar o plano estratégico da IES com plena definição de suas metas académicas, financeiras, físicas e de pessoal, necessárias para atingir os objetivos da instituição.	5	5	5	5
26	Antes de qualquer decisão de remuneração, o órgão deve considerar a legislação pertinente tanto da instituição, como do setor público, incluindo aspectos éticos.	1	1	2	1,33
27	É de responsabilidade do comitê de remuneração determinar e rever os salários, termos e condições do presidente da instituição e outros membros do órgão de governo.	1	1	1	1
28	Quando é tomada uma decisão de remuneração, os pagamentos devem ser compatíveis com as tarefas atribuídas ao cargo e comunicados aos revisores de contas.	1	1	1	1

Nº	Recomendação	Classificação			Média da Frequência
		UFPR	UFRGS	UFSC	
29	O órgão de governo deve exercer suas responsabilidades de forma corporativa, ou seja, deve tomar decisões coletivamente por todos os membros.	5	5	5	5
30	Definido risco como “ameaça ou possibilidade que uma ação ou evento afetará a capacidade da instituição de atingir os seus objetivos”, é exigida a identificação e o gerenciamento dos riscos, bem como a divulgação anual sobre a gestão de risco nas demonstrações financeiras da instituição.	2	1	1	1,33
31	No sistema de controle, incluem-se políticas, objetivos e planos de gestão dos principais riscos e oportunidades, monitoramento de desempenho financeiro e operacional, segregação de funções, salvaguarda física de ativos e procedimentos de autorizações e aprovações.	2	2	1	1,67
32	É elemento essencial do sistema de controle um sistema de informação.	5	5	5	5
Média Geral					3,19

DISCUSSÕES

Em todas as universidades estudadas tem-se que as atribuições do presidente do órgão de governo estão claras, confirmando, assim, suas responsabilidades diante da gestão, da liderança, quanto à definição de diretrizes e metas e quanto à supervisão das atividades e cumprimento da missão institucional.

Em relação às recomendações que tratam da responsabilidade do órgão de governo quanto a assegurar a solvência da Instituição, proteger seus ativos e ter políticas claras de tesouraria e riscos, a UFPR e UFRGS **não atendem, porém citam alguns itens**. Ambas apresentam relatórios que fazem referências aos bens móveis e imóveis, às metas físicas e financeiras de investimentos, às políticas de dívidas com metas e resultados. Contudo, os relatórios da UFPR não se referem à tesouraria, nem tampouco a riscos e contratos e, na UFRGS não há registro que trate de responsabilidades sobre solvência. No caso da UFSC, apresenta no seu Estatuto, dentre as atribuições do Conselho de Curadores, a atribuição de aprovar a alienação e a transferência de bens da

Universidade. Cabe destacar que o fato de não constar, nas atribuições dos membros do órgão de governo, referências sobre a responsabilidade em assegurar a solvência da UFSC faz com que a recomendação seja classificada como **atende parcialmente na maioria dos itens**.

A UFPR, a UFRGS e a UFSC **atendem e evidenciam totalmente** as recomendações que determinam a responsabilidade do órgão de governo em aprovar planos operacionais e estratégicos, orçamentos, contas anuais e relatórios financeiros, assim como todas as informações submetidas aos órgãos reguladores do ensino superior e das entidades públicas. Estas ações passam pelo princípio da prestação de contas e da transparência e vai além de garantir o atendimento às normas legais, o que, no contexto das instituições públicas, reforça a ligação da autonomia e da liberdade para gerir os seus próprios assuntos com uma política de gestão responsável, que favoreça o exercício da cidadania e uma gestão de acompanhamento do setor (Coughlin, Hoey e Hirano-Nakanishi, 2009; Rossetto, 2009; Platt Neto e Cruz, 2009; Marques, 2012).

Nos relatórios da UFPR e da UFRGS constam indicações de que a

responsabilidade pela conservação das instalações físicas, por reformas e por ampliações de edifícios, entre outros, fica a cargo das prefeituras universitárias. Contudo, não consta, na estrutura do órgão de governo da administração superior da UFPR e da UFRGS, a figura de prefeituras universitárias e superintendência da infraestrutura, logo, a recomendação deste item fica classificada como **não atende, porém citam-se alguns itens**, pois não há clareza quanto à responsabilidade do órgão de governo nesse aspecto. Quanto à UFSC, consta, no seu PDI, item Estrutura Física, a relação de todos os terrenos e prédios com as devidas áreas e localizações. Ainda no PDI consta, no item Gestão, o objetivo de fortalecer a manutenção preventiva de edificações, laboratórios, almoxarifados, sistemas de informação e de segurança física e patrimonial, bem como estabelece as atribuições da Pró-reitoria de Infraestrutura (PROINFRA). Há, ainda, um Departamento de Segurança para proteção de suas edificações e do patrimônio. Todas estas informações contribuem para que a UFSC **atenda e evidencie totalmente** as recomendações.

A UFPR, UFRGS e UFSC apresentam, em seus relatórios, a figura da Auditoria Interna e, na sua estrutura da administração superior, o Conselho de Curadores, portanto todas **atendem e evidenciam totalmente** essa recomendação.

Não foi encontrado, nas instituições estudadas, nenhum documento que se caracteriza com clareza, como declarações, sejam elas de governança ou de responsabilidades, portanto, elas **não atendem** às recomendações que tratam da declaração de governança ou de responsabilidades.

Na recomendação que estabelece a aprovação da missão e da visão da instituição, entre outros itens, em relação ao plano de negócio de longo prazo, a UFPR e a UFRGS **não atendem, porém**

citam alguns itens, pois apresentam algumas informações em seus relatórios, tais como: missão, objetivos estratégicos, identificação de responsáveis e seus devidos cargos, entre outras. Esta classificação se dá por conta da falta do plano de negócios de longo prazo e da declaração de responsabilidade, conforme já destacado no item anterior. A UFSC, além das informações apresentadas nas demais instituições, cita, no seu Relatório de Gestão, um plano de longo prazo para atividades de controle e como forma de planejamento estratégico. No entanto, este documento não foi encontrado. Conforme Relatório da CGU, o planejamento estratégico da UFSC está sendo elaborado em todos os centros de ensino, campi e reitoria. A UFSC também **não atende, porém cita alguns itens** da recomendação.

Todas as universidades **atendem e evidenciam totalmente** as recomendações que tratam das atualizações nas bases de dados com informações sobre atividades, programas acadêmicos, pessoal, estudantes matriculados, custo por estudante, diplomas conferidos, etc.

Apenas a UFRGS estabelece, em seu Estatuto, que o mandato do Reitor, exercido em regime de dedicação exclusiva, será de quatro anos, vedada a reeleição para o período imediato, o que faz com que **atenda e evidencie totalmente** esta recomendação. As demais instituições **não atendem** a recomendação.

Viana (2010) destaca que uma estrutura de governança é necessária para garantir a boa gestão dos recursos públicos e a identificação de falhas gerenciais. Nesse sentido, observa-se que esta responsabilidade pela gestão de fundos e recursos como descrição da prestação de contas, vai de encontro às atribuições tanto do Conselho de Planejamento e Administração quando da elaboração das políticas das áreas administrativa,

patrimonial e financeira, como também vai de encontro às atribuições do Conselho de Curadores no acompanhamento e na fiscalização da execução orçamentária e demais assuntos econômico-financeiros.

As recomendações que tratam de financiamento se referem a um Conselho de Financiamento, porém nenhuma das instituições possui tal conselho. Outro ponto a destacar é que, apesar de não existir a figura do Conselho de Financiamento, consta, na UFPR, na UFRGS e UFSC, o Departamento de Contabilidade e Finanças, com atribuições e competências declaradas que levam a apresentar alguns aspectos deste item.

Nenhuma instituição possui o Comitê de Remuneração ou fazem referências a qualquer questão que trate do assunto.

UFPR, UFRGS e UFSC **atendem e evidenciam totalmente**, a recomendação que trata das tomadas de decisões, pois, documentos como PDI, e demais relatórios estabelecem regras claras para as reuniões e determina que as mesmas têm representações de vários membros, portanto, as tomadas de decisões acontecem coletivamente. No caso da UFSC, por exemplo, há inclusive confirmação dessa ação no Relatório CGU.

A UFPR apresenta, em seu Relatório da CGU, que, segundo a autoavaliação realizada, há clara identificação dos processos críticos e existe diagnóstico dos riscos operacionais. Todavia, tais informações não constam no Plano Institucional 2007-2011, nem os procedimentos adotados para mensurar, classificar e acompanhar os riscos identificados. Isso faz com que a Instituição **não atenda, embora cite alguns itens** da recomendação que trata da abordagem baseada em risco, da identificação e do gerenciamento destes itens e das políticas e planos de gestão dos principais riscos. Cabe destacar que não foram encontradas informações sobre estes itens na UFRGS e na UFSC, logo,

tais instituições **não atendem** a esta recomendação.

Nesse contexto, conclui-se que o princípio da prestação de contas/*accountability* deixa de ser atendido quando trata de remuneração, nomeação e, ainda, de gestão financeira no quesito financiamento. Isso se dá por não existirem, em nenhuma IFES, o comitê de remuneração, o comitê de nomeação e o conselho de financiamento recomendados. Ainda quanto à remuneração, não constam informações sobre decisões atribuídas às tarefas, cargos, etc., item também proposto dentre as recomendações.

No entanto, tem-se como pontos positivos que as responsabilidades do órgão de governo, do seu presidente, bem como de todos os demais órgãos que compõem a administração superior estão claramente definidas nas atribuições constantes no estatuto e no regimento geral de cada instituição. Estas responsabilidades se estendem às questões que envolvem aprovações de contas anuais, demonstrações financeiras, orçamentos e estratégias financeiras e, ainda, às questões que envolvem garantias de cumprimento da missão institucional. As normas para as reuniões são claras e identificam que as decisões são tomadas de forma corporativa.

Por outro lado, têm-se os pontos negativos que comprometem o atendimento e a evidenciação das recomendações. Esses se referem à exigência das figuras dos comitês de remuneração e de nomeações, do código ou declaração de governança e de declarações de responsabilidades que garantam a conformidade com estatutos, decretos e demais regulamentos.

CONCLUSÕES

A pesquisa teve como objetivo geral identificar a evidenciação de políticas de governança voltadas ao princípio da prestação de contas/*Accountability*, nas

Universidades Federais do sul do Brasil à luz das entidades que tratam do tema, especificamente para as IES.

A partir do cálculo das médias das frequências da Escala de Likert, ao longo de um contínuo de cinco pontos (5 – 1), foi possível concluir que o princípio da ‘Prestação de contas/accountability’ atingiu a média de 3,19. Em síntese, as IFES estudadas apresentaram um grau aceitável de evidencição das recomendações de governança estabelecidas pelo CUC (2009) e pelo EURYDICE (2008) considerando o princípio Prestação de contas/accountability.

Diante do exposto, cabe destacar alguns pontos que devem ser considerados neste processo de conclusão da pesquisa. Conforme o ANAO (2002), a governança tem um alcance muito amplo, pois vai além do gerenciamento, estabelecendo estruturas capazes de lidar com cultura, direção e organização geral das políticas das entidades. Nesse sentido, acredita-se que questões como prestação de contas têm relação direta com procedimentos adequados de divulgação dos resultados, gestão de recursos e, considerando-se o segmento estudado – IES –, com ações que promovam a qualidade do ensino e, sobretudo, uma maior incidência das práticas e dos relatórios contábeis nas políticas de governança.

Os problemas contemporâneos da sociedade nos órgãos públicos referentes ao controle e à correta aplicação dos recursos confirmam a necessidade de acompanhamento, de maneira efetiva, do que ocorre na gestão pública (Viana, 2010). Neste ponto os resultados mostraram que não há clareza nas informações que se referem à origem e à aplicação dos recursos das IFES, tanto na acessibilidade da informação quanto na sua compreensão. O que se tem são informações dispersas e de entendimento antidemocrático. Segundo Pacheco et al. (2009) e Viana (2010), não basta

disponibilizar a informação, divulgando demonstrações e resultados, mas antes permitir que estas informações façam sentido para os diferentes interessados, possibilitando a certificação da eficiência nos gastos públicos. Importante destacar também que as próprias recomendações propostas pelo CUC (2009) e EURYDICE (2008) são incipientes quanto a este quesito.

Sendo a contabilidade uma ciência que estuda e controla o patrimônio das entidades, bem como suas variações, objetivando registrar, classificar e demonstrar todos os seus fenômenos e fornecer aos usuários um conjunto de informações que sejam úteis para a tomada de decisões (FRANCO, 2006; RIBEIRO, 2009; IUDÍCIBUS, 2010); tendo, ainda, como objetivo apresentar um modelo de informação capaz de auxiliar no conflito distributivo decorrente de movimentos de apropriação de bens e serviços na sociedade (RIBEIRO FILHO, LOPES e PEDERNEIRAS; 2009); acredita-se que esta, a contabilidade, tem um papel fundamental no processo de governança. Nesse contexto, observou-se que as práticas e os relatórios contábeis são pouco abordados, tanto no resultado das buscas nas IFES, como dentre as recomendações do *checklist*. Cabe ressaltar que um dos problemas de natureza administrativa no Governo Federal é o fato de que a contabilidade era utilizada como mero instrumento de registros formais. No entanto, foi desenvolvido, em 1987, o Sistema Integrado de Administração Financeira do Governo Federal (SIAFI), que, dentre os seus principais objetivos, busca propiciar que a contabilidade seja fonte segura e tempestiva de informações (BRASIL, 2012). Para Naves (2011), esta mudança fortaleceu a contabilidade e efetivou as dimensões de prestação de contas e transparência da gestão pública.

REFERÊNCIAS

- Almeida, Evandro Julião de. **O reforço das competências de gestão nas instituições públicas:** governança e gestão no poder legislativo municipal estudo de caso na câmara municipal de Niterói. Dissertação (Mestrado em Administração Pública) – Fundação Getúlio Vargas, Rio de Janeiro, 2006.
- Almeida, Moisés Araújo et. al. **Determinantes da Qualidade das Práticas de Governança Corporativa:** um Estudo nas Empresas de Capital Aberto Não Listadas em Bolsa. XXXIII Encontro ANPAD. São Paulo-SP, set. 2009.
- Australian National Audit Office – ANAO. (Austrália) **Achieving better practice corporate governance in the public sector.** Internacional Quality & Productivity Centre Seminar, 2002. Disponível em: http://www.anao.gov.au/uploads/documents/Achieving_Better_Practice_Corporate_Governance_in_the_Public_Sector1.pdf. Acesso em: 28 mar. 2011.
- Bianchi, Márcia. Silva, Carolina Vianna da. GELATTI, Rosemary. **A Evolução e o Perfil da Governança Corporativa no Brasil:** um Levantamento da produção científica do ENANPAD entre 1999-2008. XXXIII Encontro ANPAD. São Paulo-SP, set. 2009.
- Bolsa De Valores, Mercadoria E Futuros – BM & FBOVESPA. **Informações Diversas...** 2012. Disponível em: <http://www.bmfbovespa.com.br>. Acesso em: 13 fev. 2012.
- Brasil. **Código de Ética Profissional do Servidor Público Civil do Poder Executivo Federal.** 2012. Disponível em: http://www.planalto.gov.br/ccivil_03/decreto/d1171.htm. Acesso em: 24 mar. 2012.
- Cadbury, Adrian. **The Financial Aspects of Corporate Governance.** Report of the Committeeon, 1992. Disponível em: <http://www.ecgi.org/codes/document/s/cadbury.pdf>. Acesso em: 29 mar. 2011.
- Comissão De Valores Mobiliários – CVM (Brasil), jun 2002. **Cartilha de Governança Corporativa – Recomendações da CVM sobre Governança Corporativa.** Disponível em: <http://www.cvm.gov.br>. Acesso em: 15 mar. 2011.
- Committee Of University Chairs – CUC. **Guide for Members of Higher Education Governing Bodies in the UK.** 2009. Disponível em: http://www.hefce.ac.uk/pubs/hefce/2009/09_14/. Acesso em: 17 ago. 2011
- Cooper, Donald R. Schindler, Pamela S. **Métodos de Pesquisa em Administração.** Trad. Luciana de Oliveira Rocha. 7. ed. Porto Alegre: Bookman, 2003.
- Coughlin, Mary. Ann. Hoey, Joseph., Hirano-Nakanishi, Marsha. **Sector differences in the role of institutional research in informing decision making and governance in higher education.** Asia Pacific Education Review 10(1): 69-81, 2009.
- Enders, Jürgen. **Higher education, internationalisation, and the nation-state:** Recent developments and challenges to governance theory. Higher Education 47(3): 361-382, 2004.
- Eurydice – A Rede De Informação Sobre Educação Na Europa. (Unidade Portuguesa). **A governança do ensino superior na Europa.** Gabinete de Estatística e Planeamento da Educação. Ministério da Educação, 2008. Disponível em: http://eacea.ec.europa.eu/education/Eurydice/documents/thematic_report/s/091PT.pdf. Acesso em: 26 mar. 2011.

- Franco, Hilário. **Contabilidade geral**. 23. ed. São Paulo: Atlas, 2006.
- Gil, Antônio Carlos. **Como elaborar projetos de pesquisa**. 4. ed. São Paulo: Atlas, 2009.
- Instituto Brasileiro De Governança Corporativa - IBGC. **Código das melhores práticas de governança corporativa**. 4. ed. Instituto Brasileiro de Governança Corporativa. IBGC: São Paulo, 2009.
- International Federation Of Accountants (IFAC). **Governance in the Public Sector: A Governing Body Perspective** International Public Sector Study, 2001. Disponível em: <http://www.ifac.org>. Acesso em: 14 jan. 2011.
- Iudícibus, Sérgio. **Teoria da contabilidade**. 10. ed. São Paulo: Atlas, 2010.
- Knott, Jack. H. Payne, A. Abigail. **The impact of state governance structures on management and performance of public organizations: A study of higher education institutions**. Journal of Policy Analysis and Management **23**(1): 13-30, 2004.
- Mainardes, Emerson Wagner. Alves, Helena. Raposo, Mario. **The process of change in university management: from the “ivory tower” to entrepreneurialism**. *Transylvanian Review of Administrative Sciences*, No. 33 E/2011, p. 124-149, 2011.
- Marques, Maria da Conceição da Costa. **Aplicação dos Princípios da Governança Corporativa ao Sector Público**. RAC, v. 11, n. 2, p. 11-26, Abr./Jun. 2007.
- Marques, Maria da Conceição da Costa. **Modelos de governo e gestão universitária: uma visão sobre o contexto actual português**. Revista iberoamericana de Contabilidad e Gestión. v. X, n. 19, enero-junio, 2012.
- Marques. Daniel Siqueira Pitta. Costa, André Lucirton. **Governança Corporativa e Clubes de Futebol Profissional: um Estudo de Caso com um Clube do Estado de São Paulo**. 30º Encontro da ANPAD. Salvador-BA. set. 2006.
- Matias-Pereira, José. **Governança no setor público**. São Paulo: Atlas, 2010.
- Naves, Gladston Guimarães. **A Contribuição do Sistema Integrado de Administração Financeira do Governo Federal (SIAFI) para a promoção da accountability: a percepção dos usuários**. 2011. Dissertação (Mestrado em Administração Pública) – Escola Brasileira de Administração Pública e de Empresas da Fundação Getúlio Vargas (EBAPE/FGV), Rio de Janeiro, 2011.
- Oliveira, Elisio Corrêa de. **Governança corporativa nas IES brasileiras: uma proposta para o setor de educação no Brasil, e os impactos do SINAES (Sistema nacional de Avaliação da Educação Superior)**. Dissertação (Mestrado Profissionalizante em Administração) - Faculdade de Economia e Finanças IBMEC, 2006.
- Organization For Economic Co-Operation And Development –OECD. **OECD Principles of Corporate Governance**. Paris: OECD, 2004. Disponível em: http://www.oecd.org/topic/0,3373,en_2649_37439_1_1_1_1_37439,00.htm. Acesso em: 14 nov. 2010.
- Pacheco, Andressa Sasaki Vasques et al. **Universidade Pública e Accountability**. XII SemeAd, 2009.
- Platt Neto, Orion Augusto. Cruz, Flávio da. **Proposta de um Painel de Informações Sintéticas sobre as Universidades: Aplicação do “Raio-X” na Universidade Federal de Santa Catarina**. Revista Contemporânea de Contabilidade – RCC, ISSN 1807-1821, UFSC, Florianópolis, ano 06, v.1, nº12, p. 109-126, Jul./Dez., 2009.
- Platt Neto, Orion Augusto. Cruz, Flávio da. Vieira, Audí Luiz. **Transparência**

- das Contas Públicas das Universidades:** um Enfoque no Uso da Internet como Instrumento de Publicidade. IV Colóquio Internacional sobre Gestão Universitária na América do Sul, 2004.
- Ribeiro, Osni Moura. **Contabilidade geral fácil**. 5. ed. São Paulo: Saraiva, 2009.
- Ribeiro Filho, José Francisco. Lopes, Jorge. Pederneiras, Marcleide. (org.). **Estudando teoria da contabilidade**. São Paulo: Atlas, 2009.
- Richardson, Roberto Jarry. **Pesquisa Social: Métodos e Técnicas**. 3ª ed. São Paulo: atlas, 2008.
- Rossetto, Ana Cláudia. **Governança corporativa em instituições do ensino superior particular:** um estudo das instituições que abriram capital na Bovespa e aderiram às boas práticas de governança corporativa. Dissertação. (Mestrado em Ciências Contábeis). Pontifícia Universidade Católica de São Paulo, PUC-SP, 2009.
- Rossoni, Luciano. Machado-Da-Silva, Clóvis L. **Institucionalismo Organizacional e Práticas de Governança Corporativa**. VI Encontro de Estudos Organizacionais da ANPAD. EnEO. Florianópolis-SC, maio, 2010.
- Slomski, Valmor. **Controladoria e governança na gestão pública**. 1. ed.. 2. reimpr., São Paulo: Atlas, 2007.
- Sousa, Madalena Bastos. Ribeiro, Thais Gabriele Brandão. Nascimento, Artur Roberto. **A Evidenciação Da Contribuição Da Contabilidade No Processo De Accountability Nas Universidades Públicas – Um Estudo de caso da Universidade Estadual de Feira de Santana**. XI Congresso Brasileiro de Custos, 2004.
- Teferra, Damtew. Altbach, Philip. G. **African higher education: Challenges for the 21st century**. Higher Education 47(1): 21-50, 2004.
- Trakman, Leon. **Modelling University Governance**. *Higher Education Quarterly*, 0951– 224, volume 62, n.1/2, p. 63–83, Jan.-Apr., 2008.
- Universidade Federal Do Paraná – UFPR. **Informações diversas...** 2011. Disponível em: <<http://www.ufpr.br/>>. Acesso em: 10 out. 2011.
- Universidade Federal Do Rio Grande Do Sul – UFRGS. **Informações diversas...** 2011. Disponível em: <<http://www.ufrgs.br/ufrgs/inicial>>. Acesso em: 22 out. 2011.
- Universidade Federal De Santa Catarina – UFSC. **Informações diversas...** 2011. Disponível em: <<http://ufsc.br/>>. Acesso em: 29 ago. 2011.
- Viana, Evandro. **A governança corporativa no setor público municipal:** um estudo sobre a eficácia da implementação dos princípios de governança nos resultados fiscais. 2010. Dissertação (Mestrado em Controladoria e Contabilidade), Faculdade de Economia, Administração e Contabilidade de Ribeirão Preto da Universidade de São Paulo, Ribeirão Preto, 2010.

HOW DO THE RESULTS OF INTERNATIONAL RATING AGENCIES PENALIZE SPAIN?

Criterion to analyse the Country risk and to determine the Risk premium

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ABSTRACT

Within the last three years, the main international rating agencies have become more prominent. They are mentioned at all levels. Some people think that they are agencies managed by international speculators for their own benefit; some consider that their work is very technical and impartial, and others think that they should be replaced by exclusively European rating agencies. But the fact is that financial analysts' recommendations and investors' decisions concerning real and financial economy are based on the rating that these agencies give to sovereign debts and to companies which are quoted in international stock markets. The article uses a methodology that concentrates the different criteria used by two of the three main international agencies of rating: Standard and Poor's and Moody's. Spain is the country that is analyzed, from four points of view: political, economical, solvency and liquidity. The comparison of the data is from December 2001 to December 2012, and the results show an evident and general deterioration.

Key words: Country risk; Country analysis; International agencies of rating; Risk premium; Global risk index; Politic, economic, solvency and liquidity indicators; Spain.

INTRODUCTION

a. GENERAL INFORMATION

Within the last three years, international rating agencies became more prominent. They are mentioned in all levels. Some people think that they are agencies managed by international speculators on their own benefits; some others think that their work is very technical and impartial and some others think that they should be replaced by exclusively European rating agencies¹.

But the fact is that financial analysts' recommendations and investors' decisions concerning real and financial economy are based on the rating that these agencies give to sovereign debts and to companies which are quoted in international stock markets.

Within the last decades, capital flight has happened when company owners have decided to dismantle a factory in a country which did not offer the desired profitability and to settle it in other areas where they found the expected benefits. Nevertheless, the current problem of those countries which receive the investment is that this flight happens when broker presses the Enter key in a computer. In a second, thousands of millions of dollars, euros, yens, pounds or any other important currencies can be transferred from Madrid to Hong Kong, or from London to Sao Paulo, or from Dubai to New York. As a result, the funding level of some countries decreases with all the negative consequences that this might involve. Therefore, in order to bring the money back, a *plus* derived from the analysis and

¹ In September 2010, the European Union issued a list of regulations for rating agencies whose aim was to regulate the integrity and transparency in the rating process. Furthermore, in April 2012, they introduced four more

proposals to this regulation. Some employees in these agencies suggest that those proposals "*might damage investors, companies and European economy*".

subsequent rating from those international rating agencies has to be paid.

But, Eaton and Stiglitz (1986) consider that investors should not base their investment decisions solely upon those ratings, since they evaluate one risk aspect, which is default².

b. RATING AGENCIES' ROLE

With regard to these agencies, we have to point out that there are more than 70 in the world. However the three most prestigious agencies are: firstly, Standard & Poor's, secondly, Moody's and thirdly, Fitch. The three of them, which are from New York, are the oligopoly which owns 90% of world market.

As we have seen within the last years, governments and multinationals should thoroughly understand the ratios and variables³ because whenever a rating agency downgrades sovereign debts, this downgrading has a disproportionate impact on the so-called "*risk premium*"⁴. Hence, the downgrading has two parts: firstly the one related to methodology, criteria and procedures which rating agencies use to assess and rate a country, and secondly, the impact that the downgrading has on the *risk premium*. The present article is based, firstly, on the procedure used by these agencies to rate the sovereign debt of Spain as a result of the so-called "Country Risk" analysis. And, secondly, the impact of this analysis on the famous "Risk Premium".

c. CONSIDERATIONS ABOUT "RISK PREMIUM"

² Eaton, J.; Gersovitz M.; Stiglitz, J.E. The pure theory of Country Risk. Elsevier Science Publisher B.V. 1986.

³ The article is about the analysis of "Country Risk". However, in Spain these agencies assess and rate debts from *Autonomous Communities* and *Municipalities*. In big private companies, they assess and rate everything which is quoted in stock markets.

⁴ Further information in epigraph nr. 5. Conclusion.

Before delving into the first topic, we would like to include a few lines to explain the meaning of "risk premium" as this concept occupies a significant place in the media. It refers to the differential in the interest rate paid in sovereign debts issued by a country. In other words, the debt which is used as a standard is a 10-year government bond. The differential in rate is compared to similar bonds issued by another country whose economic behaviour is good as a model in a region. In the Eurozone, Germany is the reference country.

From an academic and technical point of view, the differential between interest rate within two countries reflects on the one hand, the inflation rate between them and on the other hand, the default risk perceived by the market. However, from a real point of view, it must be recognised that in this equation there are other variables which are always present: rational and irrational expectations about market's volatility⁵. In order to understand the impact of risk premium on national economy, we are going to mention the Spanish case on the 31st of December 2012. The interest rate to 10-years Treasury bonds was 5.26%, while the German bond was 1.32%. In that case the risk premium assumed by Spain was 3.94%, which in stock market terminology means 394 basis points (394bps).

d. SUMMARY "COUNTRY RISK ANALYSIS"

What is remarkable is that the three rating agencies analyse ratios related to political, economic, solvency and liquidity aspects of a country.⁶ Each one of those structures

⁵ These expectations in colloquial language are called "*speculation*".

⁶ Each one has its own methodology, procedures and criteria in general but all of them coincide in these factors. For example, Standard & Poor's, currently applies five criteria: (i) institutional effectiveness and political risks, (ii) economic structure and growth

include at the same time, weights and rates which lead to a sample mathematic model which creates a technical and objective result. We know that a mathematical model is a description, in a mathematical language, of some existing realities in a non-mathematical universe, that is to say, political and economic facts of a country. Success or failure of a model is the reflection of the precision by which it represents the reality and not the accuracy by which mathematics analyse the model. This is the result used for more than two decades, and therefore it should be considered, at least technically, valid. Consequently the opinion which says that everything that surrounds the “Country Risk” is only speculative, should not be included in an academic or professional context⁷.

To summarise, this work presents the methodology, criteria and procedures which international rating agencies use in order to analyse the “Country Risk” and so, to rate the government debt. Each agency has its own method and criterion rate but we have tried to amalgamate them into a single model for obvious reasons.

We know that these rating agencies made important mistakes as it is normal in any company and they might keep doing it. However it would be unwise to dismiss their ratings due to the fact, as we mentioned before, that for big companies dealing with money in worldwide stock markets, the result of the assessments of these agencies is an objective, authorised and relevant opinion. The rest is simply banal.

expectations; (iii) external liquidity and external investment position; (iv) fiscal development and flexibility and debt level; and, (v) monetary flexibility.

⁷ Although we are conscious that the “Risk Premium” rises up notoriously just previous days of the issue of the Spanish bond treasury.

1. BASIC CONCEPTS

1.1. COUNTRY RISK

In accordance with Pampillón O. (1999), *Country Risk* refers to the exposure to a loss which an investor is endangered due to economic and sovereign issues in a country. At the same time, it is divided into *Political Risk and Transfer Risk*. *Political Risk* is the risk that investors and moneylenders could suffer as a result of political factors regarding repatriation of capitals, interest, dividends, etc. For instance, the nationalization of YPF-Repsol by the Argentinian government is a clear example of political risk. *Transfer Risk* is the risk derived from the impossibility to repatriate capital, interest, dividends, etc. due to the economic situation of a country and specifically, due to the lack of currency in the moment of capitals repatriation⁸.

It is also important to mention that methods and ratio structures to calculate the Country Risk used by international rating agencies, as we mentioned before, are based upon the same concepts and constitute estimates on quantitative and qualitative variables. Choice and weighting of these variables is analysed by a multidisciplinary experts team whose top priority is objectivity. Nevertheless, we have to recognise that they made a lot of mistakes.

1.2. SOVEREIGN RISK

According to Gültekin-Karakas, D., Hisarciklilar, M., and Öztürk, H. (2011), Sovereign Risk is the risk assumed in an investment where the debtor is a

⁸ There are other risks, basically for those countries which do not belong to the “First World” which are related to “Currency risk” and “Legal risk”. The last one is due to intervention of legislations of different countries.

Sovereign State. It should not be confused with Country Risk, which is a broader concept meaning that all economic and financial investments located abroad are exposed to Country Risk whether the debtor is the government of a country or a private company.

Nonetheless, it is also important to declare that even if we consider the influence of macroeconomic and financial aspects outside the current globalised world, the increase in Country Risk is usually due to an inappropriate economic management of the government of a country.

1.3. COUNTRY ANALYSIS

In order to analyse Country Risk, a “Country Analysis” has to be previously done. In this analysis different kind of risks to which the nation is bound are identified. They, as it is mentioned in the Introduction, are related to political, macroeconomic, solvency and liquidity risks. The final result of this analysis is the Global Risk Index, which is used to obtain the “Country’s rating” expressed in letters: AAA, AA, A, BBB, BB, B, etc.⁹.

2. HOW CAN WE MAKE A “COUNTRY ANALYSIS”?

International rating agencies use a very similar methodology, in general, to analyse countries based in two main aspects: (i) an analysis of the political, ideological and social context, and (ii) a study of economic, debt and physical indicators. They include factors and ratios related to the will and capacity of a government in order to meet their payment

commitments about sovereign debt in time and as agreed¹⁰.

2.1. POLITICAL, IDEOLOGICAL AND SOCIAL CONTEXT ANALYSIS WHICH DETERMINE STRATEGIC DECISIONS OF THE GOVERNMENT

Political analysis is the most relevant as it is very important to point at political scenarios of different countries and in different periods of recent history of the twentieth century¹¹ due to the fact that we obtain an obvious conclusion: an unsuitable political management, which means that a governmental team which did not measure up to the tasks, has an immediate and negative impact upon the economic scenario of the country.

Analysis factors related to the “political indicator” are, basically, risks derived from political weakness and instability, corruption, pressure groups effect and potential effect of international organizations on the definition of their national policies. As a result, the first thing that investors observe – main addressees of Country Risk Analysis made by rating agencies – is the political scenario. Sometimes from an economic and geographic point of view a country could be potentially viable to attract investments, but the political regime does not help. A current and very clear example is Iran.

If political ratios of a country do not show a good result, it will negatively affect the other three ratio structures: economic, solvency and liquidity. It is due to mathematical transversality of the used model. And due to the fact that political ratios are weightier, the final result would

⁹ In number 4.2. Table 2, there is a classification by agencies, letters and marks.

¹⁰ In epigraph b. from the introduction we mentioned that the objective of this work is the practical application of the methodology used for the analysis of the Spanish Sovereign debt. Obviously, rating agencies assess also private companies’ debts.

¹¹ Argentina is a clear example: in the 50’s it was the 7th world economy and nowadays its worsening is obvious. Furthermore, we find just the opposite in countries like Japan or South Korea, whose economy within the last 50 years made a U-turn.

not be favourable for the country. The main indicators of this analysis are:

- Political regime: a mature democratic system is the best letter of introduction of a country.
- Pressure groups: when there are strikes, uprisings and disturbances. An investment does not desire any kind of turbulences.
- Corruption level: it is probably the worst letter of introduction of a country for investors.
- Separatist movements: they plot against political stability of a country and it is very negative for the so-called “country marking”¹²
- Other political indicators: foreign affairs, bureaucracy level, racial, religious and social structure.

To sum up, political analysis assesses how governmental institutions and their policy formulations affect country’s credit principles through an efficient and sustainable management of public finances which lead to an economic balanced growth and an appropriate investment climate.

2.2. ECONOMIC, DEBT AND PHYSICAL INDICATORS ANALYSIS

The most important sources to obtain macroeconomic and debt information are:

- *International Monetary Fund (IMF) and World Bank (WB)*: experts of IMF and World Bank –in spite of their failure in their missions in some countries– are considered to be very competent in economy and finances. Therefore, the data that they write on their reports and working papers are highly reliable.

- *European Union (EU)*: it is the most important body for the 27 member countries, and it is the most reliable information source.
- *United Nation Development Program (UNDP)*: annual report of UNDP is a key information source. For instance, UNDP’s Human Development Index of countries is its most important information source. It is used to assess social aspects of each nation.
- Other international and national organizations of reference are: *Inter-American Development Bank (IDB)*, *African Development Bank*, *Asian Development Bank*, *Central Banks*, *Ministry of Economy and Finances* and *National Statistical Institutes*.

2.2.1. Main economic indicators analysed

- *Economic system*: there are different economic systems from a planned economy to a free-market economy. Effectiveness and attitude with regards to foreign investments vary between them.
- *Economic policies*: these indicate the state of public and private economies and its aims determine if they are efficient and competitive or not in specific sectors and if they build trust or distrust in foreign investments.
- *Labour policies*: the way labour relations are established could create conflicts affecting not only the economy but government stability. For instance, rigidity of employment favours an insufficient assessment in this ratio.
- *Fiscal policies*: they assess State’s budget and its components, taxes, public spending as a control variable in

¹² Independent movements lead to regional products export with their own local trademark which is unknown abroad. These products have to compete with other similar products from well-known countries which are

sometimes powerful. These kinds of situations discourage investors who prefer a more homogeneous country.

order to ensure and keep economic stability.

Nationalization: nationalization policies have a negative impact in the assessment of this indicator. Nevertheless it is important to know if it is a part of the program or the philosophy of the current or future government about this issue, as it is the case in Argentina.

2.2.2. *Debt aspects*

All aspects related to debt, including external and internal debts, are described in epigraph 3.3. “Sovereign debt analysis”.

2.2.3. *Physical aspects of the country*

In this part of the analysis, geography of the country, surface area, orography, natural resources, climate and possibility of severe natural disasters are studied.

3. ECONOMIC RESULTS, BALANCE OF PAYMENTS AND DEBT ANALYSIS

Next, we are going to present the economic result analysis which is divided into three parts: economic result, balance of payments result and debt result.

3.1. ECONOMIC ANALYSIS

Economic analysis is divided into structural analysis and conjectural analysis.

3.1.1. *Structural analysis: resources and infrastructures of the country*

- *Resources:* apart from what we have mentioned in 2.2.3., it is also important to consider human resources of the country and their contribution to GDP.
- *Infrastructures:* it means that the country has enough resources and also good infrastructures: roads, ports,

airports, energy sources, technological development, etc.

3.1.2. *Cojunctural analysis: most used macroeconomic indicator*

- *GDP, inflation, employment, industrial and services production, interest rate, exchange rate:* every one of these indicators are thoroughly analyzed.

Finally, it is important to mention that there are other aspects which are not conjunctural which should also be analysed by rating agencies. Some of them are *economic management and membership of international organisations.*

- *Economic management:* they analyse the policies they are applying and if the means they have (quality and reliability of data, official previsions about economy and authorities and public workers suitability), are suitable to be applied.
- *Membership of international organisations:* being a member of an international organisation has a big influence on the economy of a country and it is strategic in the current world. For example, the importance the EU had and has for Spain, or any other member country, is simply vital.

3.2. BALANCE OF PAYMENTS ANALYSIS

In general the balance of payments analysis is made separated from the economic analysis. Therefore, in this analysis there are two factors which are studied: on the one hand the components of the current account balance and on the other hand the world market situation related to the main product which this country exports.

3.2.1. Current account balance: evolution and its balances

- *Commercial, service and transfer balance*: their evolution, composition and the distribution by means of geographical area, products, migrant's remittances are also analysed. Likewise, other components which are not part of the current account balance are also analysed: income balance and variation in the reserves.

Likewise, other components which are not part of the current account balance are also analysed: income balance and variation in the reserves: (i) *Income balance*¹³, evolution and composition in the capital account in short and long term. It is estimated that capital movements originate due to an appropriate political climate for capital accumulation in a country; and, (ii) *Variation in the reserves*, it is an important indicator in order to forecast the capacity of a country to cope with its debts.

3.2.2. World market situation related to its main products: Price fluctuation of its main exports is the key to forecast.

3.3. SOVEREIGN DEBT ANALYSIS

In this section we are going to analyse four key aspects: debt quantity, the level of international monetary reserves, debt structure and the possibility of currency devaluation and depreciation.

3.3.1. Debt level¹⁴

We need to know the debt quantity with regards to the possibility that the country has to pay it back. It is related to its GDP, balance of payments and its reserves. The most used indicator is¹⁵:

$$\frac{\text{Sovereign debt}}{\text{GDP}} * 100 \quad [1]$$

In the early 90's the World Bank recommended that this ratio was to be kept under 30%¹⁶. If this percentage rose, they should take measures in order to decrease it. However, this recommendation did not succeed and was ignored even by lending multilateral organizations –and, of course, by international investors– resulting in worrying rises in percentage levels. Furthermore, net public debt in Spain on 31st December 2011 rose up to Euros 734,961 million: 559,459 million from the Central Government and 175, 502 million from Regional Governments and Town Halls. Therefore, the debt represented

¹³ Incomes and payments for labour and capital gains obtained outside the country by residents in the country or paid by residents in the rest of the world. They are labour gains, investment gains (direct investment or portfolio inflows), credit interest and deposit.

¹⁴ Regarding the “Stability and Growth Pact” from the European Union, the relationship between sovereign debt and GDP has four different possible situations:

- Growth rate of the GDP < Interest rate on government bonds. There is also a fiscal deficit, which means that state costs > incomes. In this situation, the ratio Debt/GDP usually raises indefinitely.*
- Growth rate of the GDP > Interest rate on bonds. There is not a fiscal deficit yet, which means that the relationship debt/GDP will decrease down to a “stationary point” only if the ratio Debt/GDP is higher than the initial balance.*
- Growth rate of the GDP < Interest rate on bonds. And due to a tax increase there is not a fiscal deficit, therefore there was an initial deficit. In this situation, the ratio debt/GDP is less than the initial balance. If this ratio is higher than the initial balance, the ratio debt/GDP will rise indefinitely.*

d. Growth rate of the GDP > Interest rate on bonds. And due to a tax increase there is not a fiscal deficit. In this situation, the relationship debt/GDP will decrease to 0.

Each one of these situations has its corresponding mathematical method which we will not explain here.

¹⁵ The debt with regards to GDP has been lately questioned in some experts committees on financial economy like Sala-i-Martin. They think that the debt should be measured with regards to the capacity that a country has to give money back as the GDP does not represent the capacity to repay the debt. The state cannot appropriate all the GDP; in fact they appropriate only the taxes and they have to deduct some costs which are already committed (unemployment compensations, rents, public workers costs, etc.). The rest means the capacity of a government to give the borrowed money back.

¹⁶ The World Bank. Country Economics Department. 1990. A Revised Minimum Standard Model for Chile. Washington D.C., U.S.A.

68.5% GDP¹⁷, a percentage which exceeded 8.5%¹⁸ the Stability and Growth Pact of the European Union. According to the Finance and Economy Minister by the end of 2012 it would rise up to 79.8% GDP. In the European Union, the average is 90.4%.

Another macroeconomic ratio which is related to the previous one and to the debt level and the commercial relation of the country with the rest of the world is the so-called *Debt Service Ratio* (DSR):

A DSR which is around 20% or less is acceptable. DRS increase over 25% could bring a solvency problem. Equation 3 is called *Interest Service Ratio* (ISR).

$$DSR = \frac{\text{Debt Servicing year } N}{\text{Current Account Balance year } N} * 100 \quad [2]$$

$$ISR = \frac{\text{Sovereign debt interest year } N}{\text{Commercial exports and services year } N} * 100 \quad [3]$$

3.3.3. International monetary reserves level (IMR)

Although it is not the only source of liquidity, these international reserves show the capacity of a country to afford the short-term proportion of its debt. Those reserves could constitute currency or gold²⁰. The most popular ratio about this international reserve level on monthly imports is:

$$\frac{IMR}{\text{Monthly imports}} \quad [4]$$

If a ratio is bigger than five months, it is considered to be adequate, but if it is less than one month it could represent a worrying situation.

It is a good complement to DSR. However DSR it is more a solvency indicator while ISR is more a liquidity¹⁹ indicator. The difference between both ratios gives us the percentage of goods and services exports which are necessary every year in order to afford the debt principal. Therefore an increase in ISR means a bigger necessity to export goods and services in order to afford payments due to interests. A change in the difference between both ratios gives us information about the development of the external debt structure. A decrease in this difference shows that the country can afford most of the payment of its external debt.

Another ratio from the same group is the so-called *1 Yr Liquidity Gap Ratio* (LGR). Therefore, one of the ratios used to measure the liquidity of a country is:

$$\frac{IMR}{\text{Imports} + 1 \text{ Yr. debt}} \quad [5]$$

The result should be under 20% as treasury bills can be issued – in fact they are issued – for one year in order to clear the deficit.

3.3.4. Currency devaluation or depreciation possibility

The Euro is the second strongest currency in the world; however, we have to speak about this topic although nowadays it does not exist²¹. In this sense

¹⁷ Bank of Spain. Statistic bulletin. December 2011. It is important to point out that the debt level is not included in the €734,961. If we include it, the total debt would be 363% GDP.

¹⁸ This 8.5% cannot be mixed with the fiscal deficit on 31st December 2011.

¹⁹ However, it is important to mention that the liquidity of a country does not always depend on current account

balance. In Spain, as in other developed countries, Treasury bills are a very important liquidity source.

²⁰ The Bank of Spain confirms that gold reserves on 31st December 2011 were €11,017 millions. On the other hand, and on the same date, Germany, Italy and France, for example, owned €132,874 – €95,924 – 9€5,281 million respectively.

²¹ As an example in 1993, Spanish government devalued the peseta three times within 9 months with a total of

currency devaluation possibility could be very important if the country needed to export more products in order to acquire more currencies in order to afford the debt. Devaluation is related to inflation, balance of payments, government economic policies and government strength facing pressures to devalue it.

4. COUNTRY RISK ASSESSMENT

Now we are going to present an example of how rating agencies assess “country risk” which is the basement to grade the sovereign debt.

4.1. GLOBAL RISK INDEX

As we mentioned in 1.3. “Country Analysis”, the final result is called *Global Risk Index* (GRI) and rating agencies translate it into letters (AAA, AA, A, BBB, etc.). This Global Risk index is made up of a group of political, economic, solvency and liquidity indexes²², which have a specific weight, which is: political index (PI) 45%, economic index (EI) 25%, solvency index (SI) 20%, and liquidity index (LI) 10%. Therefore the weight is related to the Formula (6).

Apart from the column where we can see the indexes, we have included two main columns with the dates of the analysis. Each one is divided into three more columns: *weight*, *assessment* and $(W)*(A)$. *Weight* is related to what we described in the previous paragraph. Economic and politic management of a country have a joint weight of 75%. Therefore an increase or decrease in one of

those indexes defines the final mark of the “country risk”.

Assessment is related to the “marks” obtained through the analysis of the corresponding indexes.

In the last column, $(W)*(A)$, is the result of multiplying weight and assessment. Global Risk Index (GRI) is the addition of the values obtained in this multiplication, which is the rating of a country.

4.2. LONG-TERM COUNTRY RISK RATING FROM THE MAIN AGENCIES

Table 2, shows “Country Risk” rating used by the main long-term agencies. They use *letters* which are translated into *marks* coming from Global Risk Index (GRI).

4.3. POLITICAL RISK ANALYSIS AND ASSESSMENT

As we mentioned before, the first thing that an investor observes is the political scenario of the country where he would invest. Therefore, the political Risk assessment (PI) is related to 17 ratios. Between them we can point out political regime, governmental strength level, bureaucracy level, corruption range, foreign affairs policies, labour policies, autonomous and independent movements, pressure groups, etc. They apply a weighting depending on the importance level to each ratio, always from the investor point of view. That means that a weighting of 3 means that the ratio is very important, a weighting of 2, has a medium importance and a weighting of 1 is relatively important. Generally, none of

²¹%. Instead of this kind of devaluations, some popular economists like Paul Krugman, proposed an “internal devaluation” for Spain. It means a decrease in salaries which would mean bringing down the costs and therefore, Spanish products. This would help exports. Being poorer, we would buy less foreign products and the imports would decrease. Therefore the exterior deficit would decrease with an “internal devaluation” as a traditional monetary devaluation.

²²Each one of these agencies use different criterions and punctuations but all of them coincide in these four concepts. For example Standard & Poor’s uses the following criterion: “institutional effectiveness and political risk”, “economic structure and growth expectations”, “external liquidity and international investment position”, Flexibility and fiscal performance together with debt level” and “monetary flexibility”.

these three main rating agencies apply a weighting of 1 to political ratios. As a result, it is obvious that these ratios have an important weight on the rating of the country, which is normally 45%.

It is also important to mention that each of these 17 ratios has a series of “sub-ratios” which are meticulously and constantly analysed by a specialist team consisting on experts from each area. If we confirm that the “political regime” is only democratic, we don’t say anything. The issues studied in these sub-ratios are for example maturity level of the democracy

of a country, if it has a positive impact in the coexistence level of its society and if it has a positive impact in the economic scenario. For that reason, they study the following questions: Is it a direct, indirect, representative or participative democracy? Does the power belong to the totality or the majority of the population? When they make decisions, do they belong to the collective will of the population through mechanism of direct or indirect participation which gives legitimacy to its representatives?

$$GRI = PI * 45\% + EI * 30\% + SI * 15\% + LI * 10\% \quad [6]$$

Table 1. Global Risk Index Assessment

Indexes	December 2001		December 2012	
	Weight (w)	Assesment (a)	Weighting (W)	Assessment (A)
Politic	45.0%		45.0%	
Economic	30.0%		30.0%	
Solvency	15.0%		15.0%	
Liquidity	10.0%		10.0%	
Global risk index				

Table 2. Country risk rating from the main agencies

Standard & Poor's	Moody's	Mark24
AAA	Aaa	9.5 a 10
	Aa1, Aa2,	
AA	Aa3	8.5 a 9.4
A	A1, A2, A3	8.0 a 8.4

For the explanation of the letters see Appendix 1.

Furthermore, a detailed study of the people who work in the government is a part of the analysis: curriculum vitae, professional experience and policies. In addition they sum the results of the government period among others. The assessment of these factors takes in consideration governmental control,

potential factors of internal disorders and the exterior influence on political stability of the regime.

The assigned weightings (3, 2 or 1) for each ratio must be multiplied by the “marks” that the specialist team gives each ratio. This mark can oscillate between 0 (very low) and 10 (very high)²³: (VL) Very Low, 0; (L) Low, 2; (M) Medium, 5; (H) High, 8; and, (VH) Very High, 10.

Finally, the addition of the result of the multiplications divided by the sum of the weightings (in this case 45) is the “mark” that the country obtains from the political risk analysis. For further information see Table 3. This table and N 4, show a case study of the methodology used to analyse and rate Spain by rating agencies; the first

²³As we mentioned in 1.1.although these agencies have their own criterion and methodology for weighting and assessment, structures and ratios, in general, are very

similar. Regarding the “marks”, Standard & Poor's for example, use an scale from 1 to 6 instead of from 0 to 10.

one on the 31st of December 2001, and the second, on the 31st of December 2012. However, technical rigor of the case is based in two real facts: the worsening of *Risk Premium* and *Country Risk* assessments from rating agencies within the last analysed years. The source of the economic data is the Spanish Bank. Besides, some subratios are based on Pampillon O. (1999).

As we can see, the mark of the political indicator in December 2001 was 9.511, but in December 2012 the political index

decreased to 7.911. This was due to some political ratios such as pressure groups, government strength, and above all, corruption scandals and independent movements which have appeared fiercely in the last months among the political parties. As we can see in Table 3, specifically the sub-ratios 2, 3, 6 and 7 [columns (W)*(A)], have decreased notoriously between December 2001 and December 2012, which caused a bad influence on the indicator.

Table 3. Political risk assessment in Spain - December 2001 and December 2012

	December 2001			December de 2012		
	Weight (w)	Assessment (a)	(w)*(a)	Weight (w)	Assessment (a)	(w)*(a)
1. Political regime	3.0	10.0	30.0	3.0	10.0	30.0
2. Pressure groups	3.0	9.5	28.5	3.0	6.5	19.5
3. Government strength	3.0	10.0	30.0	3.0	7.5	22.5
4. Bureaucracy	3.0	9.5	28.5	3.0	8.0	24.0
5. Foreign affair policies	3.0	9.0	27.0	3.0	8.5	25.5
6. Corruption	3.0	9.5	28.5	3.0	5.5	16.5
7. Independent movements	3.0	9.0	27.0	3.0	5.5	16.5
8. Religious and racial structure	2.0	9.0	18.0	2.0	8.5	17.0
9. Social structures	3.0	9.0	27.0	3.0	8.0	24.0
10. Int'l organization membership	2.0	10.0	20.0	2.0	9.0	18.0
11. Economic system	3.0	10.0	30.0	3.0	7.0	21.0
12. Political and labour relations	3.0	9.5	28.5	3.0	7.5	22.5
13. Demographic structure	3.0	10.0	30.0	3.0	10.0	30.0
14. Area and orography	3.0	10.0	30.0	3.0	10.0	30.0
15. International conflict probability	2.0	9.0	18.0	2.0	9.0	18.0
16. Intervention from third countries	3.0	9.0	27.0	3.0	8.0	24.0
Total	45.0		428.0	45.0		356.0
Political indicator	9.511			7.911		

Above all, if we consider that the political indicator has a weight of 45% in the global equation of the assessment, this

decrease has a higher importance in the final mark of the “country risk”.

It is important to bring forward that an indicator with a mark around 10 is a

politically stable country. This concept is valid for all indicators. In other words, for instance, in the economic scene, an indicator close to 10 would show an economically strong country.

4.4. ECONOMIC RISK ANALYSIS AND ASSESSMENT

The method of the economic risk analysis is the same. Obviously, the ratios have been changed by other factors like economic policies, GDP, economic management, employment, current account balance, fiscal, credit and currency policies, financial system, inflation, industrial production, competitiveness and nationalisation probability, among others. For further information see Table 4. The addition of the weighting is usually around 30.

Following the same structure of the political ratios, the economic indicators are divided into sub-ratios. Therefore, the first ratio, “economic policies” is related to the foreseen changes in the economic policies included in the “National Plan”. Furthermore, it shows if they are included in the general budget of the Nation, if official data and publications are reliable and if public workers responsible for the economic and financial direction are qualified. In addition, analysts assess the private sector opinion about economic management.

The main objective of studying these factors by specialists of rating agencies is to assess the capacity and credibility of the government team of a country in order to manage the economy and to carry out structural changes in an appropriate way.

As a result in December 2001, economic indicator in Spain had a mark of 9.533 but, as it happened to political indicator; it decreased to 7.450 in December 2012. The weakness of three sub-ratios such as employment, debt level and financial system, impacted negatively on the economic scene. Besides, it is very

important to mention the fiscal deficit. At the end of 2011, the outgoing government said it was 6%. However, two months later, the new government corrected this percentage until 9%. This situation shocked the international markets, and of course, immediately the international rating agencies penalized to Spain.

4.5. SOLVENCY ANALYSIS AND ASSESSMENT

The method used to assess the solvency of a country, that is, its capacity to afford its long-term obligations, is exactly the same that we have seen before but assessing the ratios related to this assessment. For further information, see Table 5, in which we can see – besides analysis results – that the total weight rises up to 15.

The assessment of the long-term financial strength indicator, shows that the mark in 2001 was 9.900, while in 2012, it decreased to 7.500. The main causes of this worsening were sub-ratios such as debt structure and level, and public debt / GDP.

4.6. LIQUIDITY ASSESSMENT AND ANALYSIS

In accordance with Alquist R. (2005), the liquidity analysis of a country means its capacity to afford its short-term obligations, or the capacity to refinance it. The method used for this analysis –once the corresponding ratios have been selected– is similar to the ones before. For an example, see Table 6 which shows the final results in December 2001 and 2012. In addition, it shows that the total weight rises up to 10.

The table shows that the assessment in 2001 was 9.850, while in 2012 it decreased to 8.250. It is also obvious that as it is very close to 10, the investors can be less worried about the liquidity of the country. By the way, it can be seen that the liquidity

is the best indicator among the four. It is the only index that exceeds 8,0, a rating that could be the gateway to reenter among the countries "A".

4.7. GLOBAL RISK INDEX ESTIMATE

Once the four indicators have been assessed, –political, economic, solvency and liquidity– the final assessment of the “Country Risk” is estimated. For further information, see Table 7 –similar to Table 1– completed with the four indexes obtained from the previous assessments.

Table 4. Economic risk assessment in Spain - December 2001 and December 2012

	December 2001			December 2012		
	Weight (w)	Assessment (a)	(W)*(A)	Weight (w)	Assessment (a)	(W)*(A)
1. Economic policies	3.0	10.0	30.0	3.0	8.5	25.5
2. Economic management	3.0	10.0	30.0	3.0	8.0	24.0
3. Fiscal policies	3.0	10.0	30.0	3.0	8.5	25.5
4. Gdp	2.0	10.0	20.0	2.0	7.5	15.0
5. Employment	2.0	10.0	20.0	2.0	5.5	11.0
6. Inflation	2.0	10.0	20.0	2.0	8.0	16.0
7. Gdp per capita	2.0	9.5	19.0	2.0	7.5	15.0
8. Debt level	2.0	10.0	20.0	2.0	6.0	12.0
9. Financial system ²⁴	2.0	10.0	20.0	2.0	6.5	13.0
10. Resources	1.0	8.5	8.5	1.0	8.5	8.5
11. Infrastructures	1.0	10.0	10.0	1.0	10.0	10.0
12. Currency policies	1.0	9.5	9.5	1.0	9.5	9.5
13. Current account balance	1.0	10.0	10.0	1.0	8.5	8.5
14. Capital balance	1.0	10.0	10.0	1.0	8.5	8.5
15. Access to credit sources	1.0	10.0	10.0	1.0	7.0	7.0
16. Industrial production	1.0	9.5	9.5	1.0	7.0	7.0
17. Competitiveness	1.0	9.5	9.5	1.0	7.5	7.5
18. Nacionalization probability	1.0	10.0	10.0	1.0	10.0	10.0
Total	30.0		286.0	30.0		223.5
Economic indicator	9.533			7.450		

²⁴ Benmelech E. and Dlugosz J. 2009. The alchemy of CDO credit ratings. Journal homepage: www.elsevier.com/locate/jme

Table 5 Solvency risk assessment in Spain - December 2001 and December 2012

	December 2001			December 2012		
	Weight (w)	Assessment (a)	(W)*(A)	Weight (w)	Assessment (a)	(W)*(A)
1. Debt level	3.0	10.0	30.0	3.0	6.0	18.0
2. Debt service ratio ²⁵	3.0	10.0	30.0	3.0	7.5	22.5
3. Debt structure	3.0	10.0	30.0	3.0	7.0	21.0
4. Public debt / gdp	3.0	9.5	28.5	3.0	7.0	21.0
5. Currency depreciation/devaluation	3.0	10.0	30.0	3.0	10.0	30.0
TOTAL	15.0		148.5	15.0		112.5
Solvency indicator	9.900			7.500		

Table 6 Liquidity risk assessment in Spain - December 2001 and December 2012

	December 2001			December 2012		
	Weight (w)	Assessment (a)	(W)*(A)	Weight (w)	Assessment (a)	(W)*(A)
Monthly reserves /imports	3.0	9.5	28.5	3.0	8.0	24.0
Debt services / exports	2.0	10.0	20.0	2.0	8.0	16.0
Short term debt refinancing	1.0	10.0	10.0	1.0	8.5	8.5
Imf credit use	1.0	10.0	10.0	1.0	10.0	10.0
Current account balance behaviour	1.0	10.0	10.0	1.0	8.0	8.0
Liquidity gap ratio	1.0	10.0	10.0	1.0	8.0	8.0
Interest service ratio ²⁶	1.0	10.0	10.0	1.0	8.0	8.0
Total	10.0		98.5	10.0		82.5
Liquidity indicator	9.850			8.250		

Table 7 Global risk index assessment

Indexes	December 2001			December 2012		
	Weighting (w)	Assessment (a)	(W)*(A)	Weighting (w)	Assessment (a)	(W)*(A)
Political	45.0%	9.511	4.28	45.0%	7.911	3.560
Economic	30.0%	9.533	2.86	30.0%	7.450	2.235
Solvency	15.0%	9.900	1.49	15.0%	7.500	1.125
Liquidity	10.0%	9.850	0.99	10.0%	8.250	0.825
Global risk index	9.610		7.745			

²⁵As we mentioned in 3.3.1. "Debt level", the formula [2] is:

$$DSR = \frac{\text{Debt service year } N}{\text{Current account balance year } N} * 100$$

²⁶As we saw in 3.3.1 "Debt level", the formula [3] is:

$$ISR = \frac{\text{Interest on sovereign debt year } N}{\text{Commercial and service exports year } N} * 100$$

Table 8 Global risk location on the 31st Dec 2001 and 2012 regarding the letters and marks from the main rating agencies

Standard & poor's	Moody's	Assesment	Gri	
			31.dic.2001	31.dic.2012
Aaa	Aaa	9.0 to 10.0	9.610	
Bbb	Baa	7.5 to 7.9		7.745

The global mark of the country risk analysis in December 2001 was 9,610, while in 2012 it decreased to 7,745. If we relate the letters used by the three main rating agencies (see Table 2) to these marks, the downgrading of the rating is inside the studied parameters. For further information see Table 8:

The results of the assessment are very clear: in December 2001 Spain was part of the countries so-called “AAA”. However, one year ago –by the end of April 2012– Spanish Country Risk went down until the second group, with the following assessments: Standard & Poor's, *BBB* (which is still good, but the lowest in the category “investment level”), and Moody's, *Baa*.

The great majority of opinions about the rating downgrade –including the media– is only concentrated in the final result: *the country risk decrease and its impact on risk premium*. However, it is possible that the methodology, criterions and procedures used are not known. Nevertheless, as we mentioned in epigraph 1, sometimes the analysis results of rating agencies were wrong.

5. CONCLUSION

Consequently, we can conclude that the mathematic downgrade of the Spanish debt assessment from “AAA” 9.610 to “BBB” 7.745 is not the result of a speculative manoeuvre. This does not mean that speculation was not in the result of country risk assessment. It would be a

rash statement. However, it is true that the assessment is based on a rigorous analysis, whose partial results feed a mathematical methodology which combines, at least, the four mentioned ratios. So to continue, we want to show the risk premium behaviour and the “Country Risk” assessment for the analysed period, from December 2001 to December 2012. This last year, it can be seen the monthly marks.

We can see that the Risk Premium in Spain for the period of December 2002 and December 2005 was 0%. That means that the differential between interest rate paid with bonds issued by the Spanish Treasury to 10 years was similar to the German bond for the same period.²⁷ And the Country Risk Assessment was over 9.600 which mean “AAA”. But from 2006 there was a worsening period divided into four phases: (i) from December 2006 to December 2007, where the worsening was gradual but minor/slight; (ii) from the end of 2007 to 2009, when the global financial crisis started and the turbulences were noticeable²⁸; (iii) from the end of 2009 to August 2012, where the risk premium rocketed from 0.59% (59 basis points), to 5,52% (552 basis points); and, (iv) from August 2012, until the end of this year, where we can observe a gradual decrease, a trend that continues to the present.

In Spain the assessment downgrade is a logical consequence of the decrease of economic and political management quality and the lowering behaviour of solvency and liquidity indexes for the analysed period. Therefore it is not

²⁷In some of the indicated months, it was even under 0.00%, which means that the risk premium of the German bond was higher.

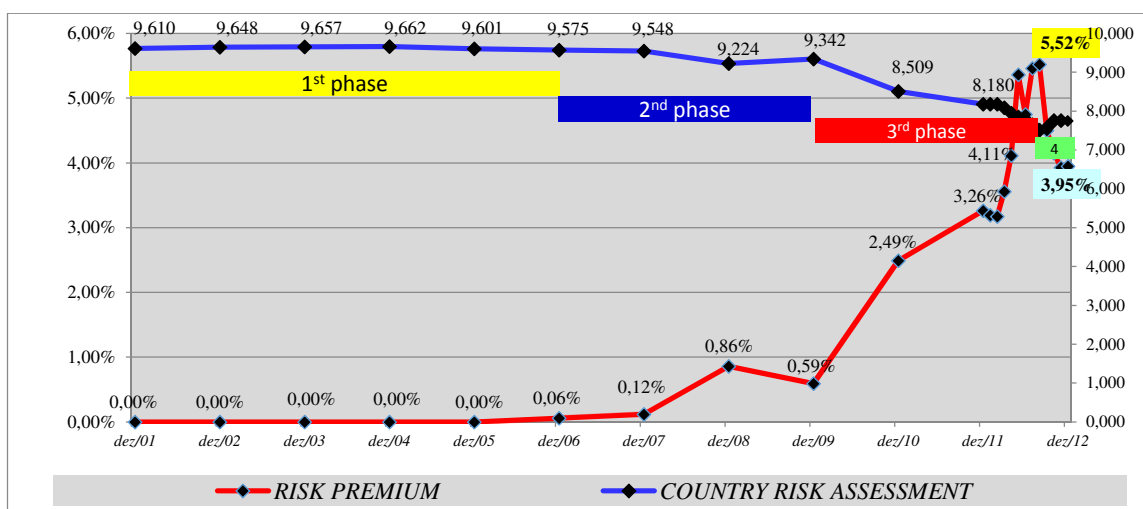
²⁸As risk premiums were from 31st of December, we cannot see the corresponding turbulences in the table. However, if we did it with monthly risk premiums, turbulences would be obvious.

necessary to transfer the mathematical model to reality in order to prove that the equation results coincide with the current political and economic scenario. The problem is the assessment downgrade which has a negative and transversal impact in three different levels: firstly, it

puts financing costs up; secondly, it raises the discount factor of the desired investment projects and finally, and the most important, economic and social worsening and deterioration continue for the great majority of the population.

Table 9 Risk premium and country risk assessment

Month-year	Risk premium ²⁹	Country risk Assessment ³⁰	Mark
Dic-2001	0.00%	AAA	9.610
Dic-2002	0.00%	AAA	9.648
Dic-2003	0.00%	AAA	9.657
Dic-2004	0.00%	AAA	9.662
Dic-2005	0.00%	AAA	9.601
Dic-2006	0.06%	AAA	9.575
Dic-2007	0.12%	AAA	9.548
Dic-2008	0.86%	AAA	9.224
Dic-2009	0.59%	AAA	9.342
Dic-2010	2.49%	AA	8.509
Dic-2011	3.26%	AA	8.180
Ene-12	3.19%	A	8.177
Feb-12	3.17%	A	8.177
Mar-12	3.56%	A	8.090
Abr-12	4.11%	BBB	7.950
May-12	5.36%	BBB	7.850
Jun-12	4.75%	BBB	7.780
Jul-12	5.46%	BBB	7.650
Ago-12	5.52%	BBB	7.510
Sep-12	4.50%	BBB	7.580
Oct-12	4.15%	BBB	7.760
Nov-12	3.93%	BBB	7.758
Dic-12	3.95%	BBB	7.745



²⁹ <http://www.datosmacro.com/prima-riesgo>

³⁰In Chart N 3, in 4.2., we have used the letters used by Standard & Poor's. The ones from Moody's are "Aaa".

Finally, the first two aspects – financing cost and discount factor of the public sector investment project– are issues to be analyzed in our following research. But, in relation to the worsening social and economic deterioration of Spain, it seems appropriate to comment briefly about them. All the methods and criteria used in the analysis and the later decrease in country risk assessment are the immediate results of the events occurred since the beginning of the crisis. The serious problem is that, as always, the negative impact on macroeconomic ratios goes to millions of people with names and surnames whose quality of life worsens and falls below the poverty line. For instance, in December 2012, Caritas' canteens³¹ -among others NGO- gave food in Spain to more than 1,200,000 people, something which was unthinkable some years ago.

On the other hand, the new government which started ruling the country in December 2011 is taking *structural adjusting* measures, including a labour reform, financing system reform, co-payments for health care, and some cuts in sensitive sectors like education and health care. All these measures are aimed at decreasing public deficit. In addition some taxes have been punctually increased, and, very slightly, some public administration costs have been reduced. These short-term measures are painful and hit the most vulnerable people. They are based on the Fiscal Pact signed by 25 countries in the European Union. Nevertheless, there are some critics who point out that there should be a balance between the mentioned adjusting measures, the expenditure growth and actions aimed at restarting economic growth.

³¹ *Cáritas*, an institution from the Spanish Bishop's Conference, is the official confederation of charity and social action from Catholic Church. In Spain it supplies

Proceedings of the 5th Global Management Conference, 2013, Global Academic Network & ISCTE-IUL;

ISBN: 978-989-732-156-6; © Instituto Universitário de Lisboa (ISCTE-IUL), Portugal

BIBLIOGRAPHY

- Alquist, R. 2005. How important is liquidity risk for sovereign bond risk premia? Evidence from the London stock exchange. *Journal of International Economics*, vol. 82, nr. 2, p. 219–229. Available in <http://dx.doi.org/10.1016/j.jinteco.2010.07.007>
- Banco de España. Reports December 2001 and 2011. www.bde.es
- Benmelech, E. and Dlugosz, J. 2009. The alchemy of CDO credit ratings. *Journal of Monetary Economics*, vol. 56, nr. 5, p. 617-634. Available in <http://dx.doi.org/10.1016/j.jmoneco.2009.04.007>
- Dembinski, P. H. 2010. ¿Finanzas que sirven o finanzas que engañan? Madrid. Ediciones Pirámide.
- Eaton, J.; Gersovitz, M. and Stiglitz, J. E. 1986. The Pure Theory of Country Risk. *European Economic Review*, vol. 30, nr. 3, p. 481-514.
- Gültekin-Karakas, D., Hisarciklilar, M., and Öztürk, H. 2011. Sovereign risk ratings: Biased toward developed countries? *Emerging Markets Finance & Trade*, vol. 47, supplement 2. p. 69. <http://www.datosmacro.com/prima-riesgo> <http://www.fitchratings.com/web/en/dynamic/fitch-home.jsp> <http://www.moodys.com/> <http://www.standardandpoors.com/ratings/en/us/>
- Inter-American Development Bank (IDB). 2009. *Model for Country Analysis*. Washington D.C., USA.
- International Monetary Fund (IMF). 2007. *Theoretical aspects of the design of fund-supported adjustment program*. Washington D.C., U.S.A.
- McAleer, M.; da Veiga, B. and Hoti, S. 2011. Value-at-Risk for country risk ratings. *Mathematics and Computers*

an important supporting and social promotion service for different social groups in situation of precariousness and/or social exclusion.

in Simulation, vol. 81, nr. 7, p. 1454-1463. Available in <http://dx.doi.org/10.1016/j.matcom.2010.06.016>

Moran, Theodore H. (2001). *Inversión extranjera directa y desarrollo*. México D.F. Oxford University Press, 2001

Pampillón O., R. 1999. *Análisis económico de países: Teoría y casos de política económica*. 2nd edition. McGraw-Hill.

World Bank. 2009. *An empirical macroeconomic model for Country Analysis*. Washington D.C., USA.

World Bank. 2009. *Macroeconomic adjustment and growth*. Washington D.C., U.S.A.

APPENDIX N 1

ACRONYMS USED IN THE QUALIFICATIONS OF COUNTRIES BY STANDARD & POOR'S and MOODY'S

- AAA and Aaa: *High credit quality*. The ratings "AAA" denote the lowest expectation of credit risk reduced. They are assigned only in cases where there is an exceptionally strong capacity to repay on time the principal and interest of a country's financial obligations.
- AA and Aa1, Aa2, Aa3: *Very high credit quality*. The "AA" ratings indicate that there is an expectation of very low credit risk. The ability for repayment of principal and interest on a timely basis is very strong. This capacity is not significantly vulnerable to foreseeable events.
- A and A1, A2, A3: *High credit quality*. The "A" ratings denote expectations of low credit risk. The ability for repayment of principal and interest on a timely basis is strong. But this ability may be more vulnerable to changes in circumstances and economic

conditions compared with higher ratings.

- BBB and Baa: *Good credit quality*. The "BBB" ratings indicate that there is an expectation of low credit risk. The ability for repayment of principal and interest on a timely basis is adequate, but adverse changes in circumstances and economic conditions may affect this ability. It is the lowest score in the category of "investment grade".
- BB and Ba1, Ba2, Ba3: *Speculative*. The ratings "BB" indicate that there is a possibility of credit risk arising mainly as a result of an adverse change in the economic situation. However, business or financial alternatives may allow financial obligations fulfilled. Securities rated in this category are not investment grade.
- B and B1, B2, B3: *Highly speculative*. The ratings "B" indicate a significant credit risk, but a limited margin of safety. They are meeting financial obligations, however capacity for continued payment is an economic and business environment favorable and stable.
- CCC, CC, C, and Caa1, Caa2, Caa3, Ca, C: *Poor position and subject to very high credit risk*. The default is a real possibility. The ability to meet financial obligations is based exclusively on a business capacity and a sustained favorable economic development. A rating of "CC" indicates that default appears probable. The rating "C" indicates an imminent default.

Agencies also included within each group some intermediate grades. For example, in the case of Standard & Poor's, "AA +" or "AA-", etc.

IMPACTO DO FÉNIX NOS PROCESSOS DE TRABALHO: APLICAÇÃO AOS DOCENTES DO ISCTE-IUL

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RESUMO

A avaliação dos Sistemas de Informação (SI) é um tema que tem sido muito estudado nos últimos anos. Este trabalho consiste num estudo caso, e pretende avaliar o impacto do Sistema de Informação do Instituto Universitário de Lisboa (ISCTE-IUL), em concreto da plataforma Fénix, sobre o trabalho dos docentes, no decorrer das suas atividades diárias. Foi investigado o impacto do Fénix nas dimensões produtividade, inovação, controlo da gestão, tomada de decisão, segurança da informação, qualidade da informação, satisfação do cliente (estudante) e satisfação do utilizador (docente) nas suas subdimensões conteúdo, precisão, formato, oportunidade e facilidade de utilização. Foi aplicado um questionário aos docentes que trabalham diariamente com o recurso ao Fénix, tendo sido obtidas 108 respostas. Os resultados indicam que as dimensões que apresentam maior impacto nos processos de trabalho ao nível individual são o controlo da gestão, a segurança da informação e a satisfação do cliente (estudante). O estudo permitiu ainda concluir, que as subdimensões da satisfação do utilizador usabilidade, conteúdo, precisão e oportunidade, contribuem para a satisfação global do docente com o Fénix.

Palavra-chave: *Sistemas de Informação, Impacto das Tecnologias de Informação no Trabalho, ISCTE-Instituto Universitário de Lisboa.*

IMPACT OF FÉNIX IN WORKING PROCESSES: THE CASE OF ISCTE-IUL PROFESSORS

ABSTRACT

The evaluation of Information Systems is a topic that has been extensively studied in recent years. This work consists of a case study, and aims to assess the impact of the Information System of Instituto Universitário de Lisboa (ISCTE-IUL), namely the Fénix platform, on the work of professors, in the course of their daily activities. It was investigated the impact of Fénix in dimensions: productivity, innovation, management control, decision making, information security, information quality, client satisfaction (student), and lastly the satisfaction of user (teacher) with the Fénix in the subdimensions content, accuracy, format, timeliness and ease of use. A questionnaire was administered to professors who work daily with Fénix, in which 108 responses were obtained. The results indicate that the dimensions that have greater impact on work processes at the individual level are management control, information security and client satisfaction (student). The study allowed us to conclude that the subdimensions of user satisfaction usability, content, accuracy and timeliness, contribute to the overall satisfaction with Fénix.

Keywords: *Information Systems, Impact of Information Technology at Work, ISCTE-Instituto Universitário de Lisboa.*

INTRODUÇÃO

*Proceedings of the 5th Global Management Conference, 2013,
Global Academic Network & ISCTE-IUL;
ISBN: 978-989-732-156-6; © Instituto Universitário de Lisboa (ISCTE-IUL), Portugal*

A avaliação das Tecnologias de Informação (TI) é um tema que tem sido muito estudado nos últimos anos. As TI apresentam-se atualmente para as organizações como um quadro de grande dinâmica e oportunidades, sendo as TI encaradas como um importante impulso da produtividade e competitividade das empresas.

O Sistema de Informação (SI) modificou a estrutura e o ambiente organizacional de forma singular. A importância do SI para as organizações é fundamental para a execução das tarefas diárias que fazem parte numa organização, tornando-se determinantes ao nível dos processos de trabalho. Torkzadeh e Doll (1999) referem que o estudo do impacto do SI no trabalho conduz a um paradigma de pesquisa que é justificado pelo facto das organizações fazerem investimentos avultados com o objetivo de aumentar o desempenho do trabalho individual dos seus colaboradores, constituindo o utilizador final um dos fatores determinantes do sucesso ou do fracasso de um SI.

Por sua vez, Lucht *et al.* (2007) referem que existem elevados investimentos em SI, de instituições públicas e privadas, sem que seja efetuado uma avaliação real e concreta dos resultados que estão a ser atingidos. No entanto, medir os impactos do SI não é uma tarefa fácil de ser realizada, quer a nível académico, quer a nível profissional, sendo reconhecido que não existe uma única maneira de se avaliar os impactos provocados pela implementação do SI numa organização.

Face a esta conjuntura, justifica-se o estudo dos impactos que estes sistemas exercem nos processos de trabalho. Avaliar diversos aspetos de gestão do SI é importante para as instituições públicas do país e para a sociedade em geral já que entender a forma como o SI pode trazer benefícios para estas

organizações permite assegurar uma melhor gestão estratégica.

A nível do Instituto Universitário de Lisboa (ISCTE-IUL), a importância deste tipo de estudo é acentuada pelo facto do seu SI Fénix encontrar-se ainda em desenvolvimento ao nível do segundo e terceiro ciclo de ensino superior e da sua ligação ao sistema de avaliação do desempenho dos docentes. Com este estudo podem-se identificar eventuais falhas e proceder à sua correção, de forma que o sucesso do SI seja uma realidade nesta instituição de ensino superior. Através da avaliação do impacto que um SI tem no quotidiano do instituto universitário, poderão advir contributos para que a gestão neste tipo de tecnologia possa caracterizar-se por uma maior eficiência e eficácia no seu funcionamento, através do acesso a informações seguras, objetivas e rápidas que um SI proporciona no dia-a-dia aos docentes.

Acresce, ainda, a constatação da existência de um estudo de avaliação de impactos do SI, aplicado anteriormente numa instituição pública, concretamente numa autarquia, a Câmara Municipal de Sintra (Bailoa, 2011; Laureano *et al.*, 2012). Considera-se, importante dar continuidade à investigação em Portugal dos impactos no SI, mas agora, numa universidade pública, adotando de certa forma a mesma metodologia (Lucht *et al.*, 2007).

No seu estudo sobre os impactos, Lucht *et al.* (2007) ampliaram o modelo preconizado e validado por Torkzadeh e Doll (1999), acrescentando, para além das dimensões que figuravam no modelo inicial produtividade, inovação, controlo da gestão e satisfação do utilizador, as dimensões relativas à tomada de decisão, segurança da informação e qualidade da informação.

Neste contexto, o objetivo do estudo é aferir os impactos do SI Fénix no Instituto Universitário de Lisboa (ISCTE-IUL) sobre o trabalho dos docentes, no decorrer das suas atividades diárias e, em particular, obter evidências empíricas que permitam responder às seguintes quatro questões de investigação: A) A produtividade é a dimensão com mais impacto?; B) As características sócio demográficas dos docentes influenciam os impactos do Fénix, nas suas diferentes dimensões?; C) As características profissionais dos docentes influenciam os impactos do Fénix, nas suas diferentes dimensões?; e D) A satisfação dos docentes está relacionada com os impactos do Fénix?

O presente artigo encontra-se estruturado para além desta introdução em mais sete secções. Na secção dois, é apresentado o SI e os seus impactos nas organizações, descrevem-se os modelos e estudos de caso de suporte à investigação e são identificados os impactos do SI nos processos de trabalho em diferentes dimensões. Na secção três apresentam-se as funcionalidades do SI Fénix disponibilizadas ao docente. Na secção quatro é apresentado o modelo conceptual. Na secção cinco é apresentada metodologia adotada, descrevendo-se o instrumento de recolha de dados e o trabalho de campo realizado. Na secção seis são apresentados os resultados estatísticos obtidos e na secção sete discutem-se os resultados tendo em conta as questões de investigação e as teorias sobre os impactos do SI. Por último, na secção oito são apresentados os contributos e limitações do estudo e são ainda indicadas algumas sugestões para investigações futuras.

O SI E OS SEUS IMPACTOS NAS ORGANIZAÇÕES

Laudon e Laudon (2004) definem SI como um conjunto de componentes inter-

relacionados que recolhe (ou recupera), processa, armazena e distribui informações destinadas a apoiar a tomada de decisões, à coordenação e ao controlo de uma organização. No entanto, este conceito de componentes inter-relacionados pode englobar diversos tipos de elementos diferenciados. Na definição de um SI, Ferauche (2006) identifica os elementos hardware, software, organização, pessoas e output.

O século XX trouxe como referência o desenvolvimento tecnológico, uma infinidade de recursos e mudanças que agregam grandes impactos e benefícios que o SI introduz nas organizações. Na literatura (Torkzadehe Doll, 1999; Dewett e Jones, 2001; Laurindo, 2002; Rascão, 2004; Lucht *et al.*, 2007; Lunardi *et al.*, 2010) são identificadas algumas vantagens e benefícios do SI, entre outros: redução de custos operacionais, aumento da produtividade, melhoria nos processos operacionais de gestão, aumento das capacidades dos colaboradores, melhorias nos processos e nos níveis de serviço, capacidade de inovar, criar novas estratégias de negócios, novas estruturas na organização e novas formas de relação entre organizações.

Deste modo, o impacto do SI é amplo e multifacetado, proporcionando a sua investigação relevantes oportunidades e desafios. Torkzadeh e Doll (1999) descrevem o impacto do SI nas organizações baseado na Teoria Comportamental da Administração, onde a avaliação dos efeitos do SI ao nível individual é reflexo direto da utilização do SI numa espécie de cadeia de valor. Na Figura 1 pode visualizar-se esse sistema de cadeia de valor de sucesso de um sistema, como sendo construído a partir de crenças, de atitudes, de comportamentos e de impactos sociais e económicos do SI. Porém, o impacto nas suas

diferentes dimensões, ocupa uma posição central na construção de um sistema de cadeia de valor, devido a ser uma consequência

direta da utilização e, por sua vez, um fator determinante para a organização.

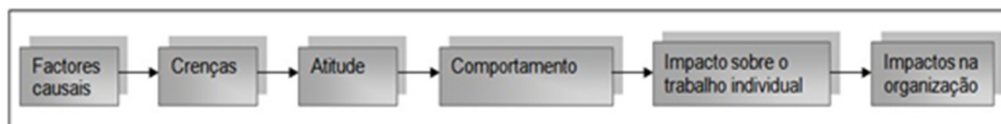


Figura 1: Sistema de cadeia de valor

Fonte: Lucht *et al.* (2007:2)

Torkzadeh e Doll (1999) apresentam um modelo onde são estabelecidas quatro dimensões para a avaliação do impacto do SI sobre o processo de trabalho individual: produtividade, inovação, satisfação do utilizador e controlo da gestão. O seu estudo conduz a um modelo multidimensional que identifica como os impactos do SI sobre o trabalho individual podem trazer diversas vantagens, nomeadamente ao permitir distinguir entre SI eficazes e ineficazes; medir a eficácia, a produtividade e, também, o resultado; e avaliar e reduzir a diferença percebida entre o potencial do SI e o seu impacto real. A validação do modelo incluiu a realização de um estudo piloto, em que foram efetuadas entrevistas estruturadas a um total de 89 utilizadores de 30 organizações distintas, sendo aplicado posteriormente um questionário a uma população de 409 utilizadores finais de SI, de 18 organizações de diversos sectores de atividade.

A investigação de Lucht *et al.* (2007) consiste numa ampliação do modelo desenvolvido e validado por Torkzadeh e Doll (1999) no qual, para além das dimensões produtividade, inovação, controlo da gestão e satisfação do utilizador, foram acrescentadas as dimensões da tomada de decisão, segurança da informação e a qualidade da informação. A validação deste modelo teve por base 334 respostas válidas de um

universo de 14166 funcionários de uma grande instituição pública. Desta forma, os autores concluíram que o impacto de um SI no trabalho individual pode ser aferido através das três novas dimensões.

Numa outra perspetiva, Doll *et al.* (2004) desenvolveram um instrumento para medição da satisfação do utilizador final de SI, composto por cinco dimensões, nomeadamente, conteúdo, precisão, formato, oportunidade e facilidade de utilização. Este estudo investigou as relações entre a satisfação dos utilizadores com o SI e as características sócio demográficas dos utilizadores, tipos de aplicações, plataformas de *hardware* e os grupos de utilizadores de SI. A realização do estudo contemplou um questionário idêntico ao utilizado na investigação de Doll e Torkzadeh (1989) e a sua disponibilização foi efetuada através de correio eletrónico, tendo-se obtido 1166 respostas válidas de utilizadores finais de mais de 60 organizações de diversos sectores de atividade e englobou mais de 300 diferentes aplicações informáticas. Os autores concluíram que as dimensões estudadas são apropriadas para avaliar a satisfação do utilizador final com o SI.

Outros estudos empíricos efetuados em Portugal e no Brasil se seguiram

(Bailoa, 2011; Bachéga e Almeida, 2009; Rodrigues, 2009; Antonelli *et al.*, 2012) apresentando-se as dimensões de impacto avaliadas em cada estudo na Tabela 1.

O estudo de Bailoa (2011) foi realizado em 2011, numa organização da Administração Pública Local, a Câmara Municipal de Sintra (CMS) e teve como objetivos avaliar o impacto do SI sobre o trabalho diário dos seus colaboradores em diversas dimensões como a produtividade, inovação, satisfação do utilizador, controlo da gestão, as fases de processo da tomada de decisão, tomada de decisão, qualidade da informação e segurança da informação. Analisou as relações entre cada uma das dimensões de impacto e as diferentes características do perfil dos colaboradores e o grau de satisfação com os meios informáticos disponíveis. Foi utilizado o modelo de Torkzadeh e Doll (1999), acrescentando as quatro dimensões relacionadas com as fases do processo de tomada de decisão, inteligência, conceção, escolha e implementação, de Pereira (2003), e as três dimensões, tomada de decisão, qualidade da informação e segurança da informação, de Lucht *et al.* (2007).

Para avaliar o impacto foram disponibilizados questionários em papel a 1100 colaboradores da autarquia, durante o período de 28 de Abril a 31 de Maio de 2011, tendo-se obtido 810 respostas válidas. Neste estudo as dimensões que tiveram maior impacto foram produtividade, segurança da informação, qualidade da informação e controlo da gestão, e as que revelaram menor impacto foram as dimensões satisfação dos colaboradores, inovação e as fases do processo de tomada de decisão. Quanto à

análise do grau de satisfação com os meios informáticos disponíveis, o estudo indicou que de uma forma geral os colaboradores estão satisfeitos com estes recursos.

O estudo de Bachéga e Almeida (2009) teve como objetivo identificar os principais benefícios que o SI disponibiliza na Prefeitura Municipal de Botucatu (Brasil). Este estudo teve como modelo base a investigação preconizada por Torkzadeh e Doll (1999), utilizando como dimensões de impacto produtividade, inovação, satisfação do cliente e o controlo da gestão. Para validação desta pesquisa, realizaram 49 entrevistas realizadas durante o mês de Março de 2009, tendo concluído que as dimensões com maiores benefícios pela utilização do SI eram a produtividade e a inovação.

O estudo de Rodrigues (2009) teve como objetivo aferir o impacto percebido pelos colaboradores do Hospital Universitário de Brasília de uma aplicação para gestão de serviços de saúde, tendo utilizado na sua investigação o modelo desenvolvido por Lucht *et al.* (2007), adicionando às dimensões existentes a dimensão inovação do estudo de Torkzadeh e Doll (1999). Para avaliar o impacto foram disponibilizados no mês de Abril de 2009 questionários a 75 colaboradores que utilizavam o programa durante um período mínimo de um ano. Os resultados apontaram para lacunas ao nível da aplicação para a gestão de serviços de saúde, diretamente relacionadas com as dimensões inovação, satisfação do utilizador e decisão. Na sua conclusão, as dimensões que apresentaram mais impacto foram a segurança da informação e o controlo da gestão.

O estudo de Antonelli *et al.* (2012) teve como objetivo da investigação avaliar a perceção dos profissionais de contabilidade paranaenses em relação ao uso do SI, na sua atividade profissional individual. Foi disponibilizado um questionário com doze afirmações baseadas no instrumento desenvolvido por Torkzadeh e Doll (1999). O questionário foi enviado a todos os indivíduos com endereços eletrónicos registados nas instituições brasileiras CRCPR, SESC-PR e IPMCONT, tendo-se obtido 362 respostas válidas que permitiram avaliar os impactos nas dimensões produtividade, controlo da gestão, inovação e satisfação do cliente. Os resultados obtidos revelaram que os benefícios do SI são mais fortes na dimensão produtividade, demonstrando automação de muitas tarefas que eram realizadas de forma manual,

medianos no controlo da gestão, resultantes dos benefícios perceptíveis ao nível de substituição de papéis por meios de armazenamento digital, do aumento de capacidade de processamento de dados necessários e da consequente criação de mecanismos de controlo interno, e na satisfação do cliente, reflexo da concorrência e aumento da exigência dos próprios clientes, obrigando as organizações a encararem os seus clientes de outra forma adaptando-se às suas necessidades e oferecendo além de preços mais competitivos, um melhor atendimento. Por último, com menor impacto, a inovação, que denota a necessidade dos profissionais de contabilidade praticarem mais intensamente a habilidade de resoluções de problemas e a sua capacidade de aprender e inovar.

Tabela 1: Síntese de modelos de estudo e dimensões de impacto do SI

Dimensões	Estudos						
	Torkzadeh e Doll (1999)	Lucht <i>et al.</i> (2007)	Doll <i>et al.</i> (2004)	Rodrigues (2009)	Bachéga e Almeida (2009)	Bailoa (2011)	Antonelli <i>et al.</i> (2012)
Produtividade	X	X		X	X	X	X
Inovação	X			X	X	X	X
Controlo da gestão	X	X		X	X	X	X
Tomada de decisão		X		X		X	
Segurança da informação		X		X		X	
Qualidade da informação		X		X		X	
Satisfação do cliente	X	X		X	X	X	X
Satisfação do utilizador			X				

No conjunto dos vários estudos são identificadas sete dimensões de impacto do SI nos processos de trabalho ao nível individual, caracterizando-se cada uma delas por:

- **Produtividade:** pode ser entendida como a eficiência, ao qual os elementos de entrada (*inputs*) de um sistema de produção são transformados nos elementos de saída (*output*) desse mesmo sistema. O aumento da produtividade

consiste na utilização mais eficaz dos factores da produção, para obter uma maior quantidade de bens e serviços no menor tempo possível e com um menor esforço humano (Mendonça *et al.*, 2009). Dewett e Jones (2001) referem que o SI ajuda na economia, ao nível dos recursos financeiros, tempo e no aumento do desempenho. Estes aumentos são derivados aos avanços efetuados na competência em adquirir e analisar dados, como igualmente da utilização do SI na partilha de recursos e de conhecimentos entre duas ou mais pessoas. Segundo os autores, o aumento do desempenho ao nível da pessoa, como ao nível de um grupo, permite que os colaboradores realizem tarefas mais complexas, adicionem outras tarefas às existentes e aumentem o seu papel na organização. Laurindo (2002) acresce que o SI é considerado como um fator de viabilização da concorrência numa abrangência mundial, bem como determinante para criar novas estratégias de negócios, novas estruturas na organização e novas formas de relação entre organizações.

- **Inovação:** o processo de inovação requer a partilha de informação e a competência de mobilizar ações em torno da solução de um problema. Neste contexto, pode-se considerar um SI como um importante meio para facilitar a inovação (Dewett e Jones, 2001). O poder da tecnologia, de acordo com Rocha e Albuquerque (2007), não está em fazer antigos processos funcionarem melhor, mas em permitir que as organizações abandonem regras antigas e criem novas formas de trabalho, proporcionando um incremento à competitividade organizacional. Já Tokzadeh e Doll (1999) referem que o SI facilita a inovação, devido a estes sistemas permitirem aos seus utilizadores desenvolverem e inovarem o seu trabalho. O SI pode permitir explorar novas formas de

comunicação nas organizações e também desenvolver a habilidade na resolução de problemas.

- **Controlo da gestão:** o controlo consiste em verificar se tudo ocorre de acordo com o programa adotado, as ordens dadas e os princípios admitidos. Tem por objetivo identificar as falhas e os erros, para que sejam efetuadas as reparações a fim de evitar posteriores repetições (Fayol, 1994). Nesta perspetiva, o SI tem sido utilizado como um instrumento para a conservação da estrutura da administração existente, em relação à centralização do controlo e ao aumento de poder dos gestores. Deste modo, o SI, em vez de associado à flexibilidade e à descentralização a nível organizacional, pode ser uma ferramenta importante, para reforço das posições a nível de gestão, e tornar, assim, o gestor centralizador e controlador (Schwarz, 2002). Torkzadeh e Doll (1999) referem que o SI é utilizado para aumentar o controlo da gestão, de modo que o interesse exclusivo dos gestores na tecnologia centra-se como num meio de controlar, limitar e enfraquecer a sua força de trabalho. De facto, os gestores ditatoriais podem fazer uso do SI para aumentar seu controlo e dificultar a criatividade (West e Berman, 2001).
- **Tomada de decisão:** é uma atividade que interpreta uma ação como uma escolha racional. Neste caso, o termo racional é, normalmente, interpretado como equivalente a “inteligente” ou “bem-sucedido”, o que descreve que as ações foram bem-sucedidas (March, 1994). Rascão (2004) refere que o SI contribui para a eficácia dos gestores, quando exercem as suas funções de planeamento, organização, controlo e decisão, na gestão da organização, fornecendo-lhes uma informação relevante e oportuna na tomada de decisão, reduzindo o risco de insucesso na tomada de decisão. A conceção do SI fornece ao gestor uma boa

fonte de dados e conhecimentos, necessários para os processos de decisão, disponibilizando importantes elementos, que permite à organização manter-se num nível alto de competitividade no mercado interno e, em certos casos, no mercado externo (Tech e Gualazzi, 2007).

- **Segurança da informação:** é uma área de conhecimento dedicada a proteger ativos de informação contra acessos não autorizados, alterações indevidas ou indisponibilidade (Sêmola, 2003), ou seja, corresponde ao processo de proteção das informações de ameaças para assegurar sua integridade, disponibilidade e confidencialidade (Donner e Oliveira, 2008). Vários autores (Koved et al., 2001; Landwehr, 2001; Whitman, 2003; Ezingear et al., 2005) incluem os seguintes aspetos no âmbito da segurança da informação: i) confidencialidade, se houver informações consideradas confidenciais, só os utilizadores com privilégios especiais lhes podem aceder; ii) integridade, nos processos de comunicação não pode haver nada entre a emissão e a receção que altere a informação; iii) disponibilidade, garantir que a informação esteja disponível aos utilizadores autorizados sem nenhum tipo de modificação e sempre que eles necessitem; iv) identificação, os utilizadores de um SI têm que ser reconhecíveis pelo sistema através de um código de utilizador; v) autenticação, para evitar que alguém mal-intencionado passe por um utilizador devidamente identificado, é necessário que, depois de se identificarem, os utilizadores provem que são quem dizem ser; vi) não-recusa, não deve ser impossível a um emissor de informação recusar ter feito essa emissão, e a um recetor, ter feito tal receção.
- **Qualidade da informação:** o conceito de qualidade representa um atributo de produtos e serviços que respondem às necessidades de quem os utiliza (Moura, 1996). Ao nível da informação o conceito

de qualidade é vasto e pode ser definido por meio de várias dimensões, o que dificulta a sua compreensão (Lucht et al., 2007). Lopes (2004) identifica cinco formas para definir qualidade de informação: i) transcendência, presume-se que a qualidade da informação é absoluta e reconhecida universalmente; ii) utilizador, está diretamente relacionada com as diferentes necessidades de informação de cada pessoa; iii) produto, considera qualidade da informação em termos precisos e identificáveis relacionados com as características dos próprios produtos de informação; iv) Produção, baseada na produção define qualidade, em termos de conformidade com as exigências; v) valor, define a qualidade, focalizando o conceito de uso, redução de “ruído”, adaptabilidade, economia de tempo e de custo, e a própria qualidade da informação. Para Sheng (2003), o SI pode aumentar a qualidade da informação disponibilizada para os clientes, que por sua vez incrementam as operações de negócio e a suaperformance, em redução de custos ou otimização de processos.

- **Satisfação do utilizador:** representa o quanto agradável deve de ser a interação do utilizador com o SI. Chin e Lee (2000) definem a satisfação do utilizador com um determinado SI, como a avaliação global afetiva que um utilizador final tem sobre a sua experiência relacionada com o SI. Conclui-se que quanto maior é a satisfação do utilizador com o SI, mais vontade este tem de explorar as potencialidades disponibilizadas pelo sistema, fornecendo, deste modo, retorno para a organização em que se insere (DeLone e McLean, 1992). Porém, existem situações em que um SI não fornece uma adequada resposta às necessidades dos utilizadores. Esta ocorrência pode estar relacionada com a adoção de um sistema, o qual não satisfaz os requisitos para que foi definido, com

repercussões nefastas ao nível dos custos de desenvolvimento que excedem os benefícios esperados da sua utilização. Deste modo, haverá uma insatisfação dos utilizadores com a fraca disponibilização de meios que respondam às suas necessidades, expectativas e ou interesses (Ramos, 2000).

DESCRIÇÃO DO FÉNIX

No portal do Fénix são disponibilizados ao docente diversos menus para executar

diferentes tarefas (Figura 2). No âmbito do trabalho diário dos docentes os menus Pessoal e Docência são relevantes.

Ao seleccionar o menu Pessoal o Fénix disponibiliza uma série de submenus (Tabela 2), que permitem executar funções relacionadas com a área pessoal, a gestão de cartões pessoais e da página pessoal e com serviços e gestão de *software*.



Figura 2: Menus pessoal e docência

Tabela 2: Submenus do menu pessoal do Fénix e suas funções

Submenus	Área pessoal Área pessoal Informação pessoal Submeter fotografia Alterar palavra-passe Consultar código para impressões	Informação pessoal: permite introduzir ou fazer a gestão da sua informação pessoal dos quais, fotografias, contactos, autorizações de disponibilização de informação, dados pessoais, informação de utilizador, filiação e residência; Submeter fotografia: permite submeter fotografias; Alterar palavra-passe: permite proceder à alteração das credenciais de autenticação; Consultar código para impressões: permite a consulta de código para impressões.
	Gestão cartões pessoais Gestão Cartões Pessoais Gestão de Cartões Pessoais Leituras	Gestão de Cartões Pessoais: permite consultar, activar e desactivar os cartões identificativos que servem para dar acesso às salas e marcar a assiduidade; Leituras: permite a pesquisa de leituras dos cartões.
	Página pessoal Página pessoal Gestão da página pessoal Conteúdos da página pessoal	Gestão da página pessoal: permite activar a sua página pessoal e escolher a informação pessoal que deseja incluir; Conteúdos da página pessoal: permite criar secções de Conteúdos Institucionais.
	Serviços Serviços Google Apps Reencaminhamento de correio Registo de endereço MAC	Google Apps: permite activar a conta Google Apps do ISCTE-IUL; Reencaminhamento de correio: permite a configuração de reencaminhamento de correio electrónico; Registo de endereço MAC: permite efectuar o registo do endereço físico da placa de rede Media Access Control (MAC) do computador.
	Gestão de software Gestão de software Software	Gestão de software: permite efectuar pedidos e fazer a gestão de licenças para utilização de aplicações informáticas.

Na seleção do menu Docência, o Fénix disponibiliza também os submenus Administração de unidades curriculares, que permite aceder às unidades curriculares lecionadas pelos docentes, como também fazer o filtro por semestre e ano letivos; Trabalhos finais, que permite seleccionar a

licenciatura e o ano curricular para a dissertação, como também definir o papel a desempenhar pelo docente; e, por fim, utilizar pedidos de revisão de notas efetuados por alunos. Na seleção de uma unidade curricular (UC), o Fénix disponibiliza diversas funções para o docente (Tabela 3).

Tabela 3: Submenus da administração de unidades curriculares do Fénix

Submenus	Comunicação Comunicação Anúncios	Anúncios: permite introduzir ou fazer a gestão de anúncios ou eventos para os alunos.
	Gestão Gestão Sumários Docentes Alunos Planeamento Avaliação Horário de atendimento FUC (Ficha de Unidade Curricular)	Sumários: permite inserir e consultar sumários das aulas lecionadas; Docentes: permite saber os docentes da unidade curricular (UC) e quem tem permissão para editar a Ficha de Unidade Curricular (FUC). Alunos: permite obter a informação dos alunos inscritos na UC, nomeadamente obter pautas globais ou por turma e por época de avaliação da UC; Planeamento: permite definir o plano das aulas com indicação de sumário previsto; Avaliação: permite a gestão de pautas com notas, afixar notas na página da unidade curricular, visualizar o número de alunos por avaliar se existem pautas por assinar nos serviços académicos; Horário de atendimento: permite definir o horário que o docente está disponível para atendimento; FUC (Ficha de Unidade Curricular): permite visualizar e editar os dados referentes a uma unidade curricular. Este documento é fundamental para o aluno, pois contempla objectivos da UC, o programa, a forma de avaliação e a bibliografia (obrigatória e complementar), entre outros.

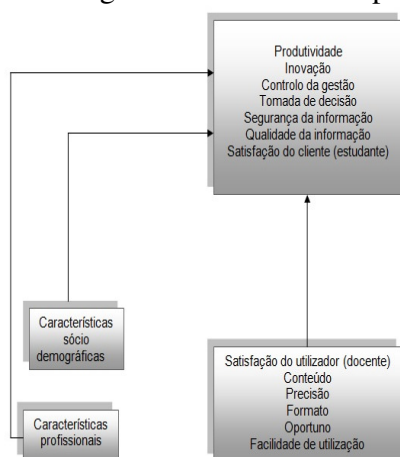
Nas tarefas diárias de um docente o Fénix ocupa um lugar de especial relevo, sendo fundamental o docente introduzir o planeamento e os sumários das suas aulas, para ver se os programas são cumpridos, se o número de aulas previstas foi efetivamente dado, e avaliar a assiduidade às aulas por parte dos alunos. Também o lançamento de notas é fundamental, já que o aluno não se pode inscrever no ano seguinte, ou em melhorias, se as notas anteriores não tiverem sido lançadas no Fénix e confirmadas pelo docente nos

serviços académicos. Por último, é importante referir que os alunos avaliam o docente e a UC através do Fénix e que esta avaliação contribui de forma acentuada para a avaliação de desempenho do docente e para acreditação de cursos do ISCTE-IUL. No final da UC, o docente também faz a sua avaliação e identifica pontos fortes e fracos e aspetos a melhorar.

MODELO CONCEPTUAL

A revisão da literatura permitiu identificar as dimensões de impacto do SI e como principais contributos os modelos de Torkzadeh e Doll (1999), Doll *et al.* (2004) e Lucht *et al.* (2007). Atendendo aos objetivos do estudo foi definido o modelo conceptual apresentado na Figura 3. O modelo evidencia a relação entre as características sócio demográficas e profissionais dos utilizadores do SI com as sete dimensões de impacto do SI de Torkzadeh e Doll (1999) e Lucht *et al.* (2007). De igual forma, o modelo estabelece uma relação entre os impactos percebidos e a satisfação global do docente com o Fénix, nas dimensões conteúdo, precisão, formato, oportunidade e facilidade de utilização (Doll *et al.*, 2004).

Figura 3: Modelo conceptual



METODOLOGIA

Considerando que o objetivo do estudo consiste em aferir o impacto do Fénix sobre o trabalho diário dos docentes do ISCTE-IUL, é inquirida apenas a população de docentes que utiliza o Fénix diariamente, totalizando, em 10 de junho de 2012, 467 docentes (ISCTE-IUL, 2012), aos quais foi disponibilizado via

eletrónica o questionário. Os docentes estão integrados em 15 departamentos que pertencem a quatro escolas, nomeadamente, gestão, sociologia e políticas públicas, ciências sociais e humanas e tecnologias e arquitetura.

No questionário são incluídos os mesmos itens dos questionários dos estudos preconizados por Torkzadeh e Doll (1999), Lucht *et al.* (2007) e Doll *et al.* (2004). Todos os itens são afirmações que permitem aferir os impactos do Fénix e as respostas são dadas numa escala de concordância tipo Likert de cinco pontos, em que 1 corresponde a discordo totalmente e o 5 corresponde a concordo totalmente. Foi adicionada uma opção de resposta “não conheço não utilizo”, para a eventualidade do inquirido ser um docente recentemente contratado e que ainda não teve oportunidade de trabalhar com o Fénix.

Assim, o questionário é constituído essencialmente por questões fechadas e está dividido em dois grandes grupos. O Grupo I inclui as questões que visam caracterizar o perfil sócio demográfico e profissional dos docentes e também avaliar a satisfação dos docentes com os recursos informáticos disponíveis. No Grupo II são incluídas as questões relacionadas com a avaliação dos impactos nas diferentes dimensões dos processos de trabalho.

O instrumento de recolha de dados utilizado foi alvo de um pré-teste com o apoio do Professor Doutor Carlos Sá da Costa, vice-reitor do ISCTE-IUL e distribuído a 10 docentes no dia 5 de maio de 2012, o qual permitiu verificar a clareza das questões, identificar a existência de erros ortográficos assim como aperfeiçoar a sua adequação aos objetivos do estudo. Desta forma, o preenchimento integral do questionário “obriga” o docente a fornecer 49 respostas, esperando-se um tempo de resposta aproximado de dez minutos.

O questionário foi disponibilizado aos docentes via digital através da plataforma *SurveyMonkey*, durante o período do dia 16 de maio a 10 de junho de 2012. Na análise das

respostas verificou-se, em alguns casos, que existiam questionários não concluídos na totalidade, devido à participação do estudo não ser obrigatória. Assim, foram obtidas 108 respostas válidas correspondentes a uma taxa de resposta de 23,1%. Dada a elevada percentagem de docentes que não responderam, considera-se que este estudo empírico tem por base uma amostra obtida por conveniência (não aleatória).

Os dados recolhidos foram introduzidos na aplicação *IBM SPSS Statistics* (versão 19) para aplicação de técnicas de análise estatística descritiva. A análise dos dados inicia-se com a caracterização sócio demográfica e profissional dos docentes à qual se segue a caracterização dos impactos do Fénix.

Relativamente às dimensões de impacto do SI no trabalho individual, consideradas no modelo conceptual (Figura 3), estas contêm vários itens. Assim, foi utilizada a medida de consistência interna *Alpha de Cronbach* para apurar quão bem esses vários conjuntos de itens estão a medir o referido constructo, considerando-se a existência de uma boa consistência quando o valor de *Alpha* for superior a 0,7 (Hair *et al.*, 1998). Validada a consistência das dimensões, estas foram operacionalizadas através da construção de índices, que correspondem à média das respostas dos docentes aos diferentes itens que compõem a dimensão. Assim, as dimensões são medidas numa escala contínua de 1 (nenhum impacto) a 5 (muito impacto). Paralelamente é efetuada uma análise descritiva dos diferentes itens de cada dimensão.

Para além das medidas descritivas São utilizadas também outras estatísticas, nomeadamente as medidas de associação (*Eta*, *Spearman* e *Pearson*), que quantificam a intensidade e, no caso do *Spearman* e do *Pearson*, também a direção da relação entre duas variáveis (Maroco, 2003), para analisar a relação entre as características sócio demográficas e profissionais dos docentes e os impactos percebidos, tendo-se considerado

que existe relação moderada ou forte quando estas medidas apresentem valor superior a 0,4 (Laureano e Botelho, 2012).

Posteriormente, procedeu-se à análise das dimensões da satisfação do docente com o Fénix, nomeadamente com o conteúdo, a precisão, o formato, a oportunidade e a facilidade de utilização, através das medidas descritivas. Aos diferentes itens das dimensões da satisfação dos docentes com o Fénix, foi aplicada uma Análise de Componentes Principais (ACP) para reduzir a dimensionalidade. A adequabilidade dos dados iniciais foi aferida pela estatística *Kaiser-Meyer-Olkin* (KMO), em que, de acordo com Pestana e Gageiro (1998), valores próximos de 1 significam uma correlação muito boa, e pelo teste de esfericidade de *Bartlett*. O critério utilizado para selecionar o número de componentes foi o de *Kaiser* que indica que devem ser retidas as componentes com valor próprio superior a 1. Para facilitar a interpretação das componentes recorreu-se à rotação ortogonal *Varimax*. Destaca-se ainda que as variáveis iniciais que apresentavam comunalidade inferior a 0,5 foram excluídas da análise por se considerar que as componentes retidas explicam pouco da sua variância.

Na solução encontrada, que agregou as dimensões formato e facilidade de utilização numa nova dimensão usabilidade, teve-se também em consideração a variância explicada pelas componentes, sendo um valor superior a 60% normalmente tido como referência nas ciências sociais (Hair *et al.*, 1998). Por fim, as dimensões foram operacionalizadas através da construção de índices a partir da média das respostas dos docentes aos diferentes itens que compunham cada uma delas, após a confirmação da sua consistência interna pelo coeficiente *Alpha de Cronbach*. Deste modo, as dimensões da satisfação são medidas numa escala contínua de 1 (nada satisfeito) a 5 (extremamente satisfeito). A análise de dados termina com a caracterização da relação entre as dimensões da satisfação e as dimensões de impacto do

Fénix através do coeficiente de correlação de *Pearson*.

RESULTADOS

Os resultados apresentados correspondem a 108 respostas obtidas durante o período do dia 16 de Maio a 10 de Junho de 2012, correspondendo a 23,1% dos docentes do ISCTE-IUL, que utilizam diariamente o Fénix.

A caracterização sócio demográfica dos docentes revela que são na maioria do sexo masculino (63,9%) e com idades compreendidas entre os 29 e os 67 anos de idade, onde a maior parte tem idades entre os 36 e os 45 anos (37,0%), seguido muito aproximado dos que têm idades entre os 46 e os 55 anos (35,2%). Quanto ao grau académico, o mais elevado é o doutoramento (72,2%), o que é esperado, já que a carreira académica “obriga” à obtenção do grau de doutor. A agregação é a categoria que surge depois, embora numa percentagem bem menos relevante (16,7%).

A caracterização profissional dos docentes revela que a escola mais representada é a escola de gestão com (39,8%) dos docentes e as menos representadas são as escolas de sociologia e políticas públicas e a de ciências sociais e humanas, cada uma delas com (14,8%) dos docentes. Quanto à atividade desempenhada, destaca-se que o desempenho nas três atividades, docência, investigação e cargos de gestão/direção, é a situação mais frequente (41,7%). Constata-se ainda que apenas 15 docentes se dedicam só à docência. A maioria dos docentes (69,5%) tem 11 ou

mais anos de serviço. Realça-se que 18 docentes têm pouca experiência, isto é, entre 0 a 5 anos de serviço (16,7%). A grande maioria dos docentes (87,0%) está em regime de exclusividade, havendo muito pouca representatividade nos regimes do tempo parcial (8,3%) e tempo integral (4,6%).

Relativamente à questão de investigação A, que remete para a avaliação dos impactos do Fénix, a Tabela 4 permite verificar que as dimensões que apresentam maior impacto são o controlo da gestão (média=3,8; desvio-padrão (DP)=1,0), segurança da informação (média=3,8; DP=1,0), satisfação do cliente (média=3,7; DP=1,2), e a qualidade da informação (média=3,5; DP=0,9), todas elas com média de impacto igual ou superior a 3,5.

Em sentido contrário, observa-se que a dimensão inovação (média=2,0; DP=1,0) é aquela em que os docentes percecionam menor impacto. Nas restantes duas dimensões, tomada de decisão (média=2,9; DP=0,9) e produtividade (média=2,9; DP=1,1), os docentes percecionam nem muito nem pouco impacto (impacto moderado), ambas com valor médio muito próximo do ponto central da escala (3,0).

Em relação à questão de investigação B, isto é, à influência das características sócio demográficas dos docentes nos níveis de impacto do Fénix, constata-se que o sexo não se relaciona com nenhuma das dimensões (Tabela 5), variando o *Eta* entre 0,007, para a satisfação do cliente (estudante) e 0,136, para a produtividade e segurança da informação.

Tabela 4: Medidas descritivas das diferentes dimensões de impacto do Fénix

Dimensões	Nº	Média	DP	Mínimo	Percentil 25	Mediana	Percentil 75	Máximo
Controlo da gestão	108	3,8	0,9	1,0	3,3	4,0	4,3	5,0
Segurança da informação	108	3,8	1,0	2,0	3,0	3,7	4,3	5,0
Satisfação do cliente (estudante)	108	3,7	1,2	1,0	3,0	3,7	4,3	5,0
Qualidade da informação	108	3,5	0,9	1,0	3,0	3,5	4,0	5,0
Tomada de decisão	108	2,9	0,9	1,0	2,3	3,0	3,7	5,0
Produtividade	108	2,9	1,1	1,0	2,0	2,9	4,0	5,0
Inovação	108	2,0	1,0	1,0	1,0	2,0	3,0	5,0

Tabela 5: Nível médio dos impactos por sexo

Dimensões de impacto	Sexo				
	Masculino		Feminino		Eta
	Média	DP	Média	DP	
Produtividade	3,0	1,0	2,7	1,2	0,136
Inovação	1,9	0,8	2,1	1,2	0,088
Controlo da gestão	3,9	0,9	3,8	0,9	0,046
Tomada de decisão	2,9	0,9	2,9	0,2	0,008
Segurança da informação	3,7	0,9	4,0	1,2	0,136
Qualidade da informação	3,4	0,8	3,6	0,9	0,122
Satisfação do cliente (estudante)	3,7	1,2	3,7	1,3	0,007

Quanto à relação do escalão etário com os diferentes impactos do Fénix (Tabela 6), observa-se sempre a existência de relações muito fracas (*Spearman* inferior a 0,2). No entanto, verifica-se ao nível da inovação uma ligeiríssima tendência para quando o escalão etário aumenta, aumentar o impacto percecionado, apresentando os docentes mais novos uma média de impacto de 1,9 e os mais velhos uma média de 3,2.

Relativamente ao grau académico também apenas se observam relações muito fracas com as dimensões de impacto (*Spearman* inferior a 0,2). Destaca-se que ao nível da inovação, existe uma ligeiríssima tendência para quando o grau académico aumenta, aumentar o impacto, sendo este, em média, de 2,3 nos licenciados, pós-graduados e mestres e de 4,0, nos docentes com agregação (Tabela 7).

Quanto à influência das características profissionais nos impactos percecionados do Fénix nas diferentes dimensões (questão de investigação C), constata-se que a escola relaciona-se de forma muito fraca com todas as dimensões (Tabela 8), variando o *Eta* entre 0,074 para a produtividade e 0,189, para a qualidade da informação.

Tabela 6: Nível médio dos impactos por escalão etário

	Escalão etário										
Dimensões de impacto	25 - 35 anos		36 - 45 anos		46 - 55 anos		56 - 65 anos		> = 66 anos		Spearman
	Média	DP	Média	DP	Média	DP	Média	DP	Média	DP	
Produtividade	2,6	1,0	2,9	1,1	2,8	1,1	3,1	1,2	4,3	0,7	0,105
Inovação	1,9	1,5	1,8	0,9	2,0	0,9	2,1	0,9	3,2	0,2	0,175
Controlo da gestão	3,2	0,9	3,9	1,0	4,0	0,6	3,7	1,4	4,8	0,2	0,125
Tomada de decisão	2,7	0,9	4,0	1,0	2,7	0,9	2,8	1,0	3,9	0,5	-0,013
Segurança da informação	3,7	1,1	4,1	1,0	3,5	0,9	4,1	1,1	3,3	1,4	-0,122
Qualidade da informação	3,6	0,8	3,5	0,9	3,4	0,9	3,4	0,7	4,5	0,7	0,008
Satisfação do cliente (estudante)	3,3	1,1	3,8	1,2	3,6	1,2	3,9	1,4	4,8	0,2	0,070

Tabela 7: Nível médio dos impactos por grau académico

Dimensões de impacto	Grau académico										
	Licenciado		Pós-graduação		Mestrado		Doutoramento		Agregação		Spearman
	Média	DP	Média	DP	Média	DP	Média	DP	Média	DP	
Produtividade	3,7	0,9	3,1	1,2	2,1	0,8	2,7	1,0	3,5	1,0	0,195
Inovação	2,3	1,0	2,3	2,1	2,3	2,0	3,7	0,8	4,0	0,8	0,176
Controlo da gestão	4,5	0,6	3,7	0,5	3,8	1,2	3,7	0,9	4,0	0,9	0,049
Tomada de decisão	3,3	0,9	3,5	0,7	2,5	1,0	2,8	1,0	3,2	0,7	0,119
Segurança da informação	4,2	1,5	3,8	1,2	3,6	1,4	3,8	1,0	3,8	1,0	0,004
Qualidade da informação	3,8	0,7	3,3	0,4	3,3	0,7	3,4	0,9	3,8	0,7	0,120
Satisfação do cliente (estudante)	4,5	1,3	5,0	1,4	3,8	1,0	3,6	1,2	3,8	1,0	-0,006

Tabela 8: Nível médio dos impactos por escola

Dimensões de impacto	Escolas								
	Gestão		Sociologia e políticas públicas		Ciências sociais e humanas		Tecnologias e arquitectura		Eta
	Média	DP	Média	DP	Média	DP	Média	DP	
Produtividade	2,9	1,0	2,8	1,1	3,0	1,2	2,9	1,0	0,074
Inovação	1,9	1,0	1,9	0,8	2,2	0,8	1,9	1,1	0,106
Controlo da gestão	4,0	1,0	3,7	1,0	3,8	0,7	3,8	1,0	0,119
Tomada de decisão	3,0	1,0	2,6	0,9	2,9	0,8	2,9	1,0	0,141
Segurança da informação	4,0	1,0	3,5	0,9	3,7	1,1	3,8	1,1	0,142
Qualidade da informação	3,5	0,8	3,3	1,1	3,9	0,8	3,4	0,9	0,189
Satisfação do cliente (estudante)	4,0	1,3	3,4	1,5	3,5	1,0	3,6	1,1	0,175

Relativamente à atividade desempenhada constata-se que esta relaciona-se de forma fraca ou muito fraca com as dimensões de impacto (Tabela 9), variando o *Eta* entre 0,159, para a produtividade, e 0,232, para a qualidade da informação e satisfação do cliente (estudante), que a par da segurança da informação constituem as dimensões em que a relação é fraca.

O tempo de serviço relaciona-se de forma muito fraca com todas as dimensões de impacto (Tabela 10), sendo todos os valores do coeficiente de *Spearman* inferiores a 0,2. Já o regime de serviço relaciona-se de forma fraca ou muito fraca com as dimensões de impacto (Tabela 11), variando o *Eta* entre 0,078, para a qualidade da informação, e

0,214, para a satisfação do cliente, sendo apenas esta última que se relaciona de forma fraca com o regime de serviço ao evidenciar que os docentes em tempo parcial percecionam maior impacto na satisfação do cliente (estudante) do que os docentes nos outros dois regimes.

Em relação à questão de investigação D, isto é, à análise da relação entre a satisfação do utilizador (docente) nas suas diferentes dimensões e os impactos nas dimensões de trabalho, foram calculados os coeficientes de correlação de *Pearson* constantes da Tabela 12. Constata-se que a satisfação com a usabilidade apresenta correlações positivas, fracas e moderadas, com as dimensões de impacto, exceto com a dimensão da

segurança da informação em que a relação é muito fraca ($Pearson=0,152$), revelando que a usabilidade contribui de alguma forma para a explicação dos impactos percebidos.

Na satisfação com o conteúdo, constata-se a existência de correlações positivas e moderadas com as dimensões de impacto, sendo a exceção com a segurança da informação em que a relação é muito fraca ($Pearson=0,123$).

Relativamente à precisão, verifica-se que as relações são positivas e de intensidade moderada ou fraca, destacando-se a relação com a dimensão tomada de decisão ($Pearson=0,432$). Ao contrário das dimensões de satisfação anteriores, a precisão tem impacto na segurança da informação ($Pearson=0,417$), evidenciando uma

tendência moderada para o impacto nesta dimensão aumentar quando aumenta a precisão.

Por fim, na satisfação com a oportunidade da informação, constata-se que as correlações com as dimensões de impacto são positivas de fracas a moderadas. Tal como na usabilidade e no conteúdo, também aqui existe uma relação muito fraca com a segurança da informação ($Pearson=0,148$). A dimensão que mais se destaca, é a satisfação do cliente ($Pearson=0,583$), seguida pela dimensão qualidade da informação ($Pearson=0,508$), evidenciando tendências moderadas para o impacto nestas dimensões aumentar quando aumenta a oportunidade da informação disponibilizada.

Tabela 9: Nível médio dos impactos por actividade desempenhada

Dimensões de impacto	Actividade desempenhada										
	Docência		Investigação		Docência e investigação		Docência e cargos de gestão/direcção		Todas as anteriores		Eta
	Média	DP	Média	DP	Média	DP	Média	DP	Média	DP	
Produtividade	2,7	1,1	2,9	0,2	2,7	1,1	2,9	1,3	3,1	1,1	0,159
Inovação	1,6	0,9	1,5	0,7	1,9	1,2	2,2	0,8	2,1	0,9	0,192
Controlo da gestão	3,7	1,1	1,0	1,0	3,7	1,0	4,2	1,2	3,9	0,9	0,168
Tomada de decisão	2,6	0,8	3,6	0,2	2,8	1,0	2,9	1,1	3,0	0,9	0,185
Segurança da informação	3,7	1,3	3,8	0,2	3,9	1,1	4,0	1,0	3,7	0,8	0,231
Qualidade da informação	3,3	0,9	4,6	0,5	3,4	0,8	3,9	0,8	3,6	0,9	0,232
Satisfação do cliente (estudante)	3,6	1,4	3,2	0,2	3,6	1,3	4,2	1,3	3,8	1,0	0,232

Tabela 10: Nível médio dos impactos por tempo de serviço

	Tempo de serviço								
Dimensões de impacto	0 - 5 anos		6 - 10 anos		11 - 20 anos		> = 21 anos		Spearman
	Média	DP	Média	DP	Média	DP	Média	DP	
Podutividade	2,7	1,0	3,0	0,8	2,9	1,1	3,0	1,2	0,058
Inovação	1,7	0,7	2,2	1,4	1,9	1,0	2,0	0,9	0,082
Controlo da gestão	3,6	1,0	4,0	0,7	3,8	1,0	3,9	1,0	0,093
Tomada de decisão	2,8	1,0	2,9	0,7	2,9	1,0	2,8	1,0	0,023
Segurança da informação	3,8	1,0	3,9	0,9	3,9	1,1	3,7	1,0	-0,097
Qualidade da informação	3,5	1,0	3,5	0,7	3,5	1,0	3,5	0,9	0,006
Satisfação do cliente (estudante)	3,4	1,3	3,9	1,2	3,5	1,1	3,9	1,3	0,103

Tabela 11: Nível médio dos impactos por regime de serviço

	Regime de serviço						
Dimensões de impacto	Tempo parcial		Tempo integral		Exclusividade		Eta
	Média	DP	Média	DP	Média	DP	
Produtividade	2,8	1,1	2,2	0,5	2,9	1,1	0,140
Inovação	1,8	0,8	1,3	0,4	2,0	1,0	0,158
Controlo da gestão	4,2	0,9	3,2	0,8	3,8	0,9	0,188
Tomada de decisão	3,0	0,9	2,3	0,5	2,9	1,0	0,149
Segurança da informação	4,1	0,9	3,3	0,3	3,8	1,0	0,139
Qualidade da informação	3,6	0,8	3,2	0,7	3,5	0,9	0,078
Satisfação do cliente (estudante)	4,2	1,5	2,7	0,4	3,7	1,2	0,214

Tabela 12: Correlações de *Pearson* entre a satisfação do docente e o impacto nas dimensões do trabalho

	Usabilidade	Conteúdo	Precisão	Oportunidade
Produtividade	0,437	0,546	0,280	0,410
Inovação	0,393	0,456	0,191	0,325
Controlo da gestão	0,373	0,497	0,224	0,411
Tomada de decisão	0,338	0,538	0,432	0,417
Segurança da informação	0,152	0,123	0,417	0,148
Qualidade da informação	0,490	0,598	0,366	0,508
Satisfação do cliente (estudante)	0,359	0,505	0,205	0,583

DISCUSSÃO DOS RESULTADOS

A primeira questão de investigação consistiu em avaliar o impacto do Fénix nos processos de trabalho diário dos docentes do ISCTE-IUL nas dimensões produtividade, inovação, controlo da gestão, tomada de decisão, segurança da informação, qualidade da informação e satisfação do cliente

(estudante). Os resultados mostraram que a dimensão que apresentou um maior nível de impacto foi o controlo da gestão e não a produtividade como seria de esperar (Tabela 13). O facto de o controlo da gestão aparecer na primeira posição, na perceção dos docentes, pode dever-se a que estes consideram que o Fénix ajuda os serviços a controlar os processos de trabalho.

Proceedings of the 5th Global Management Conference, 2013,

Global Academic Network & ISCTE-IUL;

ISBN: 978-989-732-156-6; © Instituto Universitário de Lisboa (ISCTE-IUL), Portugal

Tabela 13: Ordenação das dimensões de impacto com outros estudos

Dimensões	ISCTE-IUL (2012)	Torkzadeh e Doll (1999)	Bachéga e Almeida (2009)	Rodrigues (2009)	Bailoa (2011)	Antonelli <i>et al.</i> (2012)
Controlo da gestão	1º	3º	4º	2º	4º	2º
Segurança da informação	2º			1º	5º	
Satisfação do cliente	3º	2º	3º	6º	3º	3º
Qualidade da informação	4º			3º	2º	
Tomada de decisão	5º			5º	6º	
Produtividade	6º	1º	1º	4º	1º	1º
Inovação	7º	4º	2º	7º	9º	4º

Nos estudos de Rodrigues (2009) e de Antonelli *et al.* (2012), apesar de terem sido realizados em realidades organizacionais diferentes, o controlo da gestão foi também uma das dimensões que apresentou maior impacto, aparecendo na posição 2. Com efeito, Rodrigues (2009) justifica este facto devido à utilização das tecnologias poder ser um instrumento no reforço de posições da atividade da gestão nas organizações, podendo ser usada para uma gestão centralizada e controlada.

Seguidamente, uma das dimensões que mais se destacou neste estudo, foi a segurança da informação (posição 2), sendo também, a dimensão que apresentou maior impacto no estudo de Rodrigues (2009). Estes resultados demonstram que os docentes consideram que o Fénix é seguro, destacando-se que este tem um controlo de senhas adequado e seguro, protegendo os dados contra acessos não autorizados e aumentando, deste modo, a segurança dos dados (confidencialidade, privacidade e integridade).

Relativamente à dimensão satisfação do cliente (estudante), esta posiciona-se na posição 3. Tendo-se verificado no estudo de Bachéga e Almeida (2009) que esta dimensão posicionou-se em igual posição. Ives *et al.* (1983) consideram que um SI que responda às necessidades do seu utilizador reforça a satisfação com esse sistema. Assim, os resultados demonstram que os docentes

consideram que o Fénix contribui para um aumento da satisfação do cliente, devido a melhorar os serviços disponibilizados aos seus estudantes, respondendo, desta forma, às suas necessidades.

Numa posição menos destacada aparece a qualidade da informação (4ª posição). Bailoa (2011) considera a qualidade da informação como uma das dimensões fundamentais na gestão do SI, aparecendo na posição 2. Os docentes destacam que o Fénix disponibiliza informações de fácil acesso, melhorando, desta forma, a qualidade da informação.

A tomada de decisão aparece na posição 5, sendo no estudo de Rodrigues (2009) a dimensão que apresentou menor impacto das tecnologias. Em relação à tomada de decisão os docentes nem concordam nem discordam que as informações produzidas pelo Fénix são confiáveis, considerando que o Fénix nem contribui muito nem pouco para a tomada de decisão, isto é, que o Fénix tem um impacto moderado na tomada de decisão.

A produtividade é uma das dimensões que apresenta menor impacto ao nível dos processos de trabalho, aparecendo na posição 6, resultado muito aproximado ao do estudo de Rodrigues (2009), em que esta dimensão também apresentou uma menor média de impacto, aparecendo na posição 4. O resultado obtido revela que os docentes nem concordam nem discordam que o Fénix ajuda a economizar tempo, considerando que o Fénix contribui de forma moderada para um aumento de produtividade.

Na última posição, surge a dimensão inovação, tendo-se verificado no estudo de Bailoa (2011) um igual impacto em relação a esta dimensão, o qual considera que dadas as alterações nas tecnologias, na vertente do conhecimento e da informação, poder-se-ia pensar que a tecnologia seria uma ferramenta importante no processo de inovação. Assim, os docentes consideram que o Fénix não os ajuda a experimentar ideias novas nem os ajuda a ter ou produzir novas ideias, tendo o Fénix um contributo fraco para a inovação.

A segunda e terceira questão de investigação consistiram em analisar a relação entre os impactos do Fénix e as características sócio demográficas e profissionais dos docentes. Os resultados demonstraram que as características sócio demográficas dos docentes, sexo, escalão etário e grau académico, apresentaram uma relação muito fraca com os impactos do Fénix nas sete dimensões, o que vem confirmar os resultados de Bailoa (2011), quando esta avaliou os impactos do Fénix na Câmara Municipal de Sintra.

As características profissionais dos docentes apresentaram uma influência muito fraca ou fraca nos impactos das dimensões. Constatou-se que a atividade desempenhada pelo docente tem uma relação fraca com a segurança e qualidade da informação e com a satisfação do utilizador e que o regime de serviço apresenta relação também fraca com a satisfação do cliente. Bailoa (2011) identificou uma influência da unidade orgânica nos impactos, o que reflete que os impactos percecionados são diferentes consoante as características profissionais. Assim, os resultados obtidos confirmam os resultados do estudo de Bailoa ao identificar, embora diferentes, características profissionais que se relacionam, apenas de forma fraca, com os impactos do Fénix.

A quarta questão de investigação consistiu em analisar a satisfação do docente nas dimensões de impacto (usabilidade, conteúdo, precisão e oportunidade) e a sua relação com as dimensões de impacto do Fénix. Não foram

identificados análises semelhantes na revisão da literatura, pelo que estes resultados constituem um primeiro contributo para o conhecimento.

Verificou-se que a dimensão usabilidade, que engloba, o formato e a facilidade de utilização, e a dimensão oportunidade da informação são aquelas que apresentam maior satisfação dos docentes. Nas dimensões conteúdo e precisão, a satisfação dos docentes é apenas moderada. A satisfação dos docentes nas quatro dimensões apresenta relações positivas, moderadas ou fracas, com qualquer um dos impactos. Com relações muito fracas apenas se identificaram as dimensões usabilidade, conteúdo e oportunidade com o impacto na segurança da informação e, ainda, a dimensão precisão com o impacto na inovação. Estes resultados indiciam que quanto mais satisfeitos os docentes estiverem com o Fénix, maior será o impacto nas dimensões de trabalho.

CONCLUSÕES

A par da investigação elaborada a uma autarquia portuguesa, em 2011, este estudo é pioneiro em Portugal, não existindo estudos dos impactos do SI nos processos de trabalho individual, ao nível de uma instituição universitária. Deste modo, este trabalho pode ser importante a nível académico para quem faça investigação na área da gestão de SI.

Os resultados obtidos nesta investigação podem ser importantes nesta instituição (ISCTE-IUL), ao nível da reitoria, dos diretores de departamentos e, também, para os docentes. De facto, os resultados evidenciaram que os impactos do sistema Fénix não são muito elevados, demonstrando a necessidade de novos desenvolvimentos tendo em vista tirar todo o partido dos investimentos elevados realizados. Nomeadamente, destaca-se que a

produtividade revelou apenas um impacto moderado, ao contrário da maioria dos estudos em que o maior impacto residia, precisamente, na produtividade. Assim, talvez a simplificação de processos possa ser um requisito para uma maior produtividade, ou a integração do sistema Fénix com a plataforma de *e-learning* (*Blackboard*) possa contribuir para ganhar tempo.

A divulgação dos resultados para a comunidade ISCTE-IUL e, em particular, para os docentes pode motivar os docentes que ainda não exploram convenientemente todas as potencialidades do sistema a perderem algum tempo em formação, para depois poderem sentir os verdadeiros impactos que um sistema destes pretende proporcionar. Para os responsáveis pela gestão dos sistemas de informação o estudo permite identificar diversos aspetos positivos e negativos segundo a perceção dos docentes. Como aspetos positivos, o SI ajuda a um melhor controlo da gestão da parte dos serviços administrativos, assegura a segurança da informação e permite aumentar a satisfação do cliente, fornecendo serviços ajustados às suas necessidades. Por outro lado, como aspeto negativo, o SI não contribui para a inovação.

Assim, sugere-se que a organização possa corrigir eventuais falhas nas funcionalidades e no *design* do Fénix, por forma a aumentar os impactos deste SI nos processos de trabalho individual.

A principal limitação deste estudo prende-se com o facto de esta investigação ser um estudo caso e de ter sido realizado numa única instituição universitária, fazendo com que os resultados não se possam generalizar a outras universidades. Por outro lado, o facto de o estudo ter sido realizado nesta instituição pela primeira vez, não permite comparações com outros momentos no tempo. Acresce ainda a baixa taxa de resposta dos docentes ao questionário, o que impede a extrapolação de resultados para todos os docentes.

A inexistência de estudos dos impactos do SI em instituições universitárias portuguesas, existindo somente um estudo desta natureza numa autarquia portuguesa, não permite efetuar comparações de resultados com outras instituições similares. No entanto, os dois estudos revelam diferenças ao nível dos impactos, sugerindo que o sector de atividade pode conduzir a impactos diferentes. Assim, a realização de mais estudos em instituições de ensino superior e de outros sectores de atividades torna-se fundamental para um melhor conhecimento da realidade portuguesa.

REFERÊNCIAS

- Antonelli, R. A., Almeida, L. B., Colauto, R. D. e Silva W. V. (2012), Percepções dos profissionais de contabilidade quanto à influência da tecnologia da informação no seu processo de trabalho individual, *12º Congresso USP de Controladoria e Contabilidade*, São Paulo/SP, pp. 1-18.
- Bailoa, S. (2011), *Impacto dos Sistemas de Informação nos Processos de Trabalho: O Caso da Câmara Municipal de Sintra*. Tese de Mestrado em Gestão de Sistemas de Informação, Portugal: ISCTE-IUL.
- Bachéga, C. e Almeida, P. (2009), Benefícios proporcionados pela TI na prefeitura municipal de Botucatu: Uma análise de percepção dos usuários e dos gerentes de informática, *Actas da ETIC – Encontro de Iniciação Científica* 5(5), 1-12.
- Chin, W. e Lee, M. (2000), A proposed model and measurement instrument for the formation of IS satisfaction: The case of end-user computing satisfaction, *Proceedings of the twenty first international conference on Information systems*, 553-563.

- Dewett, T. e Jones, G. (2001), The role of information technology in the organization: a review, model and assessment, *Journal of Management* 27(3), 313-346.
- DeLone, W. e McLean, E. (1992), Information systems success: The quest of dependent variable, *Information Systems Research* 3, 60-951.
- Doll, W. eTorkzadehG. (1988), The measurement of end-user computing satisfaction, *MIS Quarterly*, 12, 258-274.
- Doll, W., Deng, X., Raghunathan, T., Torkzadeh, G. e Xia, W. (2004), The meaning and measurement of user satisfaction: a multigroup invariance analysis of the end-user computing satisfaction instrument, *Journal of Management Information Systems* 21(1), 227-262.
- Doll, W. e Torkzadeh, G. (1989), A discrepancy model of end-user computing involvement, *Management Science* 35(10), 1151-1171.
- Donner, M. L. e Oliveira, L. R. (2008), Análise de satisfação com a segurança no uso de internet banking em relação aos atuais recursos disponíveis no canal eletrónico, *Anais do XXXII Encontro da ANPAD – EnANPAD*, 1-16.
- Ezingear, J., Mccfadzean, E. e Birchall, D. (2005), A Model of Information Assurance Benefits. *Information Systems Management* 32 (11), 20-29.
- Fayol, H. (1994), *Administração industrial e geral*. São Paulo: Atlas.
- Ferauche, T. (2006), *Teoria Geral de Sistemas e Informação*. Brasil: Faculdade de Tecnologia da Praia Grande.
- Hair, J., Tatham, L., Anderson, E. e Black, W. (1998), *Análise Multivariada de Dados*. 5ª edição, Prentice-Hall, Inc., 89-419.
- ISCTE-IUL (2012), ISCTE-Instituto Universitário de Lisboa, apresentação da instituição, http://iscte-iul.pt/quem_somos/apresentacao.aspx (acedido em 6 de setembro).
- Ives, B., Olson, M. e Baroudi, J. (1983), The measurement of user information satisfaction. *Working Papers Series* 26(10), Center for Digital Economy Research, EUA: Stern School of Business.
- Koved, L. Nadalin, A., Nagarathnam, N., Pistoia, M. e Shrader, T. (2001), Security challenges for enterprise java in an e-business environment, *IBM Systems Journal*, 40(1), 130-152.
- Landwehr, C. E. (2001), Computer security, *International Journal of Information Security* 1(1), 3-13.
- Laudon, N. e Laudon, J. (2004), *Management Information Systems: The digital Firm*. 9ª edição, Prentice Hall.
- Laureano, R. M. S., Bailoa, S. e Laureano, L. M. S. (2012), Impacto dos Sistemas de Informação nos Processos de Trabalho: O Caso da Câmara Municipal de Sintra, *Revista Egítania Scientia*, nº.11, Jun-Nov, 165-188.
- Laureano, R. M. S. e Botelho, M. C. (2012), *SPSS: o meu manual de consulta rápida*, 2ª Edição, Lisboa: Edições Sílabo.
- Laurindo, F. (2002), *Tecnologia da Informação: Eficácia nas Organizações*. São Paulo: Futura.

- Lopes, I. L. (2004), Novos paradigmas para avaliação da qualidade da informação em saúde recuperada na web. *Ciência da Informação* 33(1), 81-90.
- Lunardi, G., Dolci, P. e Maçada, A. (2010), Adoção de tecnologia de informação e seu impacto no desempenho organizacional: um estudo realizado com micro e pequenas empresas. *Revista de Administração*, 45(1), 5-17.
- Lucht, R., Hoppen, N. e Maçada, A. (2007), Ampliação do modelo de impacto de TI de Torkzadeh e Doll à luz do processo decisório e da segurança da informação. *Anais do XXXI Encontro da ANPAD-EnANPAD*, 1-11.
- Maroco, J. (2003), *Análise Estatística com Utilização do SPSS*. Lisboa: Edições Sílabo.
- March, J. (1994), *A primer on decision making: how decision happen*. New York: The Free Press.
- Mendonça, M., Freitas, F. e Souza, J. (2009), Tecnologia da Informação e Produtividade na Indústria Brasileira. *Revista de Administração de Empresas* 49(1), 74-85.
- Moura, L. R. (1996), Informação: a essência da qualidade. *Ciência da Informação* 25(1), 36-42.
- Pestana, M. H. e Gageiro, J. N. (1998), *Análise de Dados para Ciências Sociais – A Complementaridade do SPSS*. 1ª Edição, Lisboa: Edições Sílabo.
- Pereira, M. (2003), *O impacto da tecnologia da informação sobre o processo de trabalho bancário*. Tese de Mestrado, Universidade Federal do Rio Grande do Sul.
- Ramos, I. (2000), *Aplicações das Tecnologias de Informação que Suportam as Dimensões Estrutural, Social, Política, Simbólica do Trabalho*. Tese de Doutoramento em Tecnologias e Sistemas de Informação, Universidade do Minho.
- Rascão, J. (2004), *Sistemas de Informação para as Organizações: A Informação Chave para a Tomada de Decisão*. 2ª edição, Lisboa: Edições Sílabo.
- Rocha, P. e Albuquerque, A. (2007), *Sincronismo Organizacional*. São Paulo: Saraiva.
- Rodrigues, J. (2009), *Avaliação do Impacto de uma Tecnologia de Informação para Gerenciamento de Serviços de Saúde na Percepção dos Clientes Internos do Hospital Universitário de Brasília*. Tese de Mestrado, Universidade de Brasília.
- Sêmola, M. (2003), *Gestão da Segurança da Informação: uma Visão Executiva*. Rio de Janeiro: Campus.
- Schwarz, G. (2002), Organizational hierarchy adaptation and information technology, *Information and Organization* 12(3), 153-182.
- Sheng, Y. P. (2003), Exploring the mediating and moderating effects of information quality on firms' Endeavor on Information Systems. *Proceedings of the 8th International Conference on Information Quality ICIQ-03*, 344-352.
- Torkzadeh, G. e Doll, W. (1999), The development of a toll for measuring the perceived impact of information technology on work, *Omega* 27(3), 327-339.

- Tech, A. e Gualazzi, G. (2007), Um modelo neural para a mensuração da informação no processo decisório. *XXVII Encontro Nacional de Engenharia de Produção*, Brasil, 1-9
- Whitman, M. E. (2003), Enemy at the gate: Threats, to information security, *Communications of the ACM* 46(8), 91-95.
- West, J. e Berman, E. (2001), The impact of revitalized management practices on the adoption of information technology: A national survey of local governments, *Public Performance e Management Review* 24(3), 233-253.

INTERRELATION BETWEEN E-SERVICE QUALITY, ATTITUDES AND BEHAVIORS INTENTIONS IN CONTENT-DRIVEN E-SERVICE WEBSITES³²

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ABSTRACT

The aim of this paper is to propose a conceptual model to examine the relationships among e-service quality, attitudes and behavioral intentions within the context of pure-play content-driven websites mainly targeted to professional of sports and fitness activities. Data from an online survey of 182 valid contacts of sports and fitness professionals as consumers were collected; Partial Least Squares Path Modeling (PLS-PM) was used to empirically test the model. Findings suggest that two dimensions of quality e-service, the website level of trust and security and the personalization service, positively influence the intentions to revisit the website. It is also suggested that when customers form positive attitudes towards the website they will positively influence their intentions to revisit it. Also customers with a positive attitude towards the internet and website brand are more likely to form positive attitudes towards the website. Results support the idea that dimensions of e-service quality influence consumer attitudes as well as behavioral intentions in the context of content-driven websites.

INTRODUCTION

Electronic commerce draws on a technology revolution that changed the way of doing business. Internet made possible a different form to interact with suppliers and customers (Santos 2003) enabling an electronic service (e-service) which supports the process of buying, selling or exchanging products, services and information (Voss, 2003). Different streams of research have been addressing the e-service concept, initially focused on the factors that influence online shopping (Bhattacharjee, 2001) particularly in B2C business. Given the differences between e-service and conventional markets in what concerns consumer and provider encounters, and as online markets become more mature, new concerns take place to understanding the consumer's behavior regarding their continued usage of specific websites. Customers are shoppers and simultaneously internet users in online markets, which explains the amount of

scholarly work addressing e-service as a subject in information technologies or as a marketing topic in e-retailing market.

Several studies explore e-service quality focusing on e-retailing (e.g. Loiacono et al., 2007; Collier and Bienstock, 2006) and addressing behavioral intentions (Carlson & O'Cass 2010; Bansal et al., 2004; Francis & White, 2002). Understanding the determinants of service quality focusing on e-retailing is imperative to develop durable relationships (Parasuraman et al., 2005; Fassnacht & Koese, 2006). Chen and Wells (1999) concluded that a predisposition to interact with a website depends on the consumer attitude towards the site. It has been referred that positive attitudes are associated with attributes of e-service quality (Chen & Wells, 1999; Chen et al., 2002), and in e-retailing environment, Wolfinbarger and Gilly (2003) identified several e-service quality factors that positively influence consumer attitudes towards the website.

³² The paper was developed in equal authorship and based on data from Jordan Ferreira master's thesis.

Other stream of research focus on information systems by applying the Technology Acceptance Model (TAM), analyzing the relationships between e-quality and behavior intentions (e.g. Mouakket, 2009; Khalifa, & Liu, 2007; Li, Browne & Wetherbe, 2006). TAM aims to explaining and predicting the drivers of these acceptance and continuance (e.g. Mouakket 2009; Hong, Thong & Tam, 2006). Technology acceptance literature builds on the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), assuming that the individual's behavioral intention to perform a behavior is jointly shaped by a personal attitude towards performing that behavior and subjective norms. In TRA behavior intentions is the only direct antecedent of the actual behavior. Further, Ajzen (1985) extended TRA to Theory Planned Behavior (TPB) by adding a perceived behavioral control construct to the model aiming to predict behavioral intentions and behavior. Technology acceptance model (TAM) adapted from TRA (Davies 1989; Davies et al. 1989), introduced two main variables, *perceived usefulness* and *perceived ease of use*, preceding attitude towards use and thereby behavioral intention. Later on, TAM was adjusted to web use at work (Lederer, 2000) and customers internet acceptance (Polatoglu & Ekin, 2001).

Attitude is a predisposition to respond towards an object (Gordon, 1935) and their study is present in both streams of research referred. Brand attitude has been a concept related with behavioral intentions, and building strong website brand equity was demonstrated to increase marketing effectiveness, improve perceptions of product or service performance and reduce perceived risk of the purchasing decision (Aaker, 1996). Several studies suggest that brand attitudes influence customer loyalty (Chaudhuri & Holbrook, 2001; Keller, 2003). Fazio and

Zanna (1978; 1981) suggested that the consistency of this relationship is higher for those that have direct experience with the attitude-object when compared to those who only have indirect experience. This means that product use or direct tests influence brand loyalty in a stronger way than attitudes promoting indirect experiences, like advertising, do. Nevertheless, Berger and Mitchell (1989) found that indirect experiences, such as advertising repetition, are similar as direct experiences in changing the accessibility of attitudes, although this repeated exposure could have a marginal effect of internet advertising on the consumer's level of brand awareness (Lee & Briley, 2005). Attitudinal loyalty explains consumer's identification with a particular service provider and preference of a product or service over existing alternatives (Jones & Taylor, 2007). Studies applying TAM to assess the consumer's intention to use websites have found that positive attitude towards a website is significantly and positively correlated with a favorable intention to reuse and purchase from the website (Vijayasathy, 2004). Similarly to these studies in effectiveness of a service within internet context, consumer's attitudes towards a website are determinant in both adoption and usage behavior (Bruner & Kumar, 2000; Stevenson et al., 2000).

Fewer studies examined simultaneously e-service quality and behavioral intentions in conjunction with consumer attitudes. The present study combines the two above mentioned streams of literature in pure-play e-retail environment. The study focuses on content driven websites where information and content about specific subjects, brands and firms are mixed with online direct or indirect (through other operators) transaction capabilities. Therefore, the purpose of this study is to contribute to the understanding of e-service quality and examine its relationship with consumer behavior

outcomes within the context of pure-play content-driven websites. A conceptual framework and specific hypotheses are developed in order to analyze the relationships between e-service quality, attitudes and behavior intentions in the context referred, but may be useful to understanding the determinants of the e-service in general. Consequently the paper is structured as follows: first, the concept of e-quality is briefly discussed, followed by a discussion on the influence of e-quality on the loyalty in revisiting the website, as well as in the attitude towards the website. The impacts of the attitude towards the brand and towards internet are also addressed. Subsequently, we present the conceptual model and the hypotheses. Methodology and discussion of results are then presented. We conclude by noting the managerial and research implications of the findings.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

The importance of service quality in the traditional commercial context has been long studied in order to understanding the role of the different attributes in consumer's behavior outcomes (e.g. Anderson et al., 1994; Cronin & Taylor, 1992). The path followed in this stream of research can be summarized in a simplified manner by first addressing the influence of quality attributes on consumer's satisfaction, and then analyzing both these variables as drivers in the attitudes towards the website. These attitudes are in turn responsible for behavior intentions. Several studies address e-service, identifying the dimensions of the quality followed by this model (e.g., Swaid & Wigand, 2009; Collier & Bienstock, 2006; Wolfinbarger & Gilly, 2003), but only few relate the e-service quality attributes with the attitudes towards the firm website and behavioral intentions.

In e-retailing and particularly in specialized services, websites became to be considered as a tool to sales where content is not only strictly supported by advertisements, but also where content could be a new branch of the business. This means the company generates revenue from either commerce, content or more often from both. Whilst there are many cases of commerce companies that also regularly blog or content-based companies who are active affiliate marketers, the new intersection of content-based commerce focuses more on curated, editorial-based content and a related commerce-based opportunity. This means you don't fall into this category if you are an ecommerce site with a blog, or a blog with affiliate links. Use content based e-commerce is difficult, due to the need of a relationship with the consumer in order to assure a brand loyalty and a continue presence in the website, but also it is essential to guarantee the attraction of the customer to visit a large number of pages. Consequently, new and targeted content must be constantly generated on an increasing basis, in order to guarantee revenue from directed advertisements and cross promotions within the content. Simultaneously, consumers should be encouraged to browse and purchase online products and services on site or on partner sites. Nonetheless, the focus must be always directed to long term relationships and not to immediately transactions.

E-service quality - In the website design and evaluation not only the different components of the e-service should be taken into account (Wolfinbarger & Gilly, 2003), but also the fact that maintaining the flow of the customer's revisits to the site is vital in e-business (Swaid & Wigand, 2009; Collier & Bienstock, 2006). In this study, we used information quality, website usability, service reliability, responsive-ness, assurance and personalization, as distinct dimensions in e-service quality.

Information quality has been investigated by several authors (e.g., Swaid & Wigand, 2009; Ho & Lee, 2007; Kim & Lee, 2004). This dimension is determined by the customer perception about the quality and usefulness of the information content of the website (Hanna & Millar 1997; Spiliopoulou, 2000) and generates a favorable attitude towards the website (Jeong & Lambert, 2001). In the present study the detail, time, relevance, appropriateness and usability (also known as ease-of-use) have been considered as measurement items. The perception of usability is the degree to which one believes that using a particular system does not involve effort (Davis, 1989), being one of the most important elements that make customers to revisit the website (Madu & Madu, 2002). Factors like ease of navigation, minimum scrolling and availability of instructions of navigation are considered as highly relevant to use (Parasuraman et al., 2005; Swaid & Wigand, 2009). Customer perception of the confidence and trust towards the website is usually mentioned as assurance (Parasuraman et al., 2005; Wolfinbarger & Gilly, 2003). As more sensitive data, financial and other, are requested from the customer to provide a better service, more resources must be allocated to website security. The customer has become increasingly demanding in their interaction with retailers, either they are physical or online. Responsiveness is a condition to provide a good service and as such, an important dimension of quality of e-service (e.g., Parasuraman et al., 2005; Swaid & Wigand, 2009; Collier & Bienstock, 2006). Responsiveness may be defined as the customer perception of getting help by human or automated factors when needed (Parasuraman et al., 2005). Interaction (by email or other) with the customer, in order to solve problems and answer questions, as well as fulfillment and short delivery time were considered in this study.

Service reliability is recognized as an important dimension in conceptualizing the quality of e-service (e.g. Wolfinbarger & Gilly, 2003; Madu & Madu, 2002; Yang & Jun, 2002), either with regard to customer perception of reliability of the website or the strict observance of service promises. Personalization, achieved by the ability to customize the service according to customer individual needs and preferences, supported by data bases where customer's story permit to search for preferences and adapt the service to the customer (Ho & Lee, 2007; Madu & Madu, 2002), saves time and increases customer perception of service quality because it maximizes their convenience (Madu & Madu, 2002). Yang et al. (2005), claim that by offering personalized services to the preferences and history of customer purchases, they feels more secure with the website willing to revisit it.

E-service quality and Loyalty - Any company with a presence online should know what their customers perceive as service quality, in order to understand what they value in an e-service (Collier & Bienstock, 2006). This global judgment of attitude (Parasuraman et al., 1988) being a predictor of the customer level of satisfaction with the service (Yang et al., 2005) and possibly preceding behavioral intentions, therefore loyalty, on a website, is suggested be strongly associated with the quality of the website service (Jeon, 2009).

Loyalty is characterized by a deep commitment to a consistent customer repurchase despite the attempts of the competitors for a change in behavior (Oliver, 1999). Griffin (2002) reports that there are two critical factors which determine the loyalty, emotional connection with the brand and repurchases of the product associated with that brand. In online context Srinivasan et al. (2002) allude to loyalty as a customer friendly attitude in relation to e-retailer, which results in repeated purchase behavior.

Web technologies reduce the customers switching costs, which increases the difficulty in retaining them and making customer retention a determinant of online business (Chen & Hitt, 2002; Vatanasombut et al., 2004).

Attitude theory predicts that behavioral intention towards an object is mainly explained by the attitude toward the same object (Fishbein & Ajzen, 1975). In TAM approach, the consumer's intention to revisit a website is influenced by the consumer's attitude towards using the internet technology involved in the site (Koufaris, 2002). A positive relationship between attitude toward the website and the revisiting intention was also suggested (Casteneda et al., 2009; Hausman and Siekpe, 2009; Sánchez-Franco Roldán, 2004). The customer loyalty, referred to as revisit intentions in this study, is thus of utmost importance to organizations today, and a crucial objective when providing a service. Hence, the following hypothesis will be tested:

H1: Dimensions of e-service quality positively influence the customer revisit intentions

Attitudes towards the website - In consumer behavior studies attitude is an important concept, being an antecedent of behavior intentions. The functional view of attitudes proposed that attitudes activate motivational concerns, or functions, across individuals (Anderson & Kristiansen, 1990; Shavitt, 1989). In other words, they activate a mental state of readiness that influences people response. Jarvenpaa et al. (2000) concluded that risk and trust in an Internet store are determinant to online shopping and attitudes to the internet and to the website, being therefore relevant to explain the online consumer behavior. An attitude is defined as a learned predisposition to respond in a favorable or unfavorable way to an object or stimulus (Fishbein & Ajzen, 1975), being a result of the consumer's learned willingness to the

service or brand in question after the assessment of past experiences (Roest & Pieters, 1997). Grace and O'Cass (2004), in the context of banking service brands, found that the service experience influenced the development of brand attitudes, which means that if the service has a good evaluation then it is possible to expect positive attitudes towards the branded bank service.

Consumer attitude towards a website has been referred to as a predisposition to respond positively or not to the website (Chen & Wells, 1999). Applying the TAM model to examine website effectiveness several authors have found a direct positive relationship with consumer attitudes (e.g. Vijayasarathy, 2004; Perea et al., 2004). Carlson and O'Cass (2010) studying how the consumer perceptions of e-service quality impacts the development of consumer attitudes towards the website, found that e-service quality acts as an antecedent to sports consumer's attitudes towards a sporting team website. Further, in the context of e-retailing and internet shopping, it has been shown that various e-service quality factors positively influence consumer attitudes towards the website (e.g. Wolfinbarger & Gilly, 2003; Yoo & Donthu, 2001). In view of above, the following hypothesis was proposed:

H2: Perceived e-service quality dimensions have a positive influence on consumers' attitude towards the website.

The existence of a relationship between the attitude towards a given system and behavior intentions is also suggested by Davis et al. (1989) in its Technology Acceptance Model where the model was tested to explaining the relationship between attitude toward the website and revisit intentions. Singh et al. (2005) argued that the formation of attitudes towards the website is one of the main drivers to generate behavioral intentions, which are essential to the success of an e-business (Reichheld &

Schefter, 2000). Several studies found that there is an effect of attitude towards website in relation to loyalty, particularly to the intention to revisit the website (e.g., Castañeda et al., 2009; Chen & Wells, 2002; Supphellen & Nysveen, 2001). Thus:

H3: Attitudes towards the website determines the intention to revisit it.

Attitudes towards the internet - In online business context, among different reasons for buying online are functional or utilitarian reasons, characterized by convenience, access to information and control of the shopping experience (Wolfenbarger & Gilly, 2001) and particularly higher time saving than in traditional retail (Alreck & Settle, 2002). Sorce et al. (2005) suggested that those with more positive convenience and information attitudes towards online shopping had higher online searching and purchasing behavior. Hence, we suggest that:

H4: Attitudes towards the internet influence the attitudes towards the website

Attitudes toward the brand - Researchers have been studying the relationship between the brand and consumer behavior for long. In this article we consider brand, as the brand of the company that is responsible for the website. A brand stimulates associations to the consumer, allowing him to organize and process pictures and information that will assist in decision making (Kwun &

Oh, 2007). It is also suggested that the reputation associated with the name of the brand is closely linked to the satisfaction with the product or service behind the brand (e.g., Aaker & Keller, 1990; Shapiro, 1983; Zeithaml, 1988). The role of brand cognitions in the formation of post-communication brand attitudes has been well documented in research applying expectancy-value attitude theory (e.g., Mitchell & Olson, 1981; Fishbein & Azjen, 1975; Lutz, 1975). Balabanis & Reynolds (2001) suggest that attitudes towards a website are conditioned by any prior attitude towards the brand associated with the website, and therefore they support that it is the attitude towards the brand that positively influences the attitude towards the website. Castañeda et al. (2009), studying the attitudes' hierarchy of effects in online user behavior, hypothesized that when the brand sponsoring a website is well known, the attitude towards the brand significantly determines the corresponding attitude towards the website. Based on the above, the following hypothesis is set:

H5: Attitudes towards a well-known website brand determines the attitudes towards this website

The hypotheses are represented in the model in Figure 1, which shows e-quality dimension as antecedents of attitude towards the website and of the intention to revisit it. Attitude towards the website is a key element in determining behavior intentions, having as precursors the attitudes towards internet and the brand.

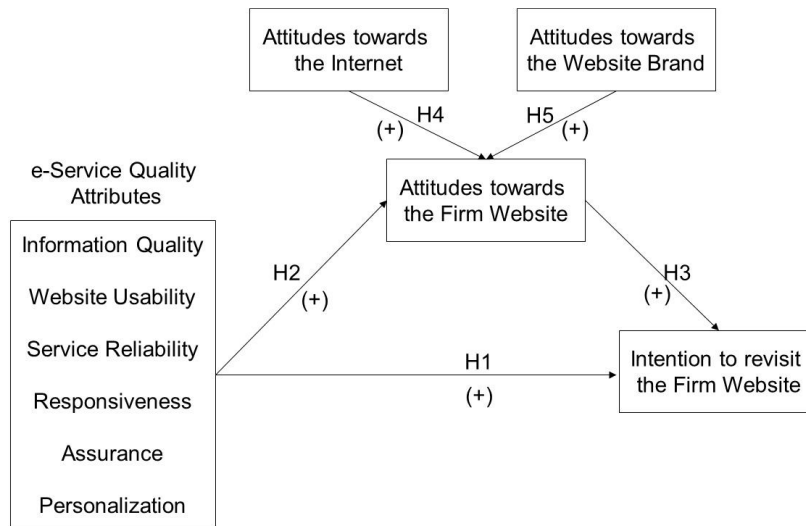


Figure 1: Conceptual model and hypotheses

METHODOLOGICAL APPROACH

Data collection procedure - The study was conducted using a sample of Portuguese professional of sports and fitness activities (e.g. jogging, tai chi, gymnastics, aerobics, walking, yoga, mountaineering, tennis, volleyball, soccer, bike-riding, surfing) who had a continuous presence and bought (as consumers and not as business) at Internet products/services used directly or indirectly in sports or/and fitness activities in the late 24 months preceding the survey response. The research was based on a survey of 1,800 valid contacts of sports' professionals (active and non-duplicate). Data collection was conducted through an

online questionnaire launched between April and May 2011. The questionnaire link was sent via email to all contacts in the database. From a total of 609 responses, only 128 had bought sport products at Internet during the defined period, hence the effective response rate was 7.1%.

Measures- The indicators used to operationalize the constructs were based on literature. Table 1 presents the main researches for each construct. All indicators are measured in a 5-point Likert scale from 1=strongly disagree to 5=strongly agree. The indicators per construct are presented in Table 2.

Table 1: Main research per construct

Construct	Main research
Intentions to revisit the website	Swaid & Wigand (2009), Parasuraman et al. (2005), Zeithaml et al. (1996)
e-service quality	Swaid & Wigand (2009), Parasuraman et al. (2005), Zeithaml et al., (1996), Li et al., (2002), Wolfinbarger & Gilly (2003), Collier & Bienstock (2006)
Attitudes towards the website	Chen & Wells (1999)
Attitudes towards the internet	Sorce et al. (2005)
Attitudes towards the website brand	Ballester & Espallardo (2008), Kwun & Oh (2007), Miller et al. (2009)

Model estimation - The standard Partial Least Squares Path Modeling (PLS-PM) algorithm (Wold, 1982) was

conducted to test the hypothesized relationships. The statistical software SmartPLS 2.0 (Ringle, Wende and Will,

2005) was used to estimate the model. The reasons for using PLS-PM were several fold, among which the following are stressed: (a) PLS-PM has being used by a growing number of researchers in various fields of management, particularly in the areas of e-business (e.g., Pavlou & Chai, 2002) and consumer behavior (e.g., Fornell & Robinson, 1983); (b) It can be used in samples of limited size since it avoids model identification problems (Henseler *et al.*, 2009); (c) PLS-PM can estimate complex models with several constructs and various indicators (Henseler *et al.*, 2009) and (d) it can incorporate both formative and reflective indicators in measurement models (Henseler *et al.*, 2009).

RESULTS

Sample characterization - respondents are majority male (60.2%) with average age of 31 years old and higher education (79.7%). A total of 60.9% are single and 32.8% have married. Most of the respondents live in the great Lisbon (59.4%).

Assessment of model quality - Model quality was firstly assessed for measurement models. An overview of some of the applied quality assessment measures for reflective and formative indicators is presented in table 2. Values of validity and reliability measures are from final model after the purification procedure, in which six indicators were eliminated due to low estimates for the standardized loadings.

Regarding the adequacy of the formative items of the Information Quality construct, all weight estimates were significant and also all VIF values were much lower than the threshold value of 10 (Diamantopoulos *et al.*, 2008; Henseler *et*

al., 2009), suggesting that there are no problems of multicollinearity. In what concerns the adequacy of the reflective measurement models, the values of Average Variance Extracted (AVE) (ranging from 0.57 to 0.69) and composite reliability (ranging between 0.81 and 0.88) of a construct are placed over the recommended thresholds for all constructs. All indicators have significant loadings which confirm the individual item reliability, and therefore, the item correlation with their latent variables. In addition, the loading value of each indicator is higher than the values of its cross-loadings. Regarding the statistical of Fornell-Larcker, it is verified that the square root of the AVE values for each construct are bigger than the correlation estimates; therefore, these two latter verified conditions allow to concluded that the scales do not suggest problems with discriminant validity, providing evidence that each construct is unique and distinct from other constructs. The first step to assess the structural model is to determine the coefficient of determination (R^2) for the endogenous constructs, attitude towards the website and intentions to revisit the website (Henseler *et al.*, 2009). The R^2 values of 0.60 for *Attitudes towards the website* and of 0.69 for *Intentions to Revisit* are considered substantial (Chin, 1998). The latter value means that 69% of variance of the construct Intentions to revisit the Website is explained by the other constructs in the model. The estimated Goodness-of-Fit measure has a satisfactory value of 0.64, indicating that the observed data fits the conceptual model.

Results of the structural model - Table 3, presents the standardized estimates of the regression coefficients associated with each hypothesis.

Table 2: Indicators per construct: item loadings and validity and reliability measures (d)

Indicators per construct		Item loadings
<i>Information Quality</i>		
The information of this website is current (b)	VIF=1.568	0.246 (c)
The information of this website is accurate (b)	VIF=2.167	0.186 (c)
The information of this website is relevant (b)	VIF=1.762	0.197 (c)
The information of this website has an appropriate level of detail (b)	VIF=2.378	0.220 (c)
The information of this website has everything I need to continue my task (b)	VIF=1.839	0.236 (c)
The information of this website is easy to understand (b)	VIF=1.530	0.244 (c)
<i>Website Usability</i> (AVE=0.656; ρ =0.850)		
Finding my way in the website is easy		0.869
Navigation around the website is consistent and standardized		0.858
I do not need to waste too much time (using scrolling) to see the content of the pages		0.691
The graphics, animations and advertising do not distract me from my purpose in using the website (a)		----
<i>Assurance</i> (AVE=0.642; ρ =0.876)		
The website is secure		0.832
I feel I can trust this website		0.902
The website is reputable		0.804
The company / brand behind the website is reputable		0.645
<i>Personalization</i> (AVE=0.691; ρ =0.870)		
The website gives me personal attention		0.819
The website allows me to order the product in a way that meets my needs		0.811
The website understands my specific needs		0.863
I can customize the product through the website (a)		----
<i>Responsiveness</i> (AVE=0.596; ρ =0.880)		
The email answers, whether human or automated, offer me a quick service		0.751
In addition to receiving, the website send me emails when I complain		0.777
Responses to e-mail messages are relevant, accurate and appropriate to my needs		0.798
The website shows a sincere interest in solving any problem		0.808
Given my expectations, the time between the request and the receipt of the order is reduced		0.723
(a) Item dropped during the purification procedure; (b) Formative indicator; (c) These values are weight estimates; (d) ρ - composite reliability.		

Table 2: Indicators per construct: item loadings and validity and reliability measures (d) (continued)

Indicators per construct	Item loadings
<i>Service Reliability</i> (AVE=0.679; ρ =0.864)	
The website has fulfilled the deadlines	0.840
All relevant order confirmations were sent to my email within 24 hours	0.829
Order cancellations and returns are confirmed me within 3 days (a)	----
The service's website was running properly right the first time	0.802
I could track the order through to delivery (a)	----
<i>Attitudes towards the Internet</i> (AVE=0.589; ρ =0.850)	
I prefer to learn and get product information via the Internet	0.721
It is easier to buy over the Internet	0.868
Buying via the internet saves me time	0.679
Buying through the Internet avoids the hassle of going to a store (a)	----
I like to buy on the Internet	0.788
<i>Attitudes towards the Firm Website</i> (AVE=0.588; ρ =0.809; R^2 =0.603)	
This website makes it easier the relationship with the respective company	0.728
I am satisfied with the service provided by the website	0.850
I feel that navigate in this website is a good way to use my time (a)	----
When comparing this website with other that sell online the same type of product, I consider this website better	0.713
<i>Attitudes towards the Website Brand</i> (AVE=0.624; ρ =0.869)	
I like the brand / company that supports the website	0.817
The brand / company behind the website is desirable	0.800
The website is respectable	0.729
The brand / company behind the website has good reputation	0.811
<i>Intentions to Revisit</i> (AVE=0.653; ρ =0.882; R^2 =0.688)	
This website will be my first choice to buy such type of products in the future	0.743
I will recommend this website to others	0.800
I intend to continue to purchase products from this website in the future	0.871
I want to revisit this website in the future	0.814

(a) Item dropped during the purification procedure; (b) Formative indicator; (c) These values are weight estimates; (d) ρ - composite reliability.

Table 3: Hypotheses and standardized path coefficients

Hypotheses		Regression coef.– Stand. estimates
H1	Dimensions of e-service quality positively influence the customer revisit intentions	
H1.1	Information quality positively influences the customer revisit intentions	-0.008
H1.2	Website usability positively influences the customer revisit intentions	0.066
H1.3	Website assurance influences the customer revisit intentions	0.185*
H1.4	Responsiveness positively influences the customer revisit intentions	-0.014
H1.5	Service reliability positively influences the customer revisit intentions	0.041
H1.6	Personalization positively influences the customer revisit intentions	0.153*
H2	Perceived e-service quality dimensions have a positive influence on consumers' attitudes towards the website	
H2.1	Information quality has a positive influence on consumers' attitudes towards the website	0.004
H2.2	Website usability has a positive influence on consumers' attitudes towards the website	0.006
H2.3	Website assurance has a positive influence on consumers' attitudes towards the website	0.174*
H2.4	Responsiveness has a positive influence on consumers' attitudes towards the website	0.285*
H2.5	Service reliability has a positive influence on consumers' attitudes towards the website	0.073
H2.6	Personalization has a positive influence on consumers' attitudes towards the website	0.182*
H3	Attitudes towards the website determines intention to revisit it	0.546*
H4	Attitudes towards the internet influence attitudes towards the website	0.124*
H5	Attitudes towards a well-known website brand determines the attitudes towards this website	0.179*

* Significant at 0.05

Regarding the significance of the regression coefficients, the results suggest that (1) assurance and personalization are the e-service quality dimensions that directly and positively influence intentions to revisit the website, partially supporting H1; (2) These two dimensions, jointly with responsiveness, also positively influence attitudes towards the website; Therefore, H2 is also partially supported; (3) Consistent with the hypotheses H4 and H5, attitudes towards the internet and attitudes and beliefs towards the brand positively influence the attitude towards the website. These results indicate that the higher the attitudes towards the internet and the brand, the greater the attitude of customer towards the website; (4) In relation to H3, the results reveal that the influence of customer's attitudes towards the firm website on its intentions to revisit

it is positive and strong (0.546, $t=7.093$); therefore H3 is also supported.

DISCUSSION AND LIMITATIONS

The purpose of the study was to understand the consumer assessments of e-service quality and examine their relationship with key consumer behavior outcomes within the context of content-driven websites. Data were collected in the business to consumer in pure-play e-retail environment and used to validate the developed model using Portuguese professional of sports and fitness activities as context.

The findings suggest that there is a positive influence of two dimensions of quality e-service, the website level of trust and security and the customization service, on the intentions to revisit the website. A positive perception of website

assurance, as well as a positive perception of personalized service, will contribute to the formation of customer intentions to perform loyalty behaviors. Customers in content websites use create a relationship with the company that manage the website and not only browse products but essentially search for interaction in a subject base. The potential value of this consumer to the company lies on a loyal and repeated relationship where both parties gain an understanding of each other. The more tailored the interaction over time, the greater the opportunities the company to propose solutions adapted to the customer and how it creates value. The customer begins to trust the judgment of the company (or brand), enjoy the content, and wants to actively return because they feel part of the movement. The website managers can build up data on what is relevant for that customer, so that they can provide the related commerce opportunity.

It is also suggested that when customers form positive attitudes towards the website they will positively influence their intentions to revisit it. Customers attitudes towards the website have been absent from most previous e-service quality models within the e-retail. Some authors in traditional e-retail context reference this relationship (e.g. Wolfinbarger & Gilly, 2003) but in content websites there are not many studies addressing this issue, particularly when a professional community is addressed as it is the case of sports and fitness activities. On the other hand, customers with a positive attitude towards the internet and website brand are more likely to form positive attitudes towards the website. Regarding the level of e-service quality, the dimensions of website assurance, customization service and responsiveness will contribute to the formation of a positive attitude towards the website when these dimensions are positively judged by the customer. The findings also allow the conclusion that an

influence on attitudes to the commerce online and on attitudes to the brand affects the attitude towards the website. The ability to respond only influences intentions to revisit the website indirectly, through its influence on the attitudes towards that website; therefore, attitude towards the website is a mediator of the relationship between the ability to respond and the loyalty intentions. Concerning the attitudes towards the website, the findings indicate that the consumers develop a favorable predisposition to develop relationships, based on service experience, which lead and influence intentions to revisit the website. This expands previous findings from studies that have been conducted within the e-retailing industry (Bruner & Kumar, 2000; Stevenson et al., 2000).

Several limitations are present in this study. Firstly, we only have addressed one business sector, Portuguese professionals in sports and fitness activities, which can be considered as a B2C industry. Furthermore, we focused the study on content websites in general, but today there are several typologies for these websites. Further research is suggested to consumer evaluations, approaching the relationship, if existing, between the type of the content website and the business to which it is addressed.

REFERENCES

- Aaker, D. & Keller, K. (1990). Consumer evaluations of brand extensions. *Journal of Marketing*, 54(1), 27-40.
- Aaker, D. A. 1996. *Building strong brand*, New York: The Free Press.
- Ajzen, I. & Fishein, M. (1980). *Understanding Attitudes and Predicting Social Behaviour*, Prentice-Hall: Englewood Cliffs, NJ.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl, & Beckmann (Eds.), *Action*

- control: From cognition to behavior. NY: Springer-Verlag.
- Allport, G. (1935). Attitudes, in *A Handbook of Social Psychology*, 798-844. Worchester, MA: Clark University Press.
- Alreck, P. & Settle, R. (2002). The hurried consumer: time-saving perceptions of Internet and catalogue shopping. *Journal of Database Marketing*, 10(1), 25-35.
- Anderson, D. S. & Knstiansen, C. M. (1990). Measuring attitude functions. *The Journal of Social Psychology*, 130(3), 419-421
- Anderson, E., Fornell, C. & Lehmann, D. (1994). Customer satisfaction, market share, and profitability. *Journal of Marketing*, 56(3), 53-66.
- Balabanis, G. & Reynolds, N. (2001). Consumer attitudes towards multi-channel retailers' Websites: The role of involvement, brand attitude, Internet knowledge and visit duration. *Journal of Business Strategies*, 18(2), 105-131.
- Ballester, E. & Espallardo, M. (2008). Building online brands through brand alliances in Internet, *European Journal of Marketing*, 42(9/10), 954-976.
- Bansal, H., McDougall, G., Dikolli, S. & Sedatole, K.(2004). Relating e-satisfaction to behavioral outcomes. *Journal of Services Marketing*, 18(4), 290-302.
- Berger, I. & Mitchell, A. (1989). The effect of advertising on attitude accessibility, attitude confidence, the attitude-behavior relationship. *Journal of Consumer Research*, 16, 269-279.
- Bhattacharjee, A., (2001). Understanding information systems continuance: an expectation-confirmation model. *MIS Quarterly*, 25(3), 351-370.
- Bruner, II G.C. & Kumar, A. (2000). Web Commercials and Advertising Hierarchy-of-Effects. *Journal of Advertising Research*. 40(1&2), 35-42.
- Carlson, J. & O'Cass, A. (2010). Exploring the relationships between e-service quality, satisfaction, attitudes and behaviours in content-driven e-service websites. *Journal of Services Marketing*, 24(2), 112-127.
- Castañeda, J., Rodríguez M. & Luque, T. (2009). Attitudes' hierarchy of effects in online user behaviour, *Online Information Review*, 33(1), 7-21.
- Chaudhuri, A., & Holbrook, M. (2001).The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, 65(2), 81-93.
- Chen, Q. & Wells, W. (1999). Attitude towards the site. *Journal of Advertising Research*, 39, 27-37.
- Chen, Q., Clifford, S. & Wells, W. (2002). Attitude toward the site: new information. *Journal of Advertising Research*, 42(2), 33-45.
- Chen, Pei-Yu & Hitt, L. (2002) Measuring Switching Costs and Their Determinants in Internet Enabled Businesses: A Study of the Online Brokerage Industry. *Information Systems Research*, 13(3), 255-276.
- Chin, W. W. (1998). Issues and opinion on structural equation modelling. *MIS Quarterly*, 22, 7-15.
- Collier, J. & Bienstock, C. (2006). Measuring Service Quality in E-Retailing. *Journal of Service Research*, 8(3), 260-275.
- Cronin, J. and Taylor, S. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing*, 56(3), 55-68.
- Davis, F.D., Bagozzi, R.P. & Warshaw, P.R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, 35(8), 982-1003.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Davis, F. D., Bagozzi, R. P. & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of

- two theoretical models. *Management Science*, 35(8), 982-1003.
- Diamantopoulos, A., Riefler, P., & Roth, K. P. Z. (2008). Advancing formative measurement models. *Journal of Business Research*, 61(12), 1203 -1218
- Fassnacht, M. & Koese, I. (2006). Quality of electronic services: conceptualizing and testing a hierarchical model. *Journal of Service Research*, 9(1), 19-37.
- Fazio, R. H., & Zanna, M. P. (1978). Attitudinal qualities relating to the strength of the attitude-behavior relationship. *Journal of Social Experimental Psychology*, 14, 398-408.
- Fazio, R. H., & Zanna, M. P. (1981). Direct experience and attitude-behavior consistency. *Advances in experimental social psychology*, 14, 161-202.
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Addison-Wesley, Reading, Mass.
- Fornell, C., & Robinson W. (1983). Industrial organization and consumer satisfaction/dissatisfaction. *Journal of Consumer Research*, 9(4), 403-412.
- Francis, J. & White, L. (2002). Exploratory and confirmatory factor analysis of the perceived internet retailing quality (PIRQUAL) model. In Shaw, R., Adam, S. and McDonald, H. (Eds), *Proceedings of ANZMAC*, CD-ROM.
- Gordon, A. (1935). Attitudes. In *A Handbook of Social Psychology*. Worcester, MA: Clark University Press.
- Grace, D. & O'Cass, A. (2004). Exploring consumer experiences with a service brand. *Journal of Product & Brand Management*, 13(4), 257-68.
- Griffin, J. (2002). *Customer loyalty: How to earn it, how to keep it*. (2^a ed.), Jossey-Bass Publication, San Francisco, USA.
- Hanna, P. & Millar, J. (1997). Promoting tourism on the Internet, *Tourism Management*, 18, 469-470.
- Hausman, A. V. & Siekpe, J. S. (2009). The effect of web interface features on consumer online purchase intentions. *Journal of Business Research*, 62(1), 5-13.
- Henseler, J., Ringle, C. M., & Sinkowics, R. R. (2009). The Use of Partial Least Squares Path Modeling in International Marketing. *Advances in International Marketing*, 20, 277-319.
- Ho, C., & Lee, Y. (2007). The development of an e-travel service quality scale. *Tourism Management*. 28(6), 1434-1449.
- Hong, S. J., Thong, J. & Tarn, K. Y. (2006). Understanding continued information technology usage behavior: a comparison of three models in the context of mobile internet. *Decision Support Systems*, (42), 1819-1834.
- Lee J. & Briley, D. (2005). Exploring Repeat Exposure Effects of Internet Advertising. In *AP - Asia Pacific Advances in Consumer Research* 6, Yong-Uon Ha and Youjae Yi, Duluth, MN (Eds.), Association for Consumer Research, 259-260.
- Jarvenpaa, S. L., Tractinsky, N. & Vitale, M. (2000). Consumer trust in an internet store. *Information Technology and Management*, 1(1&2), 45-71.
- Jeon, M. (2009). *Impact of perceived website service quality on customer e-loyalty on a lodging website*. Ph.D. Thesis, Dep. of Foodservice and Lodging Management, Iowa State Univ.
- Jeong, M., & Lambert, C. (2001). Adaptation of an information quality framework to measure customers' behavioral intentions to use lodging websites. *International Journal of Hospitality Management*, 20(2), 129-146.

- Jones, T. & Taylor S. (2007). The Conceptual Domain of Service Loyalty: How Many Dimensions?. *Journal of Services Marketing*, 26(1), 36-51.
- Keller, K. (2003). *Strategic Brand Management: Building, Measuring, and Managing Brand Equity*. 2.^a ed., Prentice Hall, Upper Saddle River, New Jersey, NJ.
- Khalifa, M. & Liu, V. (2007). Online consumer retention: contingent effects of online shopping habit and online shopping experience. *European J. of Information Systems* 16, 780-792.
- Kim, W., & Lee, H. (2004). Comparison of web service quality between online travel agencies and online travel suppliers. *Journal of Travel & Tourism Marketing*, 17(2/3), 105-116.
- Koufaris, M., (2002). Applying the technology acceptance model and flow theory to online consumer behavior. *Information Systems Research*, 13(2), 205-223.
- Kwun, D. & Oh, H. (2007). Consumer evaluation of brand portfolios. *International Journal of Hospitality Management*, 26(1), 81-97.
- Lederer, A. L., Maupin, D. J., Sena, M. P. & Youlong, Y. (2000), "The technology acceptance model and the World Wide Web", *Decision Support Systems*, 29, 269-282.
- Lee, J. & Briley, D. (2005). *Repeat exposure effects of internet advertising*. HEC Groupe, Chambre de Commerce et d'Industrie de Paris.
- Li, Y., Tan, K. & Xie, M. (2002). Measuring Web-based Service Quality. *Total Quality Management*, 13(5), 685-700.
- Li, D., Browne, GJ. & Wetherbe, J.C. (2006). Why do internet users stick with a specific website? A relationship perspective. *International Journal of Electronic Commerce*, 10(4), 105-141.
- Loiacono, E., Watson, R. & Goodhue, D. (2007). WebQual: An Instrument for Consumer Evaluation of Websites. *International Journal of Electronic Commerce*, 11(3), 51-87.
- Lutz, R. (1975). Changing brand attitudes through modification of cognitive structure. *Journal of Consumer Research*, 1(March), 49-59.
- Madu, N. & Madu, A. (2002). Dimensions of e-quality, *International Journal of Quality & Reliability Management*. 19(3), 246-258.
- Miller, C., Reardon, J., Salciuvienė, L., Auruskeviciene, V., Lee, K. & Miller, K. (2009). Need for cognition as a moderator of affective and cognitive elements in online attitude toward the brand formation. *Journal of Business & Economics Research*, 7(12), 65-72.
- Mitchell, A. & Olson, J. (1981). Are product attribute beliefs the only mediator of advertising effects on brand attitude?. *Journal of Marketing Research*. 18(August), 318-332.
- Mouakket, S., (2009). The effect of exogenous factors on the technology acceptance model for online shopping in the UAE. *International Journal Electronic Business* 7(5), 491-511.
- Oliver, R. (1999). Whence consumer loyalty?. *Journal of Marketing*, 63(4), 33-44.
- Parasuraman, A., Zeithaml, V. & Malhotra, A. (2005). E-S-Qual: a multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 78(3), 213-33.
- Parasuraman, A., V. Zeithaml & Berry, L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Perea y Monsuwé, T., Dallaert, B. & Ruyter, K. (2004). What drives consumers to shop online? A literature review. *International Journal of Service Industry Management*, 15, 102-121.
- Polatoglu, V. & Ekin, S. (2001). An empirical investigation of the Turkish consumers' acceptance of Internet

- banking services. *International J. of Bank Marketing*, 19, 156 – 165.
- Reichheld, F. & Schefter, P. (2000). E-loyalty: Your Secret Weapon on the Web, *Harvard Business Review*. 78(4), 105–113.
- Ringle, C., Wende, S., & Will, A. (2005). SmartPLS 2.0. Hamburg: University of Hamburg.
- Roest, H. & Pieters, R. (1997). The nomological net of perceived service quality. *International Journal of Service Industry Management*, 8(4), 336-51.
- Sánchez-Franco, M.J. & Roldán, J.L. (2004). Web acceptance and usage model: a comparison between goal-directed and experiential web users. *Internet Research – Electronic Networking Applications and Policy*, 15(1), 21-48.
- Santos, J. (2003). E-service Quality: A Model of Virtual Service Quality Dimensions. *Managing Service Quality*, 13(3), 233 - 246.
- Shapiro, C. (1983). Premiums for high quality products as return to attitudes, *The Quarterly Journal of Economics*, 98(4), 659–679.
- Shavitt, S. (1989). Operationalizing functional theories of attitude. In Pratkanis, A., S. Breckler & A. Greenwald (Eds.), *Attitude Structure and Function*, New Jersey.: Hillsdale Lawrence Erlbaum, 311-337.
- Singh, S., N. Dalal & Spears, N. (2005). Understanding Web home page perception. *European Journal of Information Systems*, 14(3), 288-302.
- Sorce, P., V. Perotti & Widrick, S. (2005). Attitude and Age Differences in Online Buying. *International Journal of Retail & Distribution Management*, 33(2/3), 122-132.
- Spiliopoulou, M. (2000). Web usage mining for web evaluation. *Association for Computing Machinery*, 43(8), 127-134.
- Srinivasan, S., R. Anderson & Ponnarolu, K. (2002). Customer loyalty in e-commerce: An exploration of its antecedents and consequences. *Journal of Retailing*, 78(1), 41-50.
- Stevenson, J.S., Bruner II, G.C. & Kumar A. (2000). Web page background and viewer attitudes. *Journal of Advertising Research*, 40(1/2), 29–34.
- Supphellen, M. & Nysveen, H. (2001). Drivers of intention to revisit the websites of well-known companies: the role of corporate brand loyalty. *International Journal of Market Research*, 43(3), 341-52.
- Swaid, S.I. & R.T. Wigand (2009). Measuring the Quality of e-Service: Scale Development and Initial Validation. *Journal of Electronic Commerce Research*, 10(1), 13-28.
- Vatanasombut B., Stylianou, A. & Igbaria, M. (2004). How to retain online customers. *Communications of the ACM*, 47(6), 65-69.
- Vijayasarathy, L. R. (2004). Predicting consumer intentions to use on-line shopping: the case for an augmented technology acceptance model. *Information & Management*, 41(6), 747-762.
- Voss, C. A. (2003). Rethinking Paradigms of Service: Service in a Virtual Environment. *International Journal of Operations & Production Management* 23(1), 88-104.
- Wen, C., Prybutok, V. & Xu, C. (2011). An Integrated Model for Customer Online Repurchase Intention. *Journal of Computer Information Systems*, 52(1), 14-23.
- Wold, H. O. (1985). Partial least squares. In S. Kotz & N. L. Johnson (Eds.), *Encyclopaedia of Statistical Sciences* (Vol. 6, pp. 581–591). New York: John Wiley and Sons.
- Wolfinbarger, M. & Gilly, M. (2001). Shopping online for freedom control and fun. *California Management Review*, 43(2), 34–55.

- Wolfinbarger, M. & Gilly, M. (2003). eTailQ: dimensionalizing, measuring and predicting e-tail quality. *Journal of Retailing*, 79(3), 183-98.
- Yang, Z., Cai, S., Zhou, Z. & Zhou, N. (2005). Development and validation of an instrument to measure user perceived service quality of information presenting Web portals, *Information & Management*, 42(4), 575-589.
- Yoo, B. & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research*, 52(1), 1-14.
- Zeithaml, V. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2-22.
- Zeithaml, V., L. Berry & A. Parasuraman (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(4), 31-46.

MODELAÇÃO DE UM DATA WAREHOUSE PARA O ENSINO ARTÍSTICO

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RESUMO

Nos dias de hoje é essencial que qualquer escola do ensino artístico alie a visão estratégica à visão pedagógica, de forma a aumentar a eficácia, maximizar os recursos e ser mais rápida nas correções necessárias a um desempenho de excelência. Pretende-se conceber um Data Warehouse que possa auxiliar a gestão administrativa, financeira e pedagógica de estabelecimentos de ensino artístico. Este Data Warehouse agregará dados/informação atualmente dispersas, numa única localização, proporcionando um acesso centralizado e permitindo o relacionamento simples e rápido de dados até agora não relacionáveis, possibilitando novos indicadores. Conjuntamente tornará acessíveis à gestão de topo um conjunto de dados importantes para a análise de negócio até ao momento, apesar de armazenados, não estavam disponíveis para análise. É ainda objetivo do presente trabalho contribuir para a sensibilização do interesse e das vantagens inerentes à utilização de tecnologias de apoio à decisão em escolas artísticas, cujo funcionamento é orientado para o aluno e não para a turma tornando-o um tipo de ensino com exigências singulares e de detalhe distintas de outras escolas, utilizando Data Warehouses.

Palavra-chave: Data Warehouse, Business Intelligence, Gestão escolar, Ensino artístico.

INTRODUÇÃO

A universalização, democratização e massificação do ensino transfigurou de forma definitiva a gestão das escolas.

Com estas alterações surgiram as escolas privadas, a autonomia pedagógica e os projetos educativos diferenciados. Com estes surgiu, inevitavelmente, a concorrência e a transformação do aluno em cliente.

Criaram-se assim as condições para uma universalização do ensino artístico, com principal destaque para o ensino da música, de forma integrada, complementar ou profissional.

Tal como noutros setores, a estratégia passou a ser determinante também na

educação. Com estas transformações, as escolas que queiram progredir passam a necessitar de possuir um projeto educativo e de um planeamento estratégico criterioso na escolha da sua oferta educativa, nos métodos de ensino, nos planos curriculares e de atividades, entre outros.

A transfiguração do aluno em cliente, aliado ao excesso de oferta da rede escolar trouxe consigo clientes mais exigentes e a concorrência entre escolas. Hoje as escolas necessitam que o seu projeto educativo esteja alinhado com os interesses e realidades dos alunos e da comunidade, permitindo-lhes captar novos alunos. No contexto do ensino artístico, considerando a oportunidade de atingir novos públicos mas também a

divulgação global das ofertas das escolas, possuir os indicadores corretos é fundamental para a tomada de decisão. Com todas estas alterações também a forma de gerir as escolas mudou de forma radical, sendo hoje mais criteriosa, rigorosa, responsável e orientada para a qualidade.

Estas mudanças e o facto do ensino artístico da música exigir um acompanhamento individual do aluno devido em grande parte à existência de aulas individuais de instrumento, fizeram com que as escolas artísticas passassem a estar orientadas para o aluno e não para a turma como é vulgar. Essa necessidade acarreta uma maior exigência no que respeita à análise de desempenho.

REVISÃO DA LITERATURA

Um Data Warehouse é um grande repositório de dados, em forma de série temporal, capaz de conceder vantagens estratégicas às organizações no que respeita à tomada de decisão.

Frequentemente, os Data Warehouses possuem volumes de dados na ordem dos *Terabytes* ou mesmo dos *Petabytes*, dados esses que podem ser pesquisados e agregados pelos utilizadores.

A maioria dos dados presentes num Data Warehouse é constituída por transações originárias dos sistemas operacionais.

Com recurso a *software* especializado é possível extrair os dados de bases de dados operacionais, processar, sintetizar e agregar os mesmos, para que possam ser armazenados no Data Warehouse, de uma forma mais adequada à sua visualização e exploração.

Para a implementação de Data Warehouses é possível recorrer a um grande conjunto de ferramentas de *design*, armazenamento e manutenção, comerciais ou baseadas em software livre. Contudo, nem todas as ferramentas são compatíveis entre si e nem todas são apropriadas para a metodologia de desenvolvimento selecionada. Apesar do grande universo de escolha nas ferramentas, a modelação das mesmas está geralmente baseada numa de duas metodologias: Inmon, W.H. “Building the Data Warehouse, 3th ed.” (2002) e Kimball R. “The Data Warehouse Lifecycle Toolkit, 2nd ed.” (2008).

Escolher entre Inmon ou Kimball corresponde a uma escolha a nível de arquitetura e metodologia a usar. Entender os fundamentos da arquitetura e da metodologia de cada uma dos modelos proporciona um conhecimento básico e essencial do que é e de como funciona, um Data Warehouse.

Em 1990, Bill Inmon publica “Building the Data Warehouse”, apresentado, pela primeira vez, o termo Data Warehouse.

A partir desse momento as organizações começaram a implementar a visão de Inmon, com variados graus de sucesso. Inmon (1994, 1997) tem vindo a apresentar a sua visão sobre a metodologia que deve ser adotada no desenvolvimento de Data Warehouses. Em Inmon 2002 apresenta a terceira edição do seu trabalho, descrevendo uma arquitetura lógica para extrair os dados de Bases de Dados operacionais dispersas. Os dados são transformados e organizados temporalmente numa única Base de Dados, o Data Warehouse. Parte destes dados são então extraídos para Bases Dados menores, criando Bases Dados departamentais denominadas Data Mart a partir das quais os utilizadores finais exploram os dados e criam relatórios. Para criar o Data Warehouse e os Data Marts,

Inmon propõe uma metodologia *top-down*, partindo do geral para a pormenorização, dos vários sistemas que o compõem.

Após a publicação do livro de Inmon, outros especialistas em Bases Dados começaram a criar Data Warehouses. A experiência de Ralph Kimball conduziu-o ao desenvolvimento de uma metodologia própria tendo, em 1998, publicado “The Data Warehouse Toolkit”. Após vários anos de experiência, Kimball (2002) publicou uma segunda edição da sua obra, aconselhando nesta versão uma arquitetura de múltiplas Bases Dados e Data Marts, organizadas por áreas de negócio, em que os Data Marts têm que aderir a um canal de comunicação comum denominado Data Warehouse Bus. Nessa versão, o Data Warehouse é definido como sendo a totalidade dos vários Data Marts. Para o seu desenvolvimento é aconselha uma metodologia inversa à de Inmon, com uma aproximação *bottom-up*, que parte da análise dos vários sistemas individuais terminando com a agregação dos mesmos num grande Data Warehouse.

O objetivo dos Data Warehouses é auxiliar e simplificar o processo de decisão dentro das organizações. Os Sistemas de Apoio à Decisão apoiam os utilizadores com *dashboards*, relatórios automáticos e análises *ad-hoc*. Estes sistemas requerem, geralmente, dados relativos ao histórico de transações, dados estes que podem ser agregados. Estes dados permitem aos utilizadores a análise de grandes volumes de dados de forma simples. Para encontrar uma relação estatisticamente significativa entre itens num Data Warehouse é necessário que os dados em análise sejam suficientemente detalhados, de forma a que contenham os dados da transação e a descrição clara dos itens nela envolvidos. Isto evidencia o porquê dos Data Warehouses

conterem grandes quantidades de dados (Chaudhuri e Dayal, 1996).

Os Data Warehouses possuem ainda a exigência de que permitam analisar os dados sem restrições prévias, ou seja, que se possam submeter questões em que se cruzem todos os dados disponíveis, das mais variadas fontes. Esta exigência, embora não tão óbvia é de grande importância e implica duas condições, o Data Warehouse tem que ser intuitivo e de fácil utilização para os utilizadores, e os tempos de resposta têm de ser razoáveis não prejudicando a atividade do utilizador.

Modelação do Data Warehouse

O presente trabalho visa a modelação de um protótipo de Data Warehouse, ou seja, uma plataforma de análise multidimensional com um ambiente de dados preciso, possibilitando o processo de análise de correlação, multivariado e estatístico aos responsáveis pedagógicos, administrativos e financeiros de estabelecimentos de ensino artístico, em particular do Conservatório de Música da Jobra (CMJ).

METODOLOGIA

Presentemente o CMJ conta com uma oferta formativa rica distribuída por três áreas artísticas, Música, Dança e Teatro e por três tipologias de Cursos: Oficiais, Profissionais e Livres.

A gestão, seja ela pedagógica ou financeira, no que respeita ao ensino artístico de música tem mais especificidades do que em outros tipos de ensino. Esta maior exigência deve-se ao facto de este tipo de ensino ser individualizado, em resultado das disciplinas que são lecionadas em aulas

individuais (instrumento) ou de grupo (grupos e conjuntos instrumentais).

A nível administrativo possui os departamentos de Direção, Direção Pedagógica, Coordenação Pedagógica, Administrativo e Financeiro, Sistemas de Informação e Qualidade, Recursos Humanos, Marketing e Comunicação, Administrativo e Pedagógico e Atendimento e Receção.

O CMJ possui um corpo docente de cerca de 120 docentes, aproximadamente 700 alunos repartidos por 65 turmas, lecionado aulas em três polos geograficamente afastados. Estes números fazem do CMJ uma das maiores escolas nacionais do ensino artístico.

Estra estrutura reflete a divisão entre áreas e as diferentes atribuições de cada uma, com cada área a perseguir objetivos distintos que apenas se cruzam através das unidades que têm um comportamento transversal à instituição: as aulas, os recursos físicos e os departamentos de suporte às práticas letivas.

Perante este cenário, a metodologia escolhida para a implementação do Data Warehouse do CMJ foi a apresentada por Kimball (2002), pois permite atuar individualmente sobre cada área de negócio e apresentar rapidamente resultados sem que toda a instituição esteja coberta pelo projeto e a salvo da introdução de novos sistemas de informação ou alterações na orgânica do CMJ, recorrentes dado o constante aumento de dimensão da instituição.

Esta metodologia permitirá igualmente que o desenvolvido tenha intervenção direta dos colaboradores da área em análise, facilitando assim a sua aceitação do novo sistema.

Com base na metodologia adotada a modelação do Data Warehouse possuirá as

seguintes fases: seleção do processo de negócio, definição do grão, escolha as dimensões e identificação dos factos.

Análise aos sistemas de informação

O Conservatório de Música da Jobra (CMJ) possui um alargado conjunto de sistemas de informação de suporte ao processo administrativo e pedagógico. Para a realização do presente trabalho foi concedido o acesso a todos os sistemas necessários, com a condição de não divulgação de dados.

Dos sistemas existentes destacam-se os seguintes: E-Schooling Server, Untis, ABCGest e IdOntime.

O E-Schooling Server (ESS) é o sistema de gestão escolar atualmente usado pela instituição. Importa referir que o CMJ vem desde à cerca de um ano e meio a efetuar a transição do sistema de gestão escolar anteriormente utilizado e que nem todos os módulos do ESS se encontram já em uso, devido à não completa adaptação desse sistema às especificidades do ensino artístico de música. Após concluído este processo o ESS será o principal sistema de suporte aos processos administrativos e pedagógicos do CMJ. Processos como como inscrições, avaliações, controlo de assiduidade de alunos, financeiros, bolsas, vencimentos, etc. serão tratados por este sistema.

O processo de controlo de assiduidade dos docentes é igualmente efetuado pelo E-Schooling Server em conjunto com o IdOntime, recorrendo a cartões com tecnologia *RFID* e a identificação biométrica.

O sistema Untis é utilizado para a gestão de horários de alunos, docentes, turmas e salas. Importa salientar que no ensino artístico a alteração de horários é constante

pelo que todos os horários podem chegar a ter uma periodicidade semanal.

O sistema ABCGest é o sistema de gestão escolar utilizado (em parte) até ao fim do ano letivo 2011-2012, pelo que o recurso a dados aí armazenados, principalmente dados contabilísticos e financeiros, é ainda recorrente e essencial à análise de alguns processos.

Complementarmente aos sistemas referidos e em parte devido ao processo de migração completa do sistema de gestão escolar, existem atualmente em uso um número alargado de ficheiros, principalmente de folhas de cálculo, com informação crítica para vários processos do CMJ.

A modelação

A modelação do Data Warehouse do CMJ será assente no paradigma criado por Kimball (2002), pelo que o Data Warehouse será um conjunto de Data Marts que se relacionam através de dimensões *standard*, dimensões essas que, em conjunto, formam o Data Warehouse Bus. Para se modelar o Data Warehouse será assim necessário definir o Data Warehouse Bus.

A implementação do Data Warehouse é um processo iterativo que percorre as várias áreas de negócio. O primeiro processo de negócio a ser incluído no Data Warehouse é o processo de Faltas de alunos seguido do processo de Avaliação.

O Data Warehouse Bus modelado no presente estudo corresponderá somente aos referidos processos de negócio. Nas iterações seguintes serão incluídas as restantes áreas de negócio, efetuando as alterações necessárias

às dimensões existentes e acrescentando, se necessário, novas dimensões.

Escolha do processo de negócio

O sistema de gestão escolar atualmente em uso, além de não permitir ao utilizador final a realização de análises não predefinidas, é um sistema que não se encontra ainda verdadeiramente adaptado às especificidades do ensino artístico, nomeadamente ao que à música diz respeito. Estes condicionamentos fazem com que de momento não seja acessível ao utilizador final a realização de algumas análises essenciais neste tipo de ensino.

A escolha dos primeiros processos de negócio a integrar o Data Warehouse resultou da análise dos resultados das reuniões com o Diretor Pedagógico do CMJ, e do conhecimento das limitações do atual sistema gestão conhecidas do responsável do estudo, visto este ser Coordenador do Departamento de Sistemas de Informação e Qualidade do CMJ.

Dessas reuniões identificaram-se claramente algumas questões a que os Data Marts deveriam dar resposta:

- Quais os períodos do dia a que os alunos mais faltam?
- Quais as disciplinas e os módulos a que os alunos mais faltam?
- Qual a relação entre as faltas e o período do ano letivo?
- Qual a relação entre as faltas e o instrumento tocado pelos alunos?
- Qual a relação entre as notas e o instrumento tocado pelos alunos?

Dessas análises foram identificados os processos presentes na tabela 1.

Tabela 1 – Matriz em Bus

Processos	Tipo	Grão	Alunos	Docentes	Disciplinas	Data	Horário	Turmas	Grupos Alunos	Grupo Turmas	Dimensionalidade
Avaliações	Transacional	aluno, disciplina, data	x	x	x	x		x			5
Faltas (Alunos)	Transacional	aluno, disciplina, data, hora	x	x	x	x	x				5
Faltas (Docentes)	Transacional	docente, disciplina, hora		x	x	x	x			x	4
Sumários	Transacional	aluno, disciplina, hora		x	x	x	x		x	x	8
Exceções de aulas	Transacional	docente, disciplina, hora	x	x	x	x	x	x	x		7

Dos processos identificados como necessários foram definidas prioridades tendo sido estabelecido, em resultado da maior urgência de análise, que os processos Faltas (Alunos) e Avaliações deveriam ser prioritários em termos de modelação e implementação.

Após a identificação dos processos que irão integrar, inicialmente, o Data Warehouse é indispensável efetuar uma análise de requisitos, identificando as necessidades a que o Data Mart deverá responder. Toda a informação necessária aos processos de negócio a modelar inicialmente está armazenada no E-Schooling Server, pelo que este será, presentemente, a única fonte de dados do Data Mart.

Definição da granularidade

O E-Schooling Server possui como principal objetivo o registo de todos os dados administrativos e pedagógicos necessários ao suporte do ensino.

O E-Schooling Server é um sistema transacional, possuindo uma estrutura de dados organizada segundo a terceira forma normal, não existindo assim informação desnormalizada com o intuito de facultar um qualquer tipo de análise mais rápida.

Pode-se afirmar que a estrutura de dados deste sistema possui a tabela *Students* como ponto de partida, à qual se encontram associadas entre outros a tabela *Classifications*, onde se encontram os registos referentes a avaliação; a tabela *Cours*, que possui informação relativa às turmas e a tabela *Faults*, onde se encontram registadas as faltas dos alunos. A tabela *Faults* encontra-se associada à tabela *FaultTypes* que possui armazenados dados relativos ao tipo de faltas.

A tabela *Teachers* possui armazenado os principais dados relativos aos docentes e encontra-se associada à tabela *Classifications*.

Importa referir que existem no E-Schooling Server outras tabelas que

complementam os dados presentes nas tabelas *Faults*, *Students*, *Classifications* e *Teachers*, portadoras de dados considerados, de momento, irrelevantes tendo em conta os Data Marts especificados, isto para além de todas as tabelas que suportam dados de processos que não são relevantes para o presente estudo.

Na Figura 1 podemos observar, em pormenor, uma parte da estrutura de dados composta pelas tabelas supramencionadas, bem como alguns dos campos que as constituem.

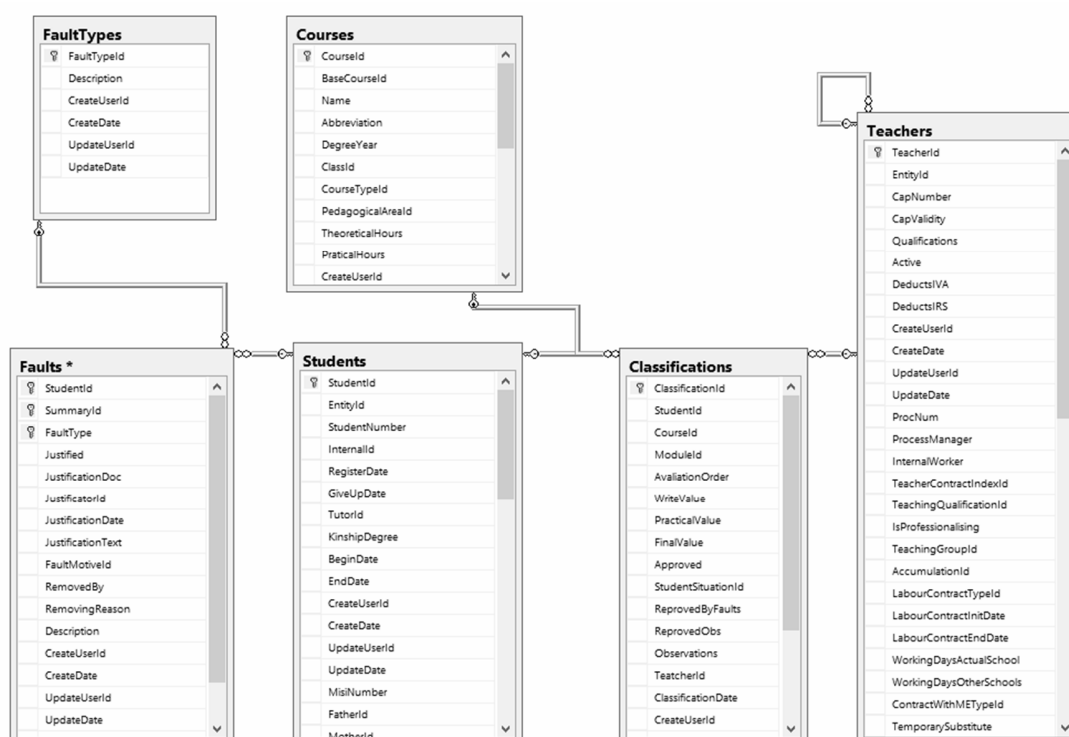


Figura 1 - Modelo de Dados do E-Schooling Server (parcial)

De forma a permitir uma análise o mais detalhada possível optou-se por escolher o menor grão, ou grau, possível para cada um dos processos de negócio identificados. Assim o grau para o processo de negócio Falta será: Aluno, Disciplina, Data e o grão para o processo de negócio Avaliação será: Aluno, Disciplina, Data, Hora.

Escolha das dimensões

A análise dos requisitos, em conjunto com a estrutura de dados do E-Schooling Server, conduziu à escolha das seguintes dimensões (Tabela 2) para a tabela de factos de Faltas e para a tabela de factos de Avaliações.

Tabela 2 - Dimensões das Tabelas de Factos

Tabela de Factos	Dimensões
Facto Falta	Data, Horário, Aluno, Docente, Disciplina
Facto Avaliação	Data, Aluno, Docente, Disciplina

Escolha dos factos

Os atributos considerados relevantes para as tabelas de factos foram os apresentados na Tabela 3.

Tabela 3 - Atributos das Tabelas de Factos

Tabela de Factos	Atributos
Facto Falta	Tipo de falta, Justificada, Justificada por, Justificada em, Motivo da falta, Justificável, Removida, Removida por, Removida em
Facto Avaliação	Nota, Módulo, Lançada em, Positiva, Primeiro lançamento, Exame, Alínea, Observação, Validada, Validada por, Validade em

Modelo Teórico

O modelo teórico do Data Mart é apresentado na Figura 2. As tabelas dimensões são representadas como elipses e as tabelas de

factos são representadas como retângulos. Esta representação de alto nível da estrutura de dados será o ponto de partida para a implementação física do modelo.

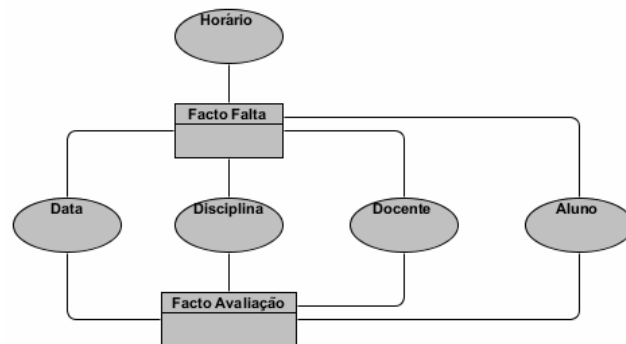


Figura 2 - Modelo teórico do Data Mart

Modelo Físico

O modelo físico será construído a partir de uma análise detalhada das dimensões e factos do modelo teórico. Para o efeito, foi preenchido um quadro de análise para cada tabela de Dimensão (Kimball & Corseta, 2004), com os seguintes campos:

- Campo: nome do campo;

- Tipo: indica o tipo de dados que o campo contém;
- Comprimento: indica o tamanho do campo em bytes;
- Slowly Changing Dimension (SCD): tipo de variação da dimensão;
- Fonte: conjunto Tabela.Campo de origem no SIIE;
- Descrição: breve descrição do campo.

O SCD regista o tipo de variação da dimensão e a importância que essa variação possui para a integridade do Data Warehouse.

A análise do SCD é feita campo a campo para se determinar a melhor forma de lidar com a mudança dentro de cada tabela, sendo possível a coexistência de diversos níveis de SCD dentro de uma mesma tabela. O SCD pode ser dividido em três tipos principais:

- Tipo 1 - A nova informação é escrita sobre a informação antiga. Este é o método mais fácil de modelar, pois não implica nenhuma alteração às tabelas de dimensão ou factos, não há alterações de chaves ou outra informação, como desvantagem perdemos o histórico da informação.
- Tipo 2 – As alterações são registadas na tabela criando um novo registo na dimensão, com uma nova chave, que é utilizada nas tabelas de factos a partir desse momento. Nas tabelas de factos são adicionados dois campos com data de início e data de término da chave, ficando a chave atual na data de término com a maior data suportada pelo sistema. Este procedimento viabiliza um acompanhamento da evolução ao longo de um período de tempo. Tomemos, por exemplo, a carreira de um funcionário numa empresa, em que é possível acompanhar os vários cargos e remunerações que este teve ao longo do tempo.
- Tipo 3 – Este terceiro género de SCD é utilizado quando é necessário manter o valor anterior e o novo valor válido. Nestes casos é acrescentada uma coluna à tabela de dimensão para se guardar o valor antigo e guardar o novo no campo existente.

As tabelas do Data Warehouse serão nomeadas a partir da sua designação no modelo teórico, acrescentando o prefixo “D_” para as tabelas de dimensão e “F_” para as tabelas de factos.

Para as tabelas de factos dos processos de negócio Faltas e Avaliações deverão ser implementadas as seguintes tabelas de dimensão de acordo com as Tabelas 4, 5, 6, 7 e 8.

A dimensão Aluno contém informação relativa a todos os alunos da instituição. Apesar de existirem diferentes cursos a tabela está especificada de forma a comportar dados de todos os alunos, independentemente do curso que estes frequentem.

Esta tabela tem um SCD do tipo 2, pois podem verificar-se alterações nos dados dos alunos sendo necessário armazenar cada uma das versões.

A dimensão Docente contém informação relativa a todos os docentes da instituição.

Esta tabela tem um SCD do tipo 2, pois podem verificar-se alterações nos dados dos docentes sendo necessário armazenar cada uma das versões.

A dimensão Disciplina contém informação relativa a todas as disciplinas lecionadas na instituição.

Esta tabela tem um SCD do tipo 1 visto não serem espetáveis alterações.

A dimensão Data é uma dimensão especial pois deve conter todas as datas possíveis. Esta tabela tem um SCD do tipo 2, pois podem verificar-se alterações de calendário sendo necessário armazenar cada uma das versões.

A dimensão Horário contém informação relativa a todos os períodos de horários letivos existentes para o leccionamento de aulas. Esta tabela tem um SCD do tipo 1 visto não serem espetáveis alterações.

Definição do Data Warehouse Bus

O Data Warehouse Bus será definido primeiramente a um nível mais elevado, através de uma matriz, onde se cruzam os componentes do negócio, na horizontal, com as dimensões, na vertical.

A Tabela 9 apresenta a matriz do Data Warehouse Bus, após a modelação do primeiro Data Mart.

CONCLUSÕES

O conceito de Data Warehouse foi bem recebido pelos responsáveis do CMJ dado que a sua concretização preenche uma área que não está a responder, de momento, a todas as questões necessárias, prevendo-se que este possa auxiliar, de forma determinante, a gestão administrativa e pedagógica da instituição.

A possibilidade de exploração dos dados e a facilidade com que estes poderão ser manuseados, assim como a possibilidade de execução de relatório *ad-hoc* aproximou os futuros utilizadores do presente estudo, o que faz prever uma rápida e apropriada modelação dos restantes processos de negócio. Depreende-se assim que apesar do presente estudo não prever, no seu decorrer, a implementação do Data Warehouse, que este trabalho terá contribuído para a sensibilização dos agentes educativos no que respeita a importância do uso de sistemas de apoio à decisão, nomeadamente Data Warehouses, cumprindo assim dos objetivos a que o presente estudo se propunha.

A utilização da metodologia Kimball, em oposição à Inmon, revelou ser acertada, visto ter facilitado a apresentação rápida de resultados, associada à flexibilidade do Data

Warehouse Bus que permite a introdução de novos processos.

O objetivo principal do estudo foi cumprido tendo sido modelado um Data Warehouse e o respetivo Data Warehouse Bus adaptado às especificidades do ensino artístico. Da análise feita espera-se que uma vez implementado este responda às principais questões que assistem desde já os gestores administrativos e pedagógicos da instituição, tendo em conta os processos de negócio analisados.

A modelação de um Data Warehouse é um processo iterativo, razão pela qual nunca estará verdadeiramente terminado, sendo um processo contínuo de aperfeiçoamento da estrutura de dados.

A natureza dinâmica de alguns sistemas ou a sua implementação faseada, como é o caso do E-Schooling Server, obrigará a alterações regulares no Data Warehouse, sendo assim necessário adaptar o Data Warehouse Bus a novas dimensões ou, em alguns casos, alterar dimensões. Para o futuro, fica a construção dos Data Marts dos restantes processos de negócio até estarem cobertos todos os processos de negócio do CMJ.

Outras conclusões como o real impacto positivo para a instituição resultante da disponibilização de análises *ad-hoc*, será apenas mensurável aquando da implementação do protótipo modelado.

O presente estudo irá continuar a ser desenvolvido com vista ao aperfeiçoamento do modelo produzido e à sua consequente implementação no CMJ.

Limitações do estudo e trabalhos futuros

Como trabalhos futuros deverão ser criados os Data Marts dos restantes processos de negócio já identificados, assim como os referentes a outros processos de negócio que possam ser verificados aquando de uma análise mais exaustiva, cobrindo assim todos os processos de negócio do CMJ.

Será igualmente necessário definir e modelar todo o processo de carregamento de Extração Transformação Carga (ETL - Extract Transform Load) inicial e posterior do Data Warehouse.

Os trabalhos futuros terão ainda de comportar o estudo e análise das tecnologias de disponibilização dos dados agregados no Data Warehouse, assim como a implementação das mesmas.

REFERÊNCIAS BIBLIOGRÁFICAS

- Boar B. H. (1997). *"Building, Using, and Managing the Data Warehouse-Understanding Data Warehousing Strategically"*, Prentice Hall PTR
- Chaudhuri S. e Dayal U. (1996). "An Overview of Data Warehousing and OLAP Technology", VLDB Conference
- Inmon, W.H. (1994). *"Using the Data Warehouse"*, John Wiley & Sons, Inc.
- Inmon, W.H. (1997). *"Managing the Data Warehouse"*, John Wiley & Sons, Inc.
- Inmon, W.H. (2002). *"Building the Data Warehouse"*., 3th ed. John Wiley and Sons, Inc.
- Kimball, R. e Ross, M. (2002). *"The Data Warehouse Toolkit : the complete guide to dimensional modeling."*. 2nd ed. John Wiley and Sons, Inc.
- Kimball, R. e Corseta, J. (2004). *"The Data Warehouse ETL Toolkit : practical techniques for extracting, cleaning, conforming, and delivering data"*. Wiley Publishing, Inc.
- Kimball R., Ross M., Thornthwaite W., Mundy J. e Becker B. (2008). *"The Data Warehouse Lifecycle Toolkit, 2nd ed."*. Wiley Publishing, Inc.

TABELAS 4 A 9

Tabela 4 - Especificações da tabela dimensões D_Aluno

Campo	Tipo	Comp.	SCD	Fonte	Descrição
Aluno_key	INT	8	-	-	Chave substituta
Aluno_id	INT	8	2	Students.StudentId	Chave Original
N_process	INT	4	2	Students.StudentNumber	N-º de processo do aluno
Nome	VARCHAR	250	2	Students.Name	Nome do aluno
Data_nasc	DATETIME	8	2	Students.BirthdayDate	Data de nascimento do aluno
Idade	INT	2	2	Students.Age	Idade do aluno
Distrito	VARCHAR	50	2	Students.District	Distrito do aluno
Concelho	VARCHAR	50	2	Students.Cons	Concelho do aluno
Freguesia	VARCHAR	50	2	Students.Freg	Freguesia do aluno
Curso	VARCHAR	50	2	Students.Course	Curso do Aluno
Turma	VARCHAR	10	2	Students.Class	Turma do aluno
Ano	INT	2	2	Students.ClassYear	Ano escolar do aluno
Instrumento	CHAR	20	2	Students.Instr	Instrumento do aluno

Tabela 5 - Especificações da tabela dimensões D_Docente

Campo	Tipo	Comp.	SCD	Fonte	Descrição
Docente_key	INT	8	-	-	Chave substituta
Docente_id	INT	8	2	Teachers.StudentId	Chave Original
N_process	INT	4	2	Teachers.StudentNumber	N-º de processo do docente
Nome	VARCHAR	250	2	Teachers.Name	Nome do docente
Data_nasc	DATETIME	8	2	Teachers.BirthdayDate	Data de nascimento do docente
Idade	INT	2	2	Teachers.Age	Idade do docente
Distrito	VARCHAR	50	2	Teachers.District	Distrito do docente
Concelho	VARCHAR	50	2	Teachers.Cons	Concelho do docente
Freguesia	VARCHAR	50	2	Teachers.Freg	Freguesia do docente

Tabela 6 - Especificações da tabela dimensões D_Disciplina

Campo	Tipo	Comp.	SCD	Fonte	Descrição
DisciplinaKey	INT	4	-	-	Chave substituta
DisciplinaId	INT	4	3	Courses.CoursId	Chave original
Descricao	VARCHAR	50	3	Courses.Description	Descrição
Tipo	VARCHAR	50	3	Courses.Type	Tipo de disciplina
Duracao	INT	4	3	Courses.Duration	Duração
Modulo	INT	2	3	Courses.Modules	Módulo
Desdobramento	VARCHAR	50	3	Courses.Bout	Desdobramento

Tabela 7 - Especificações da tabela dimensões D_Data

Campo	Tipo	Comp.	SCD	Fonte	Descrição
DateKey	INT	4	-	-	Chave substituta
ActualDate	DATE	8	2	Script	Data atual
Year	INT	4	2	Script	Ano
Quarter	INT	4	2	Script	Trimestre
Month	INT	4	2	Script	Mês
Week	INT	4	2	Script	Semana
DayOfYear	INT	4	2	Script	Dia do ano
DayOfMonth	INT	4	2	Script	Dia do mês
DayOfWeek	INT	4	2	Script	Dia da semana
IsWeekend	INT	4	2	Script	Fim de semana
IsHoliday	INT	4	2	Script	Feriado
Comments	VARCHAR	20	2	Script	Comentários
CalendarWeek	INT	4	2	Script	Semana civil
LeapYear	INT	4	2	Script	Ano Bissexto
ScholarYearWeek	INT	4	2	Script	Semana letiva
ScholarPeriod	INT	4	2	Script	Período letivo
ScholarDay	INT	4	2	Script	Dia de aulas

Tabela 8 - Especificações da tabela dimensões D_Horário

Campo	Tipo	Comp.	SCD	Fonte	Descrição
ScheduleKey	INT	4	-	-	Chave substituta
ScheduleId	INT	4	1	Script	Chave original
Descricao	VARCHAR	50	1	Script	Descrição
HoraInicio	TIME	3	1	Script	Hora de início
HoraFim	TIME	3	1	Script	Hora de fim
DuracaoMin	INT	4	1	Script	Duração em minutos
DuracaoH	INT	2	1	Script	Duração em Horas
Periodo	INT	2	1	Script	Período

Tabela 9 - Matriz do Data Warehouse Bus

Factos	Dimensões							
	Alunos	Docentes	Disciplinas	Data	Horário	Turmas	Grupos Alunos	Grupo Turmas
	x	x	x	x		x		
	x	x	x	x	x			

PODCASTS NA COMUNICAÇÃO DAS UNIVERSIDADES

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RESUMO

A Internet é um meio muito utilizado e o podcast uma tecnologia de comunicação implantado através da Internet. Esta ferramenta é caracterizada pela fácil disponibilidade de conteúdos, portabilidade e facilidade de uso, o que permite a sua utilização generalizada. Este estudo vem na sequência do uso crescente da tecnologia da informação na educação como ferramenta pedagógica, sendo esta a premissa que fez surgir a oportunidade de realizar um estudo com esta tecnologia, como ferramenta de comunicação entre estudantes e instituições de ensino superior. Procurou-se conhecer a utilização do podcast e a possibilidade deste estudo ser um reforço na adoção desta ferramenta por parte das instituições de ensino superior, caracterizando os utilizadores de podcast e seu uso, a partir de dados recolhidos sobre o grau de importância e satisfação na utilização deste recurso. Os resultados obtidos permitem-nos reconhecer que este é um projeto viável através do interesse dos utilizadores desta tecnologia e observar o nível de envolvimento, além do papel de simples consumidores, os alunos estão dispostos a ter um paradigma de comunicação com base neste modelo.

Palavras-Chave : comunicação, instituições de ensino superior, estudantes do ensino superior, tecnologia da informação, podcast, podcasting.

ABSTRACT

The Internet is a very widely used media and the podcast a communication technology deployed through the Internet. This tool is characterized by its easy availability of content, portability and ease of use, which allows its widespread use. This study comes after the growing use of this technology in education as a pedagogical tool being this the premise that made arise the will to conduct a study with this technology as intended communication between students and higher education institutions. In an attempt to know the intended use of the podcast and the possibility for this study to be a booster in the adoption of this tool by the higher education institutions, we characterized the podcast users and its use, collected data on the degree of importance and satisfaction in using this resource. The results obtained allow us to recognize that this is a viable project through the interest shown by the users of this technology and observe the level of involvement, beyond the role of simple consumers; students are willing to have a communication paradigm based on this model.

Key Words : communication, higher education institutions, students in higher education, information technology, podcast, podcasting.

INTRODUÇÃO

Assistimos diariamente ao aparecimento de novas tecnologias e cada vez são mais as pessoas que tentam acompanhar esta evolução, verificando-se, deste modo, a sua massificação e o desempenhar de um papel cada vez mais determinante no nosso quotidiano. Podemos afirmar que a

sociedade em que vivemos está cada vez mais tecnológica.

De entre as muitas tecnologias disponíveis, optou-se por estudar a utilização do *podcast* na relação dos alunos do Ensino Superior e as Instituições de Ensino Superior (IES). Este recurso consiste em ficheiros áudio e/ou vídeo que são colocados na Internet e que, para serem consumidos, devem ser

descarregados para um computador ou, alternativamente, para um leitor MP3, ipod ou Smartphones sendo estes difundidos através do *podcasting*. A sua utilização inicial tinha um formato idêntico ao da rádio, (Mack & Ratcliffe, 2007) contudo, tem vindo a diversificar-se.

“Na distribuição de conteúdos formativos; Como guias turísticos; Distribuição de sessões de conferências; Envio de avisos de segurança; Divulgação de novos produtos de uma empresa e seu guião de vendas a equipas comerciais; Explicação da utilização de produtos a clientes; etc.” (Carrera, 2009, p. 101)

Ao longo do tempo, esta ferramenta de comunicação tem vindo a expandir-se para muitas áreas de atividade tais como a saúde, política, jogos, hobbies, música, religião, educação, entre outras, e como é uma tecnologia de fácil manuseamento, transportável e que pode ser consumida a pedido, torna-se, por estes motivos, automaticamente desejável pela sociedade em geral.

O presente trabalho tem como principais objetivos:

- Aferir se os alunos do ensino superior consideram o *podcast* uma ferramenta de comunicação a ser usada pelas instituições de ensino superior;
- Saber a que área de estudos pertencem os alunos com maior apetência para o uso de *podcasts*;
- Conhecer o nível de importância conferida pelos alunos sobre o envolvimento dos próprios na produção e divulgação de *podcasts*;
- Saber como podem as IES usar o *podcast*, para melhorar a sua comunicação.

Os estudos da utilização do *podcast* como ferramenta pedagógica, são ainda raros (Baker et al., 2010), pelo que se pretendeu conhecer a opinião dos alunos que frequentam o ensino superior sobre a utilização e adequação do *podcast* na

comunicação entre instituições de ensino superior e os seus alunos.

Neste sentido, a pergunta de partida do estudo é: “Em que medida a comunicação entre alunos e Instituições de Ensino Superior pode ser estabelecida através de *podcasts*?”.

A função de investigação passou por traçar o perfil dos alunos do ensino superior que utilizam *podcasts* e da caracterização do perfil de utilização desta tecnologia.

Este estudo tinha na sua génese aferir até que ponto o *podcast* poderia ser adotado como uma ferramenta de comunicação por parte de organizações, como as IES, sendo para isso necessário antever eventuais problemas decorrentes da falta de familiaridade com a tecnologia e/ou da perceção de utilidade/importância atribuída por um dos atores mais importante neste canal de comunicação – o aluno.

O presente estudo veio permitir o enquadramento do *podcasting* na comunicação entre as IES e os seus alunos, que vem possibilitar uma nova abordagem para além dos muitos estudos que enquadram esta ferramenta como uma tecnologia de carácter pedagógico, oferecendo pistas às IES de como esta tecnologia pode ser utilizada como ferramenta de comunicação.

COMUNICAÇÃO E TECNOLOGIA

Sociedade da Informação e do Conhecimento

Na sociedade de informação e conhecimento em que vivemos as instituições de ensino superior devem, entre outras características, ser inovadoras de modo a manterem-se posicionadas no mercado pois, aquelas que não conseguem acompanhar as novas formas de comunicação poderão ficar sujeitas à indiferença dos alunos, nativos digitais (Prensky, 2012), que praticamente

nasceram a par das tecnologias da informação e comunicação (TIC).

A tecnologia, desde a revolução industrial, tem vindo a adquirir uma importância cada vez maior na sociedade contemporânea, sobretudo com a disseminação global do uso de computadores em rede. É com base nesta importância acrescida que pretendemos abordar perspectivas da evolução tecnológica no âmbito da comunicação organizacional. No que respeita a estudos no âmbito da comunicação organizacional, Baker (2002) salienta que a comunicação evoluiu desde o seu aparecimento e que já não se encontra apenas centrada em formações específicas para os gestores. Estes estudos são mais abrangentes e complexos por reconhecerem que todas as organizações (e não apenas as empresariais) têm necessidades e desafios comunicacionais.

Comunicação Organizacional

A era da industrialização veio suplantir o antigo sistema, baseado numa economia à base da agricultura e pecuária. Com a revolução industrial passamos de um sistema empobrecido para um sistema mecanizado, com capacidade de produzir em massa. A produção massificada gerou um grande problema, um excedente da produção. Foi com o surgimento da publicidade e consequente escoamento da produção, que o sistema encontrou equilíbrio. A Era Industrial só perdeu a sua expressão quando as novas necessidades da sociedade e os serviços de informação tomaram na economia o lugar da produção. Passamos a produzir informação/conhecimento com a ajuda das novas tecnologias, desde a informática às telecomunicações (Costa, 2001).

Assim, segundo Baker (2002), surge a necessidade das empresas se organizarem sob novas perspectivas e orientações com o recurso à comunicação organizacional. Esta adaptação das instituições às novas diretrizes organizacionais, para

acompanhamento da economia, com a constante evolução da tecnologia, tem feito organizações mais capazes, tanto na eficácia como na eficiência.

Organizações e a Evolução Tecnológica

Na perspetiva de Baker (2002), as mudanças nas organizações que têm ocorrido ao longo dos tempos e as mudanças dos processos, tornaram a comunicação organizacional ainda mais importante para o funcionamento das organizações em geral. As grandes transformações na tecnologia da comunicação têm provocado grandes alterações nas teorias da comunicação e na investigação nesta área. A mudança tecnológica trouxe uma nova abordagem na análise da comunicação organizacional, ou seja, estudam-se os impactos das novas formas de comunicação na organização e novos processos organizacionais. As novas tecnologias são propícias à criação de novas oportunidades, porém, peritos defendem que, nem a teoria nem a prática da comunicação organizacional têm acompanhado a rápida mudança tecnológica.

Harris & Nelson (2007), defendem que, com o continuar dos tempos, cada vez mais as novas tecnologias irão moldar as organizações e assumem que a tecnologia sempre teve um grande impacto nas organizações, desde a produção massificada de equipamentos e sua distribuição, até chegar aos processos digitais e, finalmente, a produção de informação. Assistimos a avanços na tecnologia da comunicação que contribuem para a substituição de processos tradicionais da organização da informação, por outros mais eficientes. Com esta melhoria, os processos são facilitados ou substituídos e, automatizados. As novas tecnologias devem ser entendidas, de modo a serem usadas todas as vantagens para a sua utilização.

Comunicação das Instituições de Ensino Superior no Século XXI

As IES tendem a preocupar-se, cada vez mais com a sua comunicação, quer a externa como a interna. O recurso a tecnologias de informação é cada vez mais frequente e os atuais alunos estão cada vez mais recetivos para as mesmas. Desta forma, as instituições devem acompanhar a evolução tecnológica, no que diz respeito à facilitação e divulgação da informação, por forma a oferecerem uma comunicação adequada à comunidade académica.

Ainda nos anos 90, do século XX, a comunicação usada pelas IES era muito tradicional, muito rígida e apenas institucional, usada entre as instituições e o Estado e outros organismos, caracterizada pela sua unidirecionalidade. A comunicação para o exterior era apenas informativa e burocrática e, nessa altura, não havia comunicação interna (Ruão, 2005).

Hoje em dia, as IES têm departamentos de comunicação que estão incumbidos de promover as suas instituições através da

assessoria de imprensa e protocolo, através da modernização das simbologias usadas para a projeção da identidade institucional, através de novas apostas nos meios de comunicação como a publicidade em meios de comunicação de massa, no desenvolvimento do sítio institucional, assim como, da segmentação da comunicação (Ruão, 2005). Outras apostas recentes, de departamentos de comunicação de IES são as apostas nas redes sociais, com a gestão de redes sociais institucionais como o Facebook, Twitter, YouTube, Flickr e LinkedIn.

Em Portugal a taxa de penetração do Facebook é de 39% na população em geral, chegando aos 80% na população *online*, o que se traduz em cerca de 4 milhões de utilizadores (Passos, Alturas & Laureano, 2012).

De acordo com dados apresentados pela Marktest, Bereme Internet in Os Portugueses e as Redes Sociais,ⁱ podemos verificar na Figura 1, que 59% dos portugueses utilizam a Internet (dados de 2011).

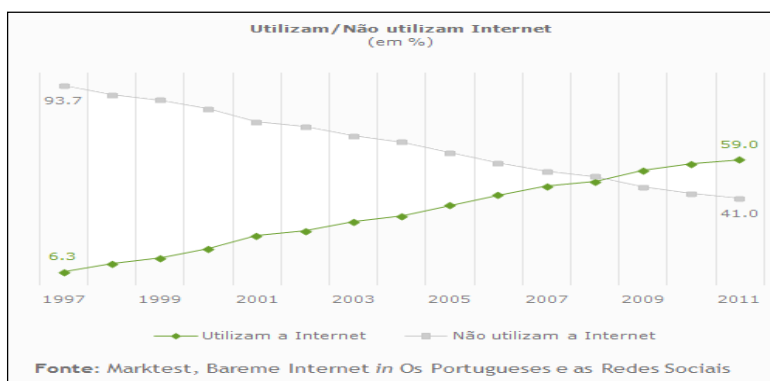


Figura 3 - Marktest, Bereme Internet in Os Portugueses e as Redes Sociais

A mudança tecnológica em conjunto com o crescimento evidente da utilização da Internet, cria espaço para o surgimento de outras apostas inovadoras de comunicação que também podem passar pelo desenvolvimento de novas ferramentas de marketing digital dentro das IES.

A forma como as organizações comunicam com o público foi de facto

alterada, os novos media fazem parte da revolução da comunicação que surge com novas formas de consumos, alcançando-se o público através de outros meios que não a palavra escrita, trazendo o áudio e o vídeo para as organizações de todas as dimensões.

Caraterização das Instituições de Ensino Superior Portuguesas

O sistema português do ensino superior subdivide-se em dois sistemas, o ensino superior público e o ensino superior privado. No sistema público estão previstos dois subsistemas, o universitário e o politécnico. Já o sistema de ensino superior privado conta com o ensino particular e cooperativo e com a universidade Católica. Em ambos os sistemas, o ensino universitário caracteriza-se pela sua vertente científica enquanto o politécnico é caracterizado pela vertente profissionalizante. O subsistema universitário é constituído por universidades que conferem graus de licenciatura, mestrado e doutoramento. O subsistema politécnico confere os graus de licenciatura e mestrados. Ambos os subsistemas preveem também outras formações tais como pós-graduações e CET'S (cursos de especialização tecnológica) que não conferem grau académicoⁱⁱ.

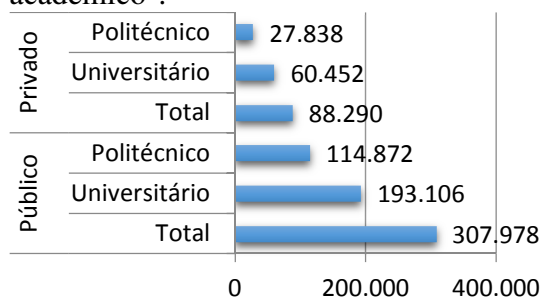


Figura 4 - Alunos matriculados no ensino superior por subsistema e por tipo de ensino

De acordo com a fonte: GPEARI/MCTES, Pordataⁱⁱⁱ, no ano letivo 2011/2012 estavam matriculados no ensino superior 396,268 alunos, dos quais 88,290 eram alunos do subsistema privado e 307,978 do subsistema público.

Desenvolvimento das Tecnologias de Informação e Comunicação

Quando as novas tecnologias e as novas formas de comunicação passaram a estar ligadas em rede, transpuseram barreiras

espaciais e temporais produzindo informação em quantidade massiva mas indiferente à qualidade produzida, permitindo a criação de novos espaços de comunicação e de conhecimento (Dias, 2001). As instituições de ensino perderam o monopólio do progresso científico e social e o controlo da distribuição do saber social (Torneró, 2007).

A Internet é um meio de comunicação largamente difundido que permite a troca de informações à escala planetária, de uma forma quase instantânea, quebrando barreiras edificadas pela distância física. A quebra destas barreiras potencia o aproximar de culturas, a partilha de conhecimento e o alargar de mercados, outrora limitados por uma esfera de influência ditada pela dimensão/prestígio da organização/instituição.

“A Internet (...) não é apenas uma tecnologia: é o instrumento tecnológico e a forma organizativa que distribui o poder da informação, a geração de conhecimentos e a capacidade de ligar-se em rede em qualquer âmbito da atividade humana” (Castells, 2004, p 311).

De acordo com os resultados do estudo Bareme Internet da Marktest, em 1997^{iv}, apenas 5,6% dos portugueses acedia à Internet mas, dez anos depois, o número de utilizadores da Internet aumentou 679%, o que em Portugal continental representava 44,6% de utilizadores. Três anos depois, o número de utilizadores da internet em Portugal já tinha ultrapassado os 57,1%, mais 920% do que então.

A crescente importância do uso da Internet e a devida preocupação das IES em apostar na gestão e desenvolvimento de sítios institucionais e em meios de comunicação *online* é facilmente consubstanciada através de dados de estudos efetuados.

As transformações e a evolução da Internet nos últimos anos têm provocado inovações constantes que podem ser usadas na comunicação entre as IES e os seus alunos. A mudança tecnológica tem

contribuído para as várias transformações comunicacionais mas, são principalmente as escolhas dos utilizadores que fazem a mudança acontecer (Cardoso, Espanha & Araújo 2009).

Segundo Junior e Coutinho (2008) registou-se uma mudança profunda no modo como se passou a usar a Internet, tendo ela mudado de paradigma sem que os utilizadores percebessem essa mudança. Existe agora maior facilidade em produzir e colocar conteúdos *online* que conduz consequentemente a novas formas de comunicação, assim como à criação do conceito de comunidade em torno de um tema. Há cada vez mais gente envolvida neste processo que, contribui, para um aumento da qualidade dos serviços oferecidos, para uma maior atualidade da informação e uma constante validação dos conteúdos.

Na Web 2.0 os utilizadores adotaram uma conduta diferente, uma vez que, passaram a poder expressar a sua opinião e contribuir com novos conteúdos. O utilizador perdeu assim a sua passividade, deixou de ser apenas consumidor para ser também, produtor de informação.

MULTIMÉDIA E PORTABILIDADE NO ÂMBITO DO *PODCAST* E *PODCASTING*

Podcast e Podcasting

Num mundo globalizado onde a comunicação e a tecnologia andam a par, o *podcast* surge com força suficiente para se alastrar na sociedade, sendo usado em várias áreas do saber e existindo uma grande aceitação pela sociedade em geral devido ao seu formato versátil.

A tecnologia do *podcast* e a técnica associada, o *podcasting*, para alguns não é novidade, porém, será ainda para grande parte dos utilizadores da Internet.

De acordo com um estudo da WIP Portugal 2010^v em “A utilização de Internet em Portugal 2010”, 20,7 % dos internautas declarou fazer download de

podcasts. Podemos afirmar que o seu uso está em ascendente pois, de acordo com INE/UMIC^{vi} em “Inquérito à Utilização de Tecnologias de Informação e Comunicação pelas Famílias 2008”, apenas 5,3% afirmaram utilizar o serviço de *podcast*.

De acordo com os diferentes autores que estudaram o *podcast*, independentemente do âmbito do seu estudo, as definições encontradas para esta terminologia são idênticas, apenas aumenta ou diminui a dimensão da definição. De acordo com Salmon et al. (2008) o *podcast* é: um arquivo de media digital que reproduz áudio, ou, áudio e vídeo; se for vídeo, o termo por vezes usado é “vodcast”; está disponível a partir de um *site*; pode ser aberto e/ou descarregado e ouvido/visto num computador e/ou; é descarregado de um *site* para ser reproduzido num leitor portátil desenhado para reproduzir som e/ou vídeo.

De uma forma muito sumária, entende-se que o *podcast* é simplesmente um ficheiro áudio e/ou vídeo disponibilizado através da internet. Esse ficheiro terá a missão de gerar interesse e se houver preocupação de adequar o conteúdo ao consumidor, tornando-o minimamente aliciante, poder-se-á espalhar atingindo o seu público-alvo em larga escala.

Com o termo *podcast* surge a necessidade de se referenciar o *podcaster*. O *podcaster* é quem produz e disponibiliza *podcasts*. Pode ser uma pessoa em nome individual ou, em nome coletivo representando uma empresa, uma instituição de ensino ou uma comunidade estudantil, etc.

De acordo com Cangialosi et al. (2007), o RSS veio permitir uma nova forma de distribuição de áudio e vídeo. Esta inovação teve origem no blogue quando o RSS se associou ao *podcast*, permitindo uma evolução para o *Podcasting*.

De acordo com a análise efetuada a estas definições, entende-se que o ato de

podcasting está diretamente relacionado com a publicação do *podcast* na Internet. Muitas são as vantagens identificadas na utilização desta ferramenta, tanto para quem a consome como para quem a

produz e disponibiliza. De acordo com outros trabalhos realizou-se uma compilação de vantagens, de modo a salientar as mais-valias da utilização do *podcast* (cf. Quadro 1).

Quadro 1 – As vantagens do *podcast*

Vantagens de uso para quem produz e disponibiliza <i>podcasts</i>	Vantagens de uso para o utilizador de <i>podcasts</i>
– não há regras para a atualização de podcasts, pode ser feita quando o podcaster quiser – o podcaster pode ser qualquer pessoa em nome individual ou coletivo – a distribuição de podcasts é gratuita (desde que inclua publicidade do diretório) – existe facilidade na distribuição dos podcasts via subscrição RSS – bastam poucos recursos para a produção de podcasts – existe facilidade na produção de conteúdos – a capacidade própria de distribuir áudio e vídeo, sem necessidade de recorrer aos media	– acesso maioritariamente gratuito, porém, já existem podcasts pagos – qualquer pessoa pode ter acesso a podcasts mesmo que não tenha feito uma subscrição – o consumo de podcasts pode ser imediato ou, podem ser descarregados para o computador ou para outros dispositivos para um consumo offline – o podcast goza de plena portabilidade, oferecida pelos dispositivos portáteis, podendo ser consumido em qualquer lugar – o podcast pode ser consumido em simultâneo com o exercício de outras atividades – o podcast pode ser consumido quantas vezes o utilizador o desejar – Permite a atualização constante

Qualquer pessoa pode ser *podcaster*, sem ter adquirido formação específica para o efeito e, para tal, basta um computador ligado à Internet, microfone, câmara de vídeo e uma ferramenta da Web 2.0, como o iTunes, Audacity, Podomatic, GoDaddy, Liberated Syndication ou SpringDoo, podendo eventualmente ser um serviço pago, dependendo do volume de *podcastings* por mês, ou, caso se opte pela divulgação de *podcasts* sem publicidade associada. O produto final pode substituir qualquer ação que, por norma, associamos aos media.

O RSS veio permitir a divulgação automática dos *podcasts*, possibilitada através de uma subscrição prévia, retirando deste modo a necessidade ao utilizador de uma pesquisa constante. A

funcionalidade de subscrição, não é obrigatória mas, facilita o acesso a novos conteúdos sem esforço do utilizador.

Apesar de não haver regras para a atualização de conteúdos, há recomendações no sentido de se fazerem atualizações periódicas de, pelo menos uma vez por semana.

A característica da portabilidade atribuída ao *podcast* é uma das vantagens enumeradas para o utilizador mas, também poderá ser entendida como uma vantagem para quem produz e distribui. Toda a informação e media necessita estar disponível *online*, podendo ser consumida onde e quando o consumidor quiser, caso contrário os *podcasters*/empresas arriscam-se a que a informação não chegue ao seu público-alvo.

Os locais possíveis para a disponibilização de *podcasts* identificam-se, mas não se limitam aos sites institucionais, *microsites*, *blogs*; e, em diretórios.

Diversidade da Utilização do Podcast

Hoje em dia o *podcast* é já muito utilizado em várias áreas do saber e são também disponibilizados diariamente nos sites de meios de comunicação como forma de divulgação de reportagens, entrevistas, programas de rádio, etc. São também muito usados na área do marketing, publicidade, relações públicas, comunicação e também do ensino.

O facto de o *podcast* ser um tecnologia relativamente recente, leva a que os motores de busca ainda não utilizem métodos de indexação adequados, para encontrar os *podcasts* mais adequados (Besser, Larson & Hofmann, 2010).

De acordo com Moura (2011), os *podcasts* têm utilizações várias e podem desempenhar várias funções na área da informação, educação e entretenimento. A potencialidade do *podcast* nas IES é muito diversificada, pois pode ser utilizado para comunicar internamente com os alunos e funcionários, docentes e não docentes, como pode servir para promover a instituição externamente, de modo a chegar a outros públicos. O uso do *podcast* como ferramenta de aprendizagem é frequente em muitas universidades estrangeiras e existem relatos de sucessos comprovados.

Segundo Marques e Carvalho (2009), os *podcasts* nas IE podem ser orientados para: aulas; feedback de trabalhos; resumo de conceitos; proporcionar conteúdos complementares; revisões das aulas; orientações em atividades; gerar avisos; e TPC – Trabalhos Para Casa.

A experiência de algumas universidades nos EUA, em particular no caso de Duke, relatou que, findo o primeiro ano de uso de *podcasts* considera esta ferramenta muito bem-sucedida para

a área educacional. No caso da universidade de Berkely é prática apresentar um *podcast* com informação respeitante ao processo de acesso a esta universidade, para uso dos seus candidatos. Assim como, o plano curricular descrito pelos professores onde oferecem dicas para o candidato alcançar a admissão. Para além destes *podcasts* mencionados oferecem esclarecimentos sobre bolsas de estudo e sobre como encontrar emprego, comunicam eventos, conferências e disponibilizam aulas.

Embora se possa pensar que a disponibilização de *podcasts* das aulas de IES pode levar os alunos a faltarem às aulas presenciais, um estudo de 2006 mostrou que os estudantes continuam a preferir assistir às aulas, mesmo quando têm as mesmas disponíveis em *podcast* (Bongey, Cizadlo & Kalnbach, 2006).

Podcasts em Portugal

A primeira evidência da existência da disponibilização de *podcasts* em Portugal foi em Março 2005, através do *podcaster* Duarte Grilo com Bilitzkrieg Bop. Logo de seguida surge o Cotonete que disponibilizava uma parte do portal para *podcasts*^{vii} e, mais tarde, ainda em 2005, apareceu outro portal, o Lusocast. Em Fevereiro de 2006 a rádio TSF contabilizava um total de 399.765 conteúdos de *podcasts* descarregados do seu site^{viii}. Ainda em Fevereiro do mesmo ano, já depois do aparecimento dos diretórios com *podcasts* e do sucesso no uso dos mesmos por uma estação de rádio, foi a vez de uma televisão, a SIC Online que também lançava um serviço de *podcasting* (Bonixe, 2006). Pouco tempo depois, em Março de 2006, o Expresso passou a usar esta ferramenta através da disponibilização de conteúdos do jornal impresso. O primeiro fórum português sobre *podcasts* e *podcasting*, intitulado “Comunidade Podcast Portugal”, foi criado em 2006 e chegou a contabilizar 3.079 membros^{ix}.

Presentemente, muitos meios de comunicação social têm espaços reservados para a disponibilização de *podcasts*, desde as três estações de televisão portuguesas, algumas rádios e periódicos. Existem muitos *podcasts*, sobre os mais diversos temas, desde: Turismo; Enologia; Tecnologia; Aulas; Música; Entrevistas; Desporto; Moda e Beleza; e Aprendizagem de Línguas.

Aos poucos, a utilização do *podcast* tem vindo a adquirir maior preponderância no ensino em Portugal. “Conta-nos uma história!” é um concurso promovido pelo Ministério da Educação e Ciência, através da Direção-Geral da Educação, do Gabinete da Rede de Bibliotecas Escolares e do Plano Nacional de Leitura e conta com o apoio da Microsoft.escolas. As escolas participantes pertencem ao nível Pré-Escolar e 1.º Ciclo do Ensino Básico. Professores e alunos participam na produção de *podcasts* dentro do género mencionado. É na área do ensino onde se continuam a registar um maior número de trabalhos, que vão desde o ensino básico até ao ensino Superior. A título de exemplo identificam-se: “Contos Populares portugueses”^x e “Arquivos Áudio da Profª Teresa”^{xi}.

METODOLOGIA

População

No âmbito dos objetivos estabelecidos para este trabalho, a informação necessária foi recolhida junto de alunos do ensino superior, tendo havido uma maior participação de alunos provenientes de três instituições: ISCTE-IUL – Instituto Universitário de Lisboa, IPA - Instituto Superior Autónomo de Estudos Politécnicos e ISCSEM - Instituto Superior de Ciências da Saúde Egas Moniz. Todos os outros participantes foram contactados via correio eletrónico e via Facebook.

Importa referir que a técnica de amostragem não probabilística utilizada é

uma amostragem de conveniência. A grande maioria dos alunos que responderam ao questionário frequentam o ISCTE-IUL, outros o IPA e o ISCSEM e, a angariação dos restantes participantes contou com a colaboração de amigos e familiares através do Facebook e correio eletrónico.

Apesar da não representatividade da população estudantil desta amostragem, a técnica utilizada permite retirar ideias e reconhecer pontos críticos^{xii}. A amostra em estudo é constituída por um total de 514 indivíduos de ambos os géneros, com idades compreendidas entre os 18 e os 62 anos de idade.

Devido à grande diversidade nas respostas do Nome do Curso (oitenta cursos) existiu a necessidade de se estabelecer uma ordem e para tal, dividiram-se e classificaram-se os cursos dos respondentes em duas áreas de estudo (Torres, 2004): Área Tecnológica (onze cursos) e Área Não Tecnológica (69 cursos).

Recolha e Tratamento dos dados

Para recolher os dados foi utilizado um questionário construído e aplicado a partir de um *software* disponível *online* denominado SurveyMonkey.

Para o modelo de investigação usaram-se as seguintes variáveis dependentes:

- A importância do *podcast* como ferramenta de comunicação;
- A importância do *podcast* como ferramenta de comunicação quando usada pelas IES;
- O nível de importância do envolvimento dos alunos na produção e divulgação de *podcasts*.

No caso das variáveis independentes estas são:

- O género de *podcast* mais utilizado;
- O gosto em consumir *podcasts*;
- As categorias de *podcasts* a usar pelas IES;

- As características sociodemográficas (idade; género; ciclo de estudos; área de estudos).

O relacionamento entre todas estas variáveis pode ser observado na Figura 3.

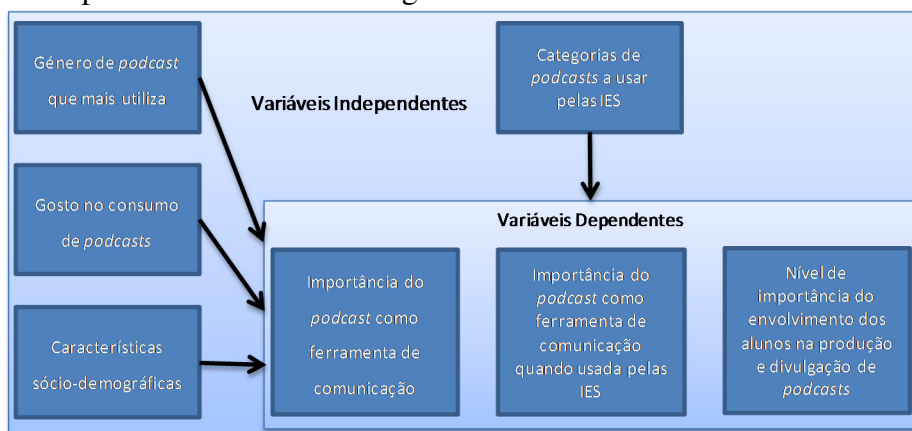


Figura 3 – Modelo conceitual de investigação

Finalizada a recolha dos dados através do SurveyMonkey, os mesmos foram exportados para uma folha de cálculo do Excel e posteriormente importados para o programa estatístico SPSS - Statistical Package for the Social Sciences, versão 19, que permitiu a análise e interpretação dos dados.

Os dados quantitativos foram analisados com recurso a duas análises fatoriais de componentes principais (ACP) de modo a identificarem-se as dimensões mais representativas. Obteve-se uma estrutura, composta por 3 componentes relativos aos géneros de *podcast* mais usados pelos inquiridos:

- Componente 1 – Sociedade e Conhecimento;
- Componente 2 – Tecnologia e Lazer;
- Componente 3 - Administração Pública e Quotidiano.

A Componente 1 (Sociedade e Conhecimento) teve a sua origem em seis itens, tal como a Componente 2 (Tecnologia e Lazer) e a Componente 3 (Administração Pública e Quotidiano) em quatro itens. A análise fatorial realizada permitiu encontrar as componentes mais relevantes:

- Sociedade e Conhecimento;
- Tecnologia e Lazer;
- Administração Pública e Quotidiano;

- Categorias de *podcasts* a usar pelas Instituições de Ensino.

Determinaram-se correlações entre as dimensões encontradas, assim como entre as variáveis dependentes e independentes, utilizando para tal o coeficiente de correlação de Pearson de modo a medir-se a intensidade entre variáveis.

RESULTADOS

Apresentamos a análise da associação entre diferentes variáveis com recurso ao coeficiente de correlação de *Pearson* de modo a medirmos a intensidade entre elas.

As correlações realizadas refletem, não só, as relações entre as variáveis dependentes, “Importância do *podcast* como ferramenta de comunicação”, “Importância do *podcast* como ferramenta de comunicação quando usada pelas IES” e “Nível de participação dos alunos na produção e divulgação de *podcasts*”, e as diversas variáveis independentes consideradas no modelo mas, também, entre as dimensões encontradas através da ACP.

De notar que as variáveis dependentes estão moderada e positivamente correlacionadas entre si, o que denota que, quando aumenta o nível de importância do *podcast* como ferramenta de comunicação, também aumenta o nível de importância do *podcast* como ferramenta de comunicação quando usada pelas IES, assim como o nível

de envolvimento dos alunos na produção e divulgação de *podcasts*.

Verifica-se que existe uma correlação significativa entre a Importância do *podcast* como ferramenta de comunicação e a Importância do *podcast* como ferramenta de comunicação quando usada pelas IES. Quanto mais se considera o *podcast* uma ferramenta de comunicação importante, maior é a importância dada a este como ferramenta de comunicação quando usada pelas IES, significando que quando uma variável aumenta a outra aumenta igualmente.

Também se verifica uma correlação significativa entre a importância do *podcast* como ferramenta de comunicação quando usada pelas IES e a importância da participação dos alunos na produção e divulgação de *podcasts*. Quanto mais se considera o *podcast* uma ferramenta de comunicação importante quando usada pelas IES, maior é a importância dada à participação dos alunos na produção e divulgação de *podcasts*.

Constata-se que existe uma correlação significativa entre a importância da

participação dos alunos na produção e divulgação de *podcasts* e a importância do *podcast* como ferramenta de comunicação. Quanto maior é a importância dada à participação dos alunos na produção e divulgação de *podcasts*, maior é o nível de importância do *podcast* como ferramenta de comunicação.

A importância do *podcast* como ferramenta de comunicação encontra-se correlacionada com todas as variáveis do constructo géneros de *podcast*, verificando-se uma correlação mais intensa com a componente Tecnologia e Lazer e menos intensa com Administração Pública e Quotidiano.

A importância do *podcast* como ferramenta de comunicação quando usada pelas IES encontra-se correlacionada com todas as variáveis do constructo géneros de *podcast*, existindo uma correlação mais intensa com a componente Tecnologia e Lazer, logo seguida pela componente Sociedade e Conhecimento, sendo a menos intensa Administração Pública e Quotidiano.

Quadro 2 – Correlações entre as componentes dos géneros de *podcast* e a importância do *podcast* como ferramenta de comunicação

		Sociedade e Conhecimento	Tecnologia e lazer	Administração Pública e Quotidiano	A importância do <i>podcast</i> como ferramenta de comunicação
Sociedade e Conhecimento	Pearson	1			
	Sig. (2-tailed)				
	N	232			
Tecnologia e lazer	Pearson	,685**	1		
	Sig. (2-tailed)	,000			
	N	226	239		
Administração Pública e Quotidiano	Pearson	,683**	,604**	1	
	Sig. (2-tailed)	,000	,000		
	N	225	231	236	
A importância do <i>podcast</i> como ferramenta de comunicação	Pearson	,308**	,395**	,229**	1
	Sig. (2-tailed)	,000	,000	,000	
	N	229	236	233	364

**. Correlação significativa ao nível 0,01 (2-tailed).

Proceedings of the 5th Global Management Conference, 2013,

Global Academic Network & ISCTE-IUL;

ISBN: 978-989-732-156-6; © Instituto Universitário de Lisboa (ISCTE-IUL), Portugal

Quadro 3 – Correlações entre as componentes géneros de *podcast* e a importância do *podcast* como ferramenta de comunicação quando usada pelas IES

			Sociedade e Conhecimento	Tecnologia e lazer	Administração Pública e Quotidiano	A importância do <i>podcast</i> como ferramenta de comunicação quando usada pelas IES
Sociedade e Conhecimento	Pearson	1				
	Sig. (2-tailed)					
	N	232				
Tecnologia e lazer	Pearson	,685**	1			
	Sig. (2-tailed)	,000				
	N	226	239			
Administração Pública e Quotidiano	Pearson	,683**	,604**	1		
	Sig. (2-tailed)	,000	,000			
	N	225	231	236		
A importância do <i>podcast</i> como ferramenta de comunicação quando usada pelas IES	Pearson	,339**	,379**	,230**	1	
	Sig. (2-tailed)	,000	,000	,000		
	N	229	236	233	365	

** . Correlação significativa ao nível 0,01 (2-tailed).

Quadro 4 – Correlações entre as componentes géneros de *podcast* e a importância da participação dos alunos na produção e divulgação de *podcasts*

			Sociedade e Conhecimento	Tecnologia e lazer	Administração Pública e Quotidiano	A importância da participação dos alunos na produção e divulgação de <i>podcasts</i>
Sociedade e Conhecimento	Pearson	1				
	Sig. (2-tailed)					
	N	232				
Tecnologia e lazer	Pearson	,685**	1			
	Sig. (2-tailed)	,000				
	N	226	239			
Administração Pública e Quotidiano	Pearson	,683**	,604**	1		
	Sig. (2-tailed)	,000	,000			
	N	225	231	236		
A importância da participação dos alunos na produção e divulgação de <i>podcasts</i>	Pearson	,272**	,339**	,196**	1	
	Sig. (2-tailed)	,000	,000	,003		
	N	223	229	226	343	

** . Correlação significativa ao nível 0,01 (2-tailed).

Constata-se que a importância da participação dos alunos na produção e divulgação de *podcasts* encontra-se correlacionada com todas as variáveis do constructo géneros de *podcast*, sendo a correlação mais intensa com a componente Tecnologia e Lazer. A importância da participação dos alunos na produção e divulgação de *podcasts* está também correlacionada, ainda que num grau não tão elevado, com a componente Sociedade e Conhecimento e ainda, mas com menor intensidade, com a componente Administração Pública e Quotidiano.

Verificou-se também que o gosto em consumir *podcasts* encontra-se moderadamente correlacionado com a importância do *podcast* como ferramenta de comunicação. Quanto maior o gosto em consumir *podcasts*, maior é a sua importância enquanto ferramenta de comunicação.

Constata-se que existe uma correlação significativa entre o gosto em consumir *podcasts* e a importância do *podcast* como ferramenta de comunicação quando usada pelas IES. Ambas as variáveis variam no mesmo sentido, portanto, quanto maior é o gosto pelo consumo desta tecnologia, maior é o nível de importância do *podcast* como ferramenta de comunicação quando usada pelas IES.

O gosto em consumir *podcasts* encontra-se moderadamente correlacionado com a importância da participação dos alunos na produção e divulgação de *podcasts*. Quanto maior é o gosto no seu consumo, maior é o nível de importância da participação dos alunos na produção e divulgação de *podcasts*.

Verifica-se que existe uma correlação significativa entre as Categorias de *podcasts* a usar pelas IES e a importância do *podcast* como ferramenta de comunicação. Ambas as variáveis variam no mesmo sentido, portanto, quanto maior é o nível de importância do *podcast* como ferramenta de comunicação, maior é o

nível de importância atribuído às Categorias de *podcasts* a usar pelas IES.

Existe uma correlação significativa entre as Categorias de *podcasts* a usar pelas IES e a Importância do *podcast* como ferramenta de comunicação quando usada pelas IES. Quanto maior a importância das Categorias de *podcasts* a usar pelas IES, maior é o nível de importância do *podcast* como ferramenta de comunicação quando usada pelas IES.

A importância da participação dos alunos na produção e divulgação de *podcasts* encontra-se correlacionada com as Categorias de *podcasts* a usar pelas IES, ou seja, quanto mais úteis são consideradas as categorias de *podcasts* a usar pelas IES, maior é o nível de importância da participação dos alunos na produção e divulgação de *podcasts*.

Existe uma correlação significativa entre a frequência de utilização de *podcasts* e a importância do *podcast* como ferramenta de comunicação quando usada pelas IES. Quanto maior é a utilização de *podcasts*, maior é a importância que se dá ao *podcast* como ferramenta de comunicação, quando usada pelas IES.

Verifica-se que existe uma correlação significativa entre a frequência de utilização de *podcasts* e a importância da participação dos alunos na produção e divulgação de *podcasts*. Ambas as variáveis variam no mesmo sentido, assim, quanto maior é a frequência de utilização desta tecnologia, maior é o nível de importância da participação dos alunos na produção e divulgação de *podcasts*.

Em resumo, dentro dos resultados obtidos, verifica-se que os alunos estão muito confortáveis com o recurso a esta tecnologia e querem participar ativamente, em conjunto com as IES, na sua implementação, atribuindo-lhe maior importância do que numa perspetiva de mero consumidor. Este resultado vai de encontro ao defendido por Cangialosi et al. (2007) no que diz respeito aos utilizadores

da Web 2.0 que tem uma participação e interação mais ativa na produção de conteúdos.

Conclui-se ainda que, o potencial de utilização desta tecnologia não se limita apenas à componente académica. O *podcast* tem utilizações várias ligadas à educação, informação e entretenimento, tal como Moura (2010) destaca.

Suportado por vários estudos, Baker (2002) salientou que todas as organizações têm necessidades e desafios comunicacionais. Os resultados observados demonstram que as IES não são exceção a essa realidade e o *podcast* pode constituir uma resposta a esses desafios.

RESULTADOS

O *podcast* vem possibilitar, e até mesmo, facilitar, a existência de uma comunicação organizacional/institucional, para além da escrita. Qualquer que seja o âmbito da organização, todas têm necessidades comunicacionais tanto internas como externas e o *podcast* pode colmatar essas necessidades, sem que hajam muitos esforços do ponto de vista material, temporal e financeiro, nem esforço de adaptação por parte dos alunos estando estes preparados para fazer uso desta tecnologia, em conjunto com as IES.

Este estudo tinha na sua génese aferir até que ponto o *podcast* poderia ser adotado como uma ferramenta de comunicação por parte de organizações, como as IES, sendo para isso necessário antever eventuais problemas decorrentes da falta de familiaridade com a tecnologia e/ou da perceção de utilidade/importância atribuída por um dos atores mais importante neste canal de comunicação – o aluno.

Os resultados vieram demonstrar que não só estavam os alunos familiarizados com a tecnologia, como a consideraram em certa medida importante como ferramenta global de comunicação e mais

ainda quando enquadrada no contexto das IES, Qualquer receio que à partida pudesse existir por parte de uma IES na adoção desta tecnologia quanto à sua aplicabilidade face a um universo de alunos da área de estudo Não Tecnológica, aparenta ser infundado uma vez que se obtiveram resultados bastante uniformes entre esses e os da área de estudo Tecnológica, o que se compreende face ao contacto constante com a tecnologia a que as atuais gerações estão sujeitas.

A utilização do *podcast* pode e deve ser alargada à divulgação de uma série de informação extracurricular, não se limitando à componente académica, assumindo assim o papel que lhe está destinado como ferramenta de comunicação entre as IES e o seu público-alvo.

REFERÊNCIAS

- Baker, K. (2002). *Organizational Communication*. Acedido em 22 de Janeiro, 2012, de <http://www.au.af.mil/au/awc/awcgate/doe/benchmark/ch13.pdf>
- Baker, R.; Harrison, J.; Thornton, B. & Yates, R. (2010). "Podcasting In Higher Education: Does It Make a Difference?" *American Journal of Business Education*, Vol. 3, Nº 6 (June), pp. 7-10.
- Besser, J.; Larson, M. & Hofmann, K. (2010). "Podcast search: user goals and retrieval technologies". *Online Information Review*, Vol. 34, Nº 3, pp. 395-419.
- Bongey, S. B.; Cizadlo, G. & Kalnbach, L. (2006). "Explorations in course-casting: podcasts in higher education". *Campus-Wide Information Systems*, Vol. 23, Nº 5, pp. 350-367.

- Bonixe, L. (2006). *El podcasting a Portugal*. Acedido em 21 outubro, 2012, do Observatori Per A La Cibernsociety website em: http://www.cibersociedad.net/congres2006/gts/comunicacio.php?id=223&llen_gua=ca
- Cangialosi, G., Geoghegan, M. W., Irelan, R., Bourquin, T., & Voegelé, C. (2007). *Podcast academy: the business podcasting book: launching, marketing, and measuring your Podcast*. Amsterdam: Focal Press, Elsevier.
- Cardoso, G., Espanha, R., & Araújo, V. (2009). *Da comunicação de massa à comunicação em rede*. Porto: Porto Editora.
- Carrera, F. (2009). *Marketing Digital na Versão 2.0 - O que não pode ignorar*. Lisboa: Sílabo.
- Castells, M. (2004). *A Galáxia da Internet*. Lisboa: Fundação Calouste Gulbenkian.
- Costa, J. (2001). *La comunicación en acción*. Barcelona: Paidós.
- Dias, P. (2001). *Comunidades de Conhecimento e Aprendizagem Colaborativa*. Acedido em 21 outubro, 2012, de http://www.prof2000.pt/users/mfflores/teorica6_02.htm
- Harris, T. E. & Nelson, M. D. (2007). *Applied organizational communication: Theory and practice in a global environment*. New York: L. Erlbaum.
- Junior, J. B. B. & Coutinho, C. P. (2008). *Recomendações para a produção de podcasts e vantagens na utilização em ambientes virtuais de aprendizagem*. Prisma.com, 6, pp. 125-140.
- Mack, S. & Ratcliffe, M. (2007). *Podcasting Bible* (pp. 37-46). Indianapolis: Wiley.
- Marques, C. G. & Carvalho, A. A. A. (2009). "Podcasts no ensino superior : um estudo em licenciaturas de gestão". In Carvalho, A. A. A. (Cl.Ed.), *Actas do Encontro sobre Podcasts*, Braga, Portugal, 2009, pp. 163-175.
- Moura, A. M. C. (2011). *Apropriação do Telemóvel como Ferramenta de Mediação em Mobile Learning: Estudos de Caso em Contexto Educativo*, Tese de Doutoramento, Guimarães: Universidade do Minho.
- Passos, J.; Alturas, B. & Laureano, R. M. S. (2012). "The Importance of Social Networking in the Dissemination of Musical Contents and Musical Events: The Case of Facebook in Portugal", *Proceedings of the LCBR European Marketing Conference 2012*, Munich, Germany.
- Prensky, M. (2012). *From digital natives to digital wisdom: hopeful essays for 21st century learning*. Thousand Oaks, California: Corwin Press.
- Ruão, T. (2005). "O papel da identidade e da imagem na gestão das universidades". In Fidalgo, A. et al., *Repensar os media: novos contextos da comunicação e da informação: Actas do Congresso da Associação Portuguesa de Ciências da Comunicação (SOPCOM) IV*.
- Salmon, G., Edirisingha, P., Mobbs, M., Mobbs, R., & Dennett, C. (2008). *How to create podcasts for education*. Maidenhead, England: Open University Press.
- Tornero, J. M. (2007). *Comunicação e educação na sociedade da informação: novas linguagens e consciência crítica*. Porto: Porto Editora.
- Torres, M. J. (2004). *Função do Marketing em Instituições do Ensino Superior*, Dissertação de Mestrado, Guimarães: Universidade do Minho.

- ⁱ Marktest Investimentos SGPS, disponível em: http://www.marktest.com/wap/private/images/logos/redes_sociais_folheto2.pdf, acessado em 24 de Outubro de 2012.
- ⁱⁱ CCISP-Conselho Coordenador dos Institutos Superiores Politécnicos, disponível em: http://www.ccisp.pt/doc/pt/Estudos/ESP_VF.pdf, acessado em 24 de Outubro de 2012.
- ⁱⁱⁱ Pordata, Base de Dados Portugal Contemporâneo, disponível em: <http://www.pordata.pt/Portugal/Alunos+matriculados+no+ensino+superior+total++por+subsistema+e+por+tipo+de+ensino-1019>, acessado em 24 de Outubro de 2012.
- ^{iv} Grupo Marktest, disponível em: <http://www.marktest.com/wap/a/n/id~e34.aspx>, acessado em 24 de Outubro de 2012.
- ^v UMIC, Agência para a Sociedade do Conhecimento, disponível em: http://www.umic.pt/images/stories/noticias/Relatorio_LINI_UMIC_InternetPT.pdf, acessado em 24 de Outubro de 2012.
- ^{vi} Destaque, Informação à Comunicação Social do Instituto Nacional de Estatística, disponível em: <http://www.google.pt/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CCoQFjAB&url=http%3A%2F%2Fwww.seguranet.pt%2Frepositorymodule%2Ffile%2Ffid%2F48%2F&ei=E5uIUKjiEtGChQf74oC4CQ&usg=AFQjCNGpTELNmQxQOWFqVPm4jetHRcR1GA&sig2>, acessado em 24 de Outubro de 2012.
- ^{vii} Meios & Publicidade, disponível em: http://www.meiosepublicidade.pt/2005/11/Depois_do_Blogging_o_Podcasting/, acessado em 24 de Outubro de 2012.
- ^{viii} Meios & Publicidade, disponível em: http://www.meiosepublicidade.pt/2007/03/Podcast_da_TSF_com_400_mil_desc/, acessado em 24 de Outubro de 2012.
- ^{ix} Recuperado de: <http://www.ptpodcast.org/>, Comunidade *Podcast* Portugal, em 3 de Março 2012. Fórum entretanto encerrado devido ao excesso de *spam*, contudo, devido à pertinência da informação optou-se por mantê-la.
- ^x Contos Populares Portugueses, disponível em: <http://adelina.podomatic.com>, acessado em 25 de Outubro de 2012.
- ^{xi} Arquivos Áudio da "Prof. Teresa", disponível em: <http://profteresa.podomatic.com>, acessado em 25 de Outubro de 2012.
- ^{xii} Métodos e Técnicas de Amostragem, Universidade do Minho, disponível em: <http://claracoutinho.wikispaces.com/M%C3%A9todos+e+T%C3%A9cnicas+de+Amostragem>, acessado em 25 de Outubro de 2012.

PRÁTICAS EMPRESARIAIS GLOBAIS E LOCAIS DO OUTRO LADO DO ATLÂNTICO – BRASIL: UMA ANÁLISE DAS ENTIDADES DE FOMENTO AO EMPREENDEDORISMO

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RESUMO

Este paper discute o fenômeno do empreendedorismo sob a ótica de cinco entidades de apoio ao tecido empresarial da cidade de Itabuna – Bahia – Brasil. O panorama empreendedor, as estratégias, os desafios encontrados na abertura e continuidade dos negócios e a sucessão formaram as dimensões teóricas. Este estudo identifica como é o modus operandi das micro e das pequenas empresas dessa região. A investigação tem uma abordagem qualitativa, caracterizada por ser exploratória e bibliográfica. O trabalho de campo utilizou as entrevistas e as observações. A análise do conteúdo sistematizou as revelações recolhidas dos responsáveis das entidades investigadas, e os pontos fortes e fracos, vividos pelos empreendedores, foram expostos pelos inquiridos. O mundo dos negócios encontra-se em situações contraditórias visto que, de um lado, apresenta-se repleto de oportunidades; do outro, com muitas incertezas. A maioria dos empresários desenvolve ações/estratégias de forma empírica e casual, sendo que a vivência é o fator mais utilizado na administração.

Palavras-Chave : empreendedorismo, estratégias, negócios, desafios, sucessão.

ABSTRACT

In this paper we discuss the entrepreneurship phenomena from the perspective of five supporting entrepreneurial organizations in the city of Itabuna - Bahia, Brazil. The entrepreneurial environment, strategies and challenges encountered in the opening, operation and succession of businesses were the themes developed. This paper examines the modus operandi of entrepreneurs in the management of micro and small firms from that area. The content analysis systematized the information collected from the people in charge of the entities investigated. The interviews and observations provided information for the reflections made and, the strengths and weaknesses involved in the local business environment were revealed by the interviewees. The results reveal a business setting in contradictory situations: on the one hand, full of opportunities, while on the other, with many uncertainties to overcome. Most entrepreneurs develop actions/strategies empirically. Experience is the most used factor in business administration.

Key words: entrepreneurship, strategies, business challenges, succession.

INTRODUÇÃO: O Universo Empresarial

O empreendedorismo é considerado uma força vital para o desempenho econômico de todas as economias do mundo globalizado. Os organismos internacionais dedicam parte de suas diretrizes, estudos e procedimentos para as ações econômicas com enfoque nesse sistema. Por sua vez, os governos, em todas as instâncias,

envidam esforços para atividades que proporcionem o crescimento econômico e social de um país oriundo de uma cultura empreendedora. O empreendedorismo, nesse sentido, pode ser um mecanismo de apoio ao desenvolvimento econômico, promoção e manutenção de empregos, criação de novas empresas, dinamização e inovação da economia e, evidentemente, geração de riqueza.

As características mais marcantes dos empreendedores são as capacidades de somar e complementar insumos e a de preencher vazios ou deficiências existentes no mercado. O empreendedor é o agente capaz de associar e completar os insumos necessários para um determinado processo produtivo, é a força motriz do crescimento e da transformação econômica, sublinha Leibenstein (1968: 72-75).

Os autores, Drucker (1986) e Filion (1998), no final dos anos 80, afirmaram que o empreendedorismo retorna à arena de discussões na sociedade, torna-se um tema importante nos diversos setores sociais. A literatura econômica vai aos poucos estabelecer que o empreendedorismo é um processo dinâmico e revitalizador de uma economia e vê no empresário o maximizador de resultados (Leibenstein, 1968).

Para refletir sobre essas questões, o empreendedorismo é convocado para desempenhar um papel relevante nas novas demandas da sociedade, como também estabelecer novas maneiras de gerir as organizações. Questões como concorrência, estratégia, competitividade, sobrevivência, oportunidades, inovação, risco, criação de novos empreendimentos vão ganhando espaço nas atividades econômicas. Uma cultura empresarial com muito profissionalismo ascendente nas empresas, em particular, nos micro e nos pequenos negócios, começa a ser estruturada.

É sob essa perspectiva inovadora e global que esta investigação debate o tema empreendedorismo. O referencial teórico discute o modelo empreendedor tradicional, nas dimensões econômicas e comportamentais. Com relação ao objetivo geral, este estudo investiga a dinâmica da formação, sobrevivência e sucessão dos empreendimentos na cidade de Itabuna, Brasil. Para operacionalizar esse objetivo amplo, avaliaram-se: a) o papel institucional das organizações

públicas e privadas no fomento à criação de novas empresas e b) as orientações quanto à continuidade e longevidade dos negócios (medidas e diretrizes). As pesquisas bibliográficas e qualitativas foram as ferramentas mais utilizadas para o alcance dos resultados. A análise do conteúdo refletiu as revelações dos entrevistados.

“Empreender” é uma tarefa necessária para os novos desafios que o mundo empresarial vivencia. Esta pesquisa explora os postulados do empreendedorismo como modelo de negócio a ser utilizado pelos empresários. Alguns questionamentos surgiram: Como gerar ocupação e renda para as pessoas? Como manter o ritmo de crescimento nas sociedades globais de forma constante? Como incentivar o espírito empreendedor em várias partes do mundo? Como desenvolver a mentalidade empresarial nos indivíduos?

EMPREENDEDORISMO: CONCEITOS, DEFINIÇÕES E CONTRADIÇÕES

A palavra “empreendedor” vem de *entreprendre*, vocábulo francês que significa “fazer algo” ou empreender (Swedberg, 2000). Sua definição surgiu dos trabalhos dos economistas franceses, Richard Cantillon (1680-1734) e Jean-Baptiste Say (1767-1832), ao dedicarem atenção à criação de novas empresas e aos procedimentos gerenciais (De Paula, Cerqueira e Albuquerque, 2004: 573).

Por sua vez, Cantillon, devido a sua percepção na própria experiência comercial (Roll, 1972), foi o primeiro economista a desenvolver as ideias-chave relativas ao empresário e ao empreendedorismo no uso acadêmico. Este autor observava no empresário o portador dos riscos causados pelas mudanças na demanda do mercado, argumentava que os comerciantes estavam envolvidos no equilíbrio da oferta e da

procura. Cantillon revelou um empresário em busca de oportunidades de negócios, preocupado com a gestão econômica e um astuto na obtenção de melhor rendimento do capital investido (Filion, 1998: 1-2; Filion, 1999a: 6).

Jean-Baptiste Say é um dos pensadores mais perspicaz da ciência econômica e, conjuntamente com Cantillon, colocou o papel do empresário no centro da teoria econômica ao inventar o termo “empresário”. Say ressaltou a função vital desse empresário na economia, no qual este seria o responsável pelo movimento da indústria, o dinamismo do processo produtivo.

As características desejáveis a um bom empresário, agente ou “mestre-agente”, deveriam ser a capacidade de planejar, avaliar projetos e poder correr riscos. Say elencou qualidades morais que deveriam fazer parte do comportamento do empresário, como: julgamento, perseverança, bom senso, conhecimento de mundo, bem como conhecedor ou *expertise* de negócios (Say, 1972).

O economista Alfred Marshall (1842-1924) contribuiu muito para a discussão sobre empreendedorismo, no seu tratado “Princípios de Economia” de 1890. Ele reconheceu a necessidade do empreendedorismo para a produção e incorporou o termo organização nos três fatores clássicos de produção. Segundo este autor, a organização seria um fator que coordenaria os outros, terra, capital e trabalho, e via no empreendedorismo o elemento motriz dos empreendimentos. O empresário tinha que criar novos produtos ou melhorar o plano de fabricação de uma mercadoria antiga. Marshall (1890) acreditava que o empresário deveria ter um profundo conhecimento da indústria e, em função disso, deveriam ser os líderes naturais.

Para além disso, o empreendedorismo é visto como uma atividade de risco e oportunidades. O risco relaciona-se com um evento cuja frequência é ocorrida em

momentos ou experiências anteriores, logo existe uma probabilidade que é estimada; já a incerteza decorre de ocorrências únicas cuja probabilidade pode ser apenas estimada. Nas palavras de Knight (1972), o empreendedor tem a função de tomar para si a incerteza envolvida no processo de tomada de decisão e suas consequências. O papel fundamental do empreendedor é assumir a incerteza.

Pelo exposto, diversas são as definições abrangentes do mundo empresarial, na pessoa do empreendedor. Foram vistos aspectos que variam desde oportunidades, gestão até os riscos envolvidos nos negócios. Outras dimensões contemplam o empreendedorismo e suas diversas ramificações.

Na atividade empresarial, o agente que for mais rápido nas tomadas de decisões será capaz de enxergar oportunidades onde os outros não as veem. A isso Kirzner (1986) chamou de “estado de alerta constante”, ou seja, o empreendedorismo é um sinal de alerta empresarial que consiste em encontrar possibilidades de lucro quando são visíveis para uns indivíduos e não o são para outros ou concorrentes. Assim, o empreendedor não é o detentor de ideias inovadoras, mas alguém alerta às oportunidades já existentes e que estão à espera de serem descobertas; ratifica Salazar (2006: 201).

Outro ponto que se pretende neste momento é identificar o contributo de Schumpeter para a teoria do empresário. Este autor abordou os aspectos da inovação, desenvolvimento econômico, equilíbrio e desequilíbrio do sistema capitalista, através da destruição criadora, resistências a mudanças, enfim, a figura do empresário inovador.

O “desenvolvimento” verificado no ambiente econômico é entendido por Schumpeter (1985: 47), quando “apenas as mudanças da vida econômica que não são impostas de fora, mas que surgiram de dentro, por sua própria iniciativa” e essa

mudança acontece através de novas combinações sobre os meios de produção através de inovações, tendo como principal agente o empresário. Nas palavras de Schumpeter, o “desenvolvimento” é definido pela realização de novas combinações, e estas são caracterizadas em cinco casos: i) introdução de um novo bem; ii) introdução de um novo método de produção; iii) abertura de um novo mercado; iv) conquista de uma nova fonte de oferta de matérias-primas ou bens semifaturados; e v) estabelecimento de uma nova organização de qualquer indústria.

O empresário desenvolve atividades econômicas e não-econômicas e tem um propósito de alocar, da melhor forma possível, os fatores de produção disponíveis. Ele é um tomador de decisões, é aquele que combina recursos, agrega valor ao produto, introduz mudanças, inovações e cria uma nova ordem nas empresas. Na literatura atual, é a pessoa que faz as coisas acontecerem, é o gerador de riquezas, perturbador da ordem econômica, pessoa que assume risco, um visionário, enérgico, ambicioso, farejador de oportunidades, enfim, alguém que tem “o sonho e o desejo de fundar uma empresa no reino privado”, “o desejo de conquistar”, “a alegria de criar” (Schumpeter, 1985).

Outra dimensão trabalhada pelo empreendedorismo é a questão psicológica. A escola comportamental foi muito discutida e as conclusões apresentadas foram sempre criticadas, assegura Filion (1999a). Independentemente dessa posição, muito trabalhos desenvolvidos por psicólogos são aceitos no mundo científico. Os resultados tinham a validade e a confiabilidade de um trabalho científico; assim, ganhou corpo teórico e aceitação no meio acadêmico, ratifica Filion (1998; 1999a). O legado de McClelland (1961) contribuiu com algum entendimento sobre o comportamento/desempenho das

pessoas (Gibson e et al., 2006: 144), e os estudos deste autor são referências para compreender o fenômeno empreendedor.

Reforçando a abordagem comportamental, David C. McClelland (1917-1998) desenvolveu um método para medir a intensidade da motivação, além de identificar as características psicológicas das pessoas, nomeadamente os gerentes de grandes organizações. O psicólogo interessou-se pela história das grandes civilizações – ascensão e queda - e o principal elemento identificado nos seus estudos foi o herói que servia de modelo para as gerações futuras. O homem que supera obstáculos e ultrapassa os limites estabelecidos era tido como um protótipo que poderia ser imitado por outrem.

Mark Casson (1982), apesar de economista, também contribuiu de maneira considerável para a teoria comportamental do empreendedorismo. Casson (2004) ao analisar o mercado critica severamente a ideia de que as informações disponíveis são perfeitas e a teoria do empreendedorismo divergiu da ortodoxa neoclássica ao identificar que as informações encontradas no ambiente empresarial são heterogêneas, escassas, localizada e tornam-se constantemente obsoletas. A busca, a recolha, o processamento e a atualização dessas informações têm um custo e é muito caro para o tomador de decisões. O papel do empresário é de extrema importância no comando dos negócios, já que uma das suas tarefas prioritárias é fazer escolhas baseadas nas informações. Assim, “o empreendedor, confiante de ser possuidor de informações, conhecimento e julgamento superior aos demais participantes do mercado, assume poder de realocar os recursos de uma maneira mais eficiente”, sublinha Braga (2003: 25).

Outro autor que também contribuiu para resolução da equação do comportamento empreendedor foi Jeffry A. Timmons (1989). Ele centralizou seus

estudos acerca do fenómeno do empreendedorismo focado na iniciativa e na atitude proativa no empresário (Macêdo, Boava e Silva, 2009).

Os principais elementos que compõem os postulados do empreendedorismo nas vertentes económicas e comportamentais foram, em parte, debatidos. Para além disso, a transmissão de empresas está neste trabalho por significar um tema importante no mundo empresarial. Assim, a seguir, discutir-se-á a questão da sucessão.

SUCESSÃO: LONGEVIDADE NOS NEGÓCIOS?

A sucessão empresarial é outro tema que interessa aos proprietários das micro empresas e das empresas de pequeno porte. O dono do estabelecimento, por vezes, não atenta para esse momento especial. A sucessão, de qualquer país, é um tópico que não pode e não deve ser ignorado. Falar sobre a transmissão da empresa significa, em princípio, a saída do dono da condução da atividade.

Os autores Lodi (1987), Bernhoeft (1989) e Leone (1992) sugerem que o tema sucessão seja discutido pelos empresários para que essa transição possa acontecer de maneira organizada; sem tanta turbulência. Os empreendedores devem ter um cuidado na transmissão dos negócios, para que eles tenham uma maior longevidade. Os procedimentos da transmissão de empresas precisam ser debatidos não só pelos proprietários de estabelecimentos comerciais, como também por organismos internacionais.

A sucessão é o ato ou efeito de suceder. A palavra sucessão vem do latim *sucessióne*, e significa substituir alguém, alguém tomar o lugar do outro. No Dicionário Aurélio eletrônico, 2011, o termo quer dizer “um ato ou efeito de suceder-se, sequência de pessoas ou de coisas que se sucedem e/ou substituem ininterruptamente ou com pequenos intervalos”. A sucessão é um rito de

transferência do poder (gestão) e do capital (propriedade) entre o atual proprietário ou dirigente e o que virá a dirigir (Leone, 1992). Esse procedimento pode acontecer de forma gradativa e planejada ou através de um processo repentino. Qualquer tipo de organização passou ou passará pelo processo de transmissão; às vezes, de forma inesperada; às vezes, apenas ciente do acontecimento; e outras vezes, com um preparo administrativo bem elaborado.

O conceito de transmissão de empresas desenvolvido pelo relatório da Comissão Europeia está assim sintetizado:

(...) transmissão de empresas significa a transmissão de património empresarial para outra pessoa ou empresa, de forma a que a empresa inicial continue em funcionamento. No caso da maioria das pequenas e médias empresas (PME), e em especial as sociedades de pessoas ou em nome colectivo, uma transmissão é acompanhada das obrigações de gestão (Comissão Europeia, 2006: 9).

Já a definição de sucessão sugerido nesse mesmo relatório é:

Uma sucessão é uma transmissão de empresas no seio de uma família, normalmente de pais para filhos. Outras formas de transmissão são, por exemplo, a aquisição pelos próprios quadros (*management buy-out*) ou a venda a terceiros. Um transmitente é o proprietário que transmite a empresa ao adquirente (Comissão Europeia, 2006: 9).

Independentemente do início do processo de transmissão, é importante frisar que os empresários devem fazer o planeamento sucessorial. A necessidade de planejar é um atenuante, visto que ameniza os conflitos verificados durante a sucessão.

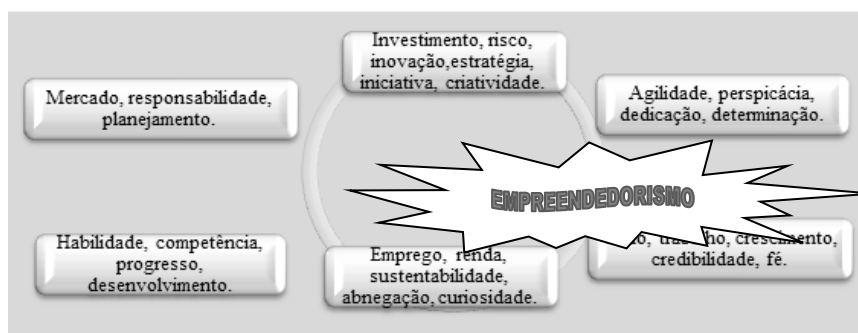
BREVE NOTA METODOLÓGICA

A pesquisa de caráter quali-quantitativo recorreu às ferramentas de trabalho como: estudo exploratório informal, pesquisa bibliográfica. A revisão da literatura teve como finalidade construir um quadro teórico-conceitual. Quanto ao trabalho de campo utilizaram-se as entrevistas estruturadas em um roteiro com seis responsáveis que diretamente fomentam o ambiente empresarial.

As observações foram apoiadas em um roteiro pré-estabelecido. A pesquisa documental ateve-se às atas, aos relatórios e documentos das entidades estudadas. Os dados secundários foram obtidos nos organismos públicos e privados. A análise do conteúdo foi a estratégia aplicada para interpretação das informações qualitativas. Por fim, os resultados revelaram percepções, ideias, estratégias, comportamento, contradições do mundo empresarial da cidade de Itabuna, Bahia, Brasil (Outro lado do Atlântico) (Objeto de estudo).

As entrevistas foram realizadas com os representantes da AMPESBA (Associação das Micro e Pequenas Empresas do Estado Bahia), da CDL (Câmara de Dirigentes Lojistas de Itabuna), da ACI (Associação Comercial e Empresarial de Itabuna), da UESC (Universidade Estadual de Santa Cruz), da Secretaria de Indústria, Comércio e Turismo da Prefeitura Municipal de Itabuna. O questionário foi composto de dois tópicos principais: o primeiro, sobre o tema estratégia, bem abrangente; e o segundo, sobre as ações realizadas por cada instituição pesquisada. A primeira etapa relaciona as palavras articuladas com o empreendedorismo. Os entrevistados foram questionados com a seguinte pergunta: quais as principais palavras que vêm à sua mente quando se pronuncia “empreendedorismo”? As respostas foram bem vastas, esse tema é realmente amplo. Nem no campo teórico, nem no campo empírico não se têm uma delimitação muito coesa. A seguir, apresentam-se as denominações dos responsáveis das entidades estudadas:

UM OLHAR SOBRE OS EMPREENDEDORES



Fonte: dados da pesquisa (2010).

Figura 5 Palavras convergentes do tema empreendedorismo

Os pesquisados (Filion, 1999a; Swedberg, 2000; Gartner, 2001; Audretch, 2002; Falcone e Osborne, 2005; Boava, 2006) já tinham identificado anteriormente essa falta de um campo sistematizado. Os estudos demonstraram/demonstram que o

fenômeno empreendedor é diversificado nas definições e nas conceituações. Existe uma abordagem muito variada quando se define ou quando se conceitua o caráter empresarial no modelo empreendedor, tanto no âmbito das ideias, quanto na realidade empresarial.

Outro aspecto inquirido refere-se à questão do ambiente externo. A cidade de Itabuna é favorável às atividades empresarial, mas apresenta alguma ambiguidade. De um lado, os representantes das entidades revelam que Itabuna é um polo regional de serviços e de comércio, em plena expansão. A localização geográfica, os municípios em seu entorno facilitam, também, a movimentação econômica do município; por outro lado, tem-se uma infraestrutura precária, o que necessitará de vultuosos investimentos nos seus setores estratégicos. A Secretaria da Indústria,

Comércio e Mineração da Bahia corrobora com esse posicionamento através dos seus informes ao expor a manchete “Novo eldorado baiano” (Governo da Bahia, 2010: 1)

Algumas inquietudes dos inquiridos foram encontradas. Eles comentaram que a região é carente de infraestrutura para absorver investimentos externos, a mão-de-obra é despreparada, a administração pública precisa ser profissionalizada com bons e eficientes gestores, as articulações entre os políticos necessitam acontecer. Para ratificar esse entendimento, algumas falas dos entrevistados foram registradas.

Tabela 1. Ambiente empreendedor de Itabuna: ambiguidades.

AMPESBA	Favorável: “Itabuna é sem dúvida que oferece um ambiente favorável aos empreendedores pela localização, clima” Desfavorável: “falta políticas públicas para melhorar a sua infraestrutura, (...) nossa mão de obra não está ainda preparada”.
CDL	Favorável: “Itabuna é um polo regional de serviços e comércio em plena expansão”
ACI	Favorável: “o empresariado local tem investido em melhorias (...) Itabuna se destacou pelo seu comércio dinâmico e bem sucedido” Desfavorável: “Se a cidade tivesse bons administradores, como prefeitos, teríamos certamente um ambiente muito melhor”.
UESC 1	Favorável: “a cidade tem um histórico de iniciativas empreendedoras (...) seu comércio bastante dinâmico, o que a salvou de uma derrocada maior no período mais agudo da crise do cacau (...) [Itabuna] tem uma posição estratégica”. Desfavorável: “(...) [Itabuna] não teve, historicamente, foco no apoio à formação profissional”.
UESC 2	Favorável: “Razoável. Ambiente espacial satisfatório decorrente da localização geográfica da cidade e aptidão da sua população para atividades comerciais”

Fonte: dados da pesquisa (2010).

Os representantes das entidades de fomento responderam a pergunta: se os empresários aplicam nos seus negócios estratégias? As respostas apontaram que o empreendedor estabelece-se por uma necessidade de sobrevivência, os planos de negócios são negligenciados, conseguem sobreviver com muita

dificuldade. Nas suas falas ficaram patentes que há uma necessidade de preparar melhor os indivíduos para atuarem nos negócios; existe uma falta de planejamento generalizado. Abaixo, validou-se essa análise, através dos registros dos respondentes:

Tabela 2. Estratégias utilizadas pelos empreendedores de Itabuna.

AMPESBA	“geralmente [os empresários] não fazem plano de negócios e estudo de mercado, ainda usam de suas habilidades adquiridas na convivência prática, (...) tenho certeza que para continuar com os negócios funcionando terão que se adaptarem a nova cultura”
CDL	“vejo nossos empreendedores dispostos a mudanças, um tanto despreparados para o desenvolvimento, precisando, assim, dos órgãos competentes para promovê-los”.
ACI	“os empresários que se destacam e que são os verdadeiros empreendedores criaram suas próprias estratégias, mas com certeza, a geração mais jovem já está buscando, em sua grande maioria as universidades, e estará trabalhando mais tecnicamente e ampliando sua visão para aproveitar as oportunidades que virão”
UESC 1	“A minha impressão é de que falta planejamento de médio/longo prazo em praticamente todos os setores, com raras exceções”
UESC 2	“Não conheço pesquisa que fale sobre o assunto [estratégia]. A impressão que tenho é que a maioria dos empresários de Itabuna se guia por intuição pessoal, de forma empírica”.

Fonte: dados da pesquisa (2010).

Muitos pontos foram levantados pelos respondentes. A falta de políticas públicas para o fortalecimento dos pequenos negócios foi revelado por um dos entrevistados. O crédito insuficiente é outro desassossego por parte do empresariado, na ótica dos representantes das entidades de fomento. As taxas, impostos, encargos trabalhistas prejudicam sobremaneira o pequeno negócio. Estes são vistos como um

agravante. Conhecer o mercado também é outro desafio, excessiva burocracia e deficiência na mão de obra são preocupantes, e, por fim, a ausência dos princípios básicos da gestão é um obstáculo a ser ultrapassado pelos empreendedores. A seguir os desafios encontrados pelos donos de micro e pequenos estabelecimentos, na análise dos líderes das entidades de fomento.

Tabela 3. Desafios enfrentados pelos empreendedores de Itabuna.

AMPESBA	“Falta de políticas públicas para o fortalecimento dos pequenos negócios. (...) A falta de crédito (...) Eu acho que é um dos grandes entraves para o surgimento de novos empreendedores, eu acho que é o sistema financeiro”
CDL	“As taxas e impostos, além dos encargos trabalhistas. Vai além do imóvel como taxas de água, luz, telefone ao horário de funcionamento, e para completar, os feriados que são muitos”
ACI	“conhecer o mercado”
UESC 1	“burocracia e deficiência de mão de obra”
UESC 2	“A literatura mostra em nível nacional, e consequentemente ocorre em Itabuna, que os principais desafios são: falta de capital de giro, desconhecimento do mercado, ausência de mecanismos de sustentação do negócio, como plano de negócio, plano estratégico e outros, falta de experiência”
PMI - Secretaria de indústria, comércio e turismo.	“desafios financeiros para manter a estabilidade em aplicação de recursos, plano de negócio, estratégia de saída, (...) gerenciar negócios e ter um plano de viabilidade”.

Fonte: dados da pesquisa (2010).

A sucessão de empresas foi outro tópico trabalhado nesta pesquisa. O tema em lide é de muita discussão nos organismos internacionais, conforme Comissão Europeia (2006). O planejamento da sucessão quando é

organizado antecipadamente reduz o número de encerramento dos negócios. Os estabelecimentos podem ser fechados por falta de sucessor e não por problemas financeiros ou gerenciais. Pensar na sucessão com antecedência é um

passaporte para perpetuidade dos negócios na “mão” ou na “administração” de outra pessoa. O sucessor virá da própria família ou externo a ela. Abaixo, algumas reflexões.

Os resultados são preocupantes. Os inquiridos (AMPESBA, CDL, UESC,

ACI, PMI) informaram que esse assunto não faz parte dos debates quotidianos das empresas da cidade de Itabuna-Brasil. A sucessão não é discutida pelos próprios empresários, nem no tecido empresarial da cidade. Abaixo, relatos dos entrevistados.

Tabela 4 – Sucessão empresarial de Itabuna.

AMPESBA	“Infelizmente não, a situação é delicada, temos exemplos ruins, perdemos empresas médias e grandes em nossa região que fecharam por falta de uma política de ordem familiar. (...) As empresas que praticam a sucessão empresarial em Itabuna podemos contar de dedos (...). Esta questão temos que discutir e chamar a atenção para que esse assunto [sucessão] seja ele colocado em prática com urgência, podemos fazer campanha (...), sensibilização.”
CDL	“Não, não é focado este tema de “suma” necessidade. Posicionamos-nos a favor de que seja feito um trabalho voltado e focado na sucessão para que não tenha problema de continuidade”.
ACI	“o que temos percebido, é que atualmente tem tido maior interesse sobre o assunto”
UESC 1	“Não tenho opinião formada a respeito”
UESC 2	“Não conheço discussão sobre esse assunto. Mesmo fora da região essa temática não tem sido discutida”
PMI - Secretaria de indústria, comércio e turismo.	“Não”. (...) a empresa não se prepara para esse momento, pode ocorrer uma situação traumática, conflitos entre membros da família por conta da transmissão do capital e, também, do poder, podem até arruinar o negócio...”

Fonte: dados da pesquisa (2010).

Pelo caminho percorrido até o presente momento, através das análises, percebe-se a complexidade do mundo empresarial de Itabuna. As atividades econômicas abrangem uma infinidade de contextos que foram atestados nas exposições verbais dos entrevistados quando conceituam ou pensam nos empreendimentos.

A atmosfera empresarial da cidade estudada é muito propícia para os negócios. Os respondentes, nas suas reflexões, descrevem o ambiente econômico de Itabuna-Brasil com muita receptividade para os micro e os pequenos estabelecimentos, um local apropriado para transações econômicas, mesmo com uma infraestrutura deficitária. O município investigado tem uma vocação para as atividades negociais, isso favorece o empreendedorismo.

Nesse momento, segundo ponto deste trabalho, far-se-á um relato das principais diretrizes desenvolvidas pelos órgãos de fomento para a melhoria do tecido

empresarial de Itabuna - Brasil. O grande desafio foi perceber como as práticas desses organismos proporcionam um melhor ambiente empresarial.

ÓRGÃOS DE APOIO À ATIVIDADE EMPRESARIAL: PAPÉIS INSTITUCIONAIS

A primeira reflexão está relacionada com o papel institucional dos órgãos de fomento. Os seus líderes foram inquiridos: quais os auxílios na criação e na continuidade de uma atividade econômica. As respostas recebidas foram assim descritas. O representante da AMPESBA diz que sua meta é representar o segmento das micro e pequenas empresas junto aos poderes constituídos, lutar por melhores condições perante o sistema financeiro e criar condições favoráveis na questão tributária. O respondente afirmou que as suas realizações estão muito longe das

suas necessidades, mas acrescentou que precisa fazer muito mais.

O responsável da CDL da cidade estudada declarou que acompanha os empresários desde a sua fundação, como também orientações contábeis e jurídicas. Já o presidente da ACI, doutor Eduardo Fontes Neto afirmou que o seu principal objetivo é defender os interesses da classe empresarial em geral, promover a expansão comercial, industrial e de serviços. Para além disso, visa desenvolver ações para o aprimoramento e o desenvolvimento das técnicas empresariais, propagar atos e campanhas que fortaleçam a livre iniciativa e o empresariado, defender, pelos meios legais, os associados, e, por fim, interagir com outros órgãos de representatividade do país.

A UESC teve dois representantes, o primeiro foi o chefe do NIT – Núcleo de inovação tecnológica da UESC, e o segundo, o pró-reitor de extensão. O responsável do NIT afirmou que a prioridade do órgão que representa é orientar qualquer membro da comunidade assistida pela UESC, quando das práticas de proteção da propriedade intelectual, além de incentivar o empreendedorismo na comunidade acadêmica e à incubadora de empresas de base tecnológica.

O pró-reitor de extensão da UESC, Professor Dr^o Raimundo Bonfim dos Santos, declarou que “no momento [novembro de 2010] não estamos trabalhando nesse foco” (informações da pesquisa, 2010), informou que quando era encarregado da *Agência Municipal de Empregos* (AME) de Itabuna, desenvolveu, conjuntamente com seus colaboradores, ações no campo do empreendedorismo, como: treinamento do empresariado e dos operários, incentivo a adoção dos instrumentos gerenciais, plano de negócio, planejamento estratégico e uso de procedimentos de controle.

A Secretaria de indústria, comércio e turismo - PMI -, no relato do seu diretor,

afirmou que a entidade promove ações voltadas ao desenvolvimento turístico, industrial, comercial e de serviços, com geração de emprego e renda, propondo uma política municipal ao desenvolvimento econômico local, bem como articulação com outras secretarias para divulgar os potenciais econômicos e turísticos da cidade de Itabuna.

Nas observações e nas análises desenvolvidas, considera-se que esses órgãos precisam avançar muito nas suas proposições, urgentemente. As práticas apresentam-se pontuais e isoladas, incipientes, um ou outro acontecimento sem impacto significativo para o fenômeno empresarial. Na convivência com o empresário, percebe-se que as articulações entre essas entidades são apenas cordiais, não se visualiza nenhum contrato consistente, nem tão pouco programas efetivos em favor do tecido empresarial.

A terceira e a quarta perguntas focaram a carreira empresarial e a transmissão de empresas, respectivamente. Os entrevistados responderam a seguinte pergunta: como incentivar uma trajetória empreendedora? Como preparar e orientar os donos de negócios para o processo sucessório? Os respondentes demonstraram interesse em apoiar a formação empreendedora, através da inclusão de “noções de negócios” desde o ensino básico; quanto à sucessão, a preparação e o planejamento são os melhores caminhos.

A seguir, duas figuras autoexplicativas foram elaboradas para sintetizar a carreira empreendedora e o processo transmissão de empresas, a partir dos relatos dos inquiridos (representantes das entidades - AMPESBA, CDL, UESC, ACI, PMI). Na figura 2, os líderes sugeriram os procedimentos e aspectos que devem estar presentes na formação da trajetória dos empresários; na figura 3, eles apontaram orientações específicas para serem utilizadas no momento da sucessão.

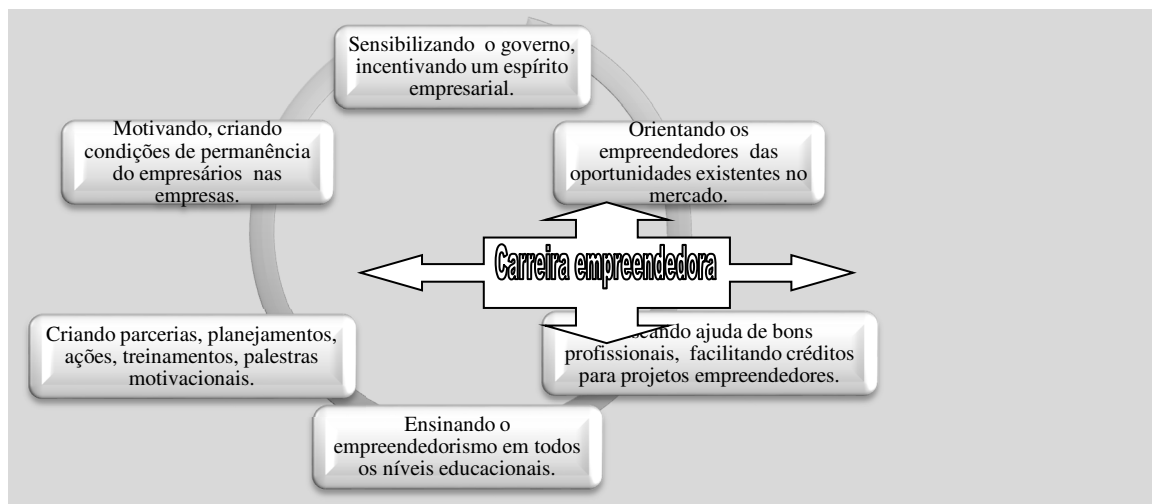


Figura 2. Carreira empreendedora: alguns desafios.

Fonte: dados da pesquisa (2010).

Os estudos do *Babson College*, em *Massachusetts*, USA, possibilitam aos seus estudantes uma educação empreendedora. O *Indian Institute of Entrepreneurship* trabalha, também, a carreira empresarial nos seus procedimentos de formação. As instituições já percebem que o estudo através do modelo empreendedor fortalece as atividades negociais. A valorização da profissão do empresário pela sociedade constitui um marco fundamental para a consolidação dos estabelecimentos comerciais, um ofício estruturado como outros já reconhecidos no meio acadêmico.

A sucessão foi outro ponto abordado nesta pesquisa, esse tema é discutido superficialmente, muitas vezes não é apreciado no meio empresarial. De fato, os empresários da cidade estudada não preparam o seu sucessor, logo é negligenciada a continuidade da atividade. Os entrevistados, conscientes dessa

situação, elencaram ações que devem ser estimuladas no seio da sociedade estudada. Tais práticas, expostas na figura 3, reduzem o fechamento indesejável das empresas, consolidam os negócios ao permitir à sua perenidade e, por fim, permitem uma sucessão organizada e planejada.

As entrevistas com os representantes das entidades de fomento foram encerradas com o tema “crença empresarial”. Os entrevistados sugeriram outras possibilidades que devem ser adotadas pelos empresários; os objetivos foram: contribuir com um plano econômico para a região, através da UESC – Universidade Estadual de Santa Cruz; tornar a atividade empresarial uma tradição no seio da sociedade, como uma profissão importante; buscar alternativas de financiamentos com juros menores; fazer pesquisas no campo empresarial; enfrentar a concorrência global.



Figura 3. Sucessão empresarial: contributo dos representantes das entidades de fomento.

Fonte: dados da pesquisa (2010).

Diante do exposto, fica evidente que se tem um longo caminho a ser percorrido para que se possa robustecer a classe empresarial da cidade estudada. Os desafios são imensos, as demandas também intensas, muitos trabalhos árduos ainda estão por vir. Acredita-se que os *stakeholder* dessas entidades, em articulação, possam transformar o tecido empresarial muito mais sólido, competitivo e coeso, quiçá uma cidade empreendedora no mundo globalizado, já pensada por Drucker (1986).

CONSIDERAÇÕES FINAIS: A PROCURA DE UMA INTEGRAÇÃO

Os órgãos de fomento ao empreendedorismo, em tese, têm um papel crucial para a dinamização da economia, o tecido empresarial fortalecido gera uma cidade próspera. Itabuna apresenta-se favorável às atividades econômicas por ser um centro convergente. Os organismos de apoio devem incentivar à criação de empresas, em especial, às de pequeno porte, visto que o Brasil tem boas perspectivas para o crescimento econômico e social nos próximos dez anos (2011-2021), o município em análise faz parte desse panorama oportuno. Esse momento é vital para consolidar Itabuna como um centro negocial no estado da Bahia, Brasil.

Os “ventos” estão favoráveis para os negócios (ano de 2011), as práticas

empresariais requerem um esforço muito grande por parte dos envolvidos. As entidades (AMPESBA, CDL, UESC, ACI, PMI) devem atuar de maneira mais efetiva na construção de uma cidade empreendedora; as atividades realizadas por esses órgãos são frágeis, mal elaboradas e desarticuladas. Há boas intenções por parte dos representantes das entidades, mas o processo econômico é altamente veloz, não vive de bons propósitos, é preciso um trabalho integrado, em rede, dessas organizações para produzirem melhores resultados.

Pode-se inferir que as entidades de fomento trabalham de forma isolada, não são articuladas, alguns contatos entre elas são percebidos, mas são poucos expressivos, de maneira ocasional, sem sistematização. Esses organismos defendem seus próprios interesses, uma visão limitada e restrita, não se articulam para pensar no projeto global com o envolvimento de todos os *stakeholders*. As entidades pesquisadas operam bem distante uma das outras, apenas relacionamentos cordiais.

Os diretores dessas entidades, urgentemente, tem que fazer um plano alargado que contemple as objeções identificadas no cenário empresarial de Itabuna. As situações críticas devem ser enfrentadas, não só pelos empresários individual, como também pelos seus representantes. A cidade precisa melhorar sua infraestrutura, facilitar o acesso ao

crédito com menores juros para as atividades produtivas, integrar efetivamente as universidades com o tecido empresarial, em especial a UESC.

Por fim, nem tudo está perdido, o empreendedorismo avançará! Acredita-se que o momento é agora. As entidades de fomento contribuirão com os empresários de alguma forma, nesse momento de concorrência global acentuada.

REFERÊNCIAS

- Ausdrestsch, David B. (2002), “Entrepreneurship: A Survey of the Literature”. European Commission. 1-73. Página consultada em 15 de Janeiro de 2010, <<http://ec.europa.eu/old-address-ec.htm>>.
- Bernhoeft, Renato (1989), *Empresa familiar. Sucessão profissionalizada ou sobrevivência comprometida*. 2.ed. São Paulo: Nobel.
- Boava, Diego Luiz Teixeira (2006), “Estudo sobre a Dimensão Ontológica do Empreendedorismo”, Dissertação de Mestrado em Administração. Londrina: PPA-UEL/UEM.
- Braga, João N. de P. e (2003), “O empreendedorismo como instrumento de desenvolvimento. O programa IES/SOFTEX”, Dissertação de mestrado profissional em Administração. Salvador: Escola de Administração da Universidade Federal da Bahia.
- Brown and Coverley (1999), “Succession Planning in Family Businesses. A study East Anglia, U.K.” *Journal of Small Business Management*, 37, 1.
- Casson, Mark (1982), *The entrepreneur: an economic theory*. Oxford: Martin Robertson.
- Casson, Mark (2004), “Entrepreneurship and the theory of the firm”. Paper of University of Reading, 1-26. Consultado em 20 de Maio de 2010. <http://www.reading.ac.uk/search/public/search?q=MARK+CASSON+intrapreneurship&entqr=0&output=xml_no_dtd&sort=date%3AD%3AL%3Ad1&client=internal&ud=1&oe=UTF-8&ie=UTF-8&proxystylesheet=internal&site=internal>
- Comissão Europeia (2006), “Mercado de Transmissão de Empresas – Promover Mercados Transparentes para a Transmissão de Empresas na Europa”. Relatório do grupo de peritos. Bruxelas: Direcção Geral das Empresas e da Indústria.
- Conexão (2010), “Oportunidades com a Copa do Mundo”. Publicação do Sebrae para o Empreendedor Baiano: Ago/Set, nº 187, pp. 5.
- De Paula, João A.; Cerqueira, Hugo E.A. da G. e Albuquerque, Eduardo da Motta E (2004), “O Empresário na Teoria Econômica”. *Revista de Economia Política*, vol. 24, nº 4 (96), outubro-dezembro, 563-583.
- Drucker, Peter F. (1986), *Inovação e Espírito Empreendedor (entrepreneurship): prática e princípios*. São Paulo: Pioneira.
- Falcone, Thomas e Osborne, Stephen (2005), “Entrepreneurship: A Diverse Concept in a Diverse World”. USASBE – United States Association for Small Business and Entrepreneurship. Página consultada em 15 de Abril de 1999, <<http://usasbe.org/knowledge/proceedings/proceedingResults.asp?proceedingyear=2005&sortSelect=title>>
- Filion, Louis J. (1998), “From Entrepreneurship to Entreprenology: the emergence of a new discipline”. *Journal of Enterprising Cultures*, v.6, n.1, 1-23.
- Filion, Louis J. (1999a), “Empreendedorismo: empreendedores e proprietários-gerentes de pequenos negócios”. *Revista de Administração*, São Paulo, v.34, n.2, 5-28.
- Flören, R.H. (1998), “The Significance of family business in the Netherlands”.

- Family *Business Review*, XI, 2, 121-178.
- Gartner, William B. (2001), "Is There an Elephant in Entrepreneurship? Blind Assumptions in Theory Development. (Business research)". *Business journals*. Página consultada em 11 de Março de 2010, <http://www.entrepreneur.com/tradejournals/article/80787420_1.html>
- Gibson, James L. et al. (orgs.), (2006), *Organizações: comportamento, estrutura e processos*. São Paulo: McGraw-Hill.
- Governo da Bahia (2010), Informativo: "Bahia Oportunidades – Sul e Extremo Sul". Salvador: Secretária da Indústria, Comércio e Mineração.
- Kirzner, Israel M. (1986). *Competição e atividade empresarial*. Rio de Janeiro: Instituto Liberal.
- Knight, Frank (1972), *Risco, incerteza e lucro*. Rio de Janeiro: Editora Expressão e Cultura.
- Leibenstein, Harvey (1968), "Entrepreneur and development". *The American Economic Review*, v.58, n. 2, 72-84.
- Leone, Nilda Maria de C. P. G. (1992), "A sucessão em pequena e média empresa comercial na região de João Pessoa". *Revista de Administração*, v. 27, n.3, 84-91.
- Lodi, João B. (1987), *Sucessão e Conflito na Empresa Familiar*. São Paulo: Pioneira.
- Macêdo, Fernanda M. F.; Boava, Diogo L. T. e Silva, Amanda F. (2009), "Estudo sobre as abordagens econômica e comportamental no empreendedorismo". Anais do XII SemeAd, Cidade Universitária, São Paulo (em CDROM).
- MacClelland, D.C. (1961), *The achieving society*. New York: VanNostrand.
- Marshall, Alfred (1985), *Princípios de economia: tratado introdutório*. São Paulo: Nova Cultura.
- Melo Neto, Francisco Paulo de; Froes, César (2002), *Empreendedorismo social: a transição para a sociedade sustentável*. Rio de Janeiro: Qualitymark.
- Quivy, Raymond e Campenhoudt, Luc Van (2008), *MANUAL DE INVESTIGAÇÃO EM CIÊNCIAS SOCIAIS*. Lisboa: Gradiva.
- Roll, Eric (1972), *História das Doutrinas Econômicas*. São Paulo: Companhia Editora Nacional.
- Salazar, José N. A. (2006), "Estratégia organizacional e empreendedorismo". *Organizações em contexto*, Ano 2, n. 4, 196-214.
- Say, Jean-Baptiste (1972), *Traite D'Économie Politique*. France: Calmann-Lévy.
- Silvia, Edna Lúcia da e Menezes, Estera Muszkat (2001), *Metodologia da pesquisa e elaboração de dissertação*. Florianópolis: Laboratório de Ensino a Distância da UFSC.
- Schumpeter, Joseph A. (1985), *Teoria do Desenvolvimento Econômico: uma investigação sobre lucros, capital, crédito o ciclo econômico*. São Paulo: Nova Cultura.
- Swedberg, Richard (2000), "The Social Science View of Entrepreneurship: Introduction and Practical Applications", in Richard Swedberg (org.), *Entrepreneurship: The Social Science View*. Oxford: Oxford University Press, 7-44.
- Swedberg, Richard (2007), "Rebuilding Schumpeter's Theory of Entrepreneurship". Atas da Conference on Marshall, Schumpeter and Social Science, Hitotsubashi University, JAS Japan. Página consultada em 12.02.2010, <<http://www.lib.hitu.ac.jp/service/tenji/amjas/Swedberg.pdf>>
- Timmons, J.A. (1989), *The entrepreneurial mind*. Andover: Brick House Publishing.

SEDIMENTATION AND TRANSFORMATION IN ORGANIZATIONAL CHANGE: THE CASE OF MANAGEMENT TRAINING

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ABSTRACT

This study aims to contribute to a more complete understanding of planned change interventions on human processes by presenting a selective interdisciplinary history of management training programmes. Drawing on the simplistic notion of 'homo economicus', training activities often focus on institutional design and the intentional process made by interested parties towards improving effectiveness. This work develops a vision that challenges the application of universal recipes to bring change in organizations and discusses directions for future research.

INTRODUCTION

Boom periods of ultimately popular planned change interventions are often reported in the academic literature and some examples include total quality management (Zbaracki, 1998), quality circles (Abrahamson & Fairchild, 1999), team work (Mueller et al., 2000), and business process reengineering (de Cock & Hipkin, 1997). Evidence also suggests that many of these innovations follow a bell-shaped curve with early adoption followed by widespread uptake and an eventual decline in credibility and usage (Goodman, 1980; Mintzberg, 1994). However, can these insights help one to understand the nature, sources, and consequences of change interventions? How did this occur and what implications does it have for the understanding of change in organizations? Aware that inquiry into organizational change has emphasized predominantly minute segments of ongoing innovations, it remains unclear the historical development of techniques for managing organizations and their employees through time.

In this article, the researcher investigates some selective planned change interventions that concentrate on human processes and are grounded on the theory of human rationality (here labeled rational-economic training technologies).

By planned change interventions, it refers to those efforts that are “conscious, deliberate, and intended, at least on the part of one or more agents” – i.e., actors, involved in a management training session (Chin & Benne, 1984: 22). By efforts, it means that the interventions must assist the individual or small group to modify some pattern(s) of practice and must utilize specific methods, instruments or tools, consisting of planned activities and procedures, based on knowledge of human behaviour, individual or social. The labels ‘group’ and ‘team’ will be used interchangeably, recognising that there may be some divergence rather than substantially semantic differences between the two (Kerr & Tindale, 2004). However, we are aware that some scholars allege the existence of two distinct entities (e.g., Katzenbach & Smith, 1993).

The theory of human rationality presents human beings as purposive, interested actors, who seek to maximize their unique positions in the world (e.g., to maximize economic well-being, power, reputation, independence, security). The postulate that man acts from reasoning prompts social science philosophers to advance down the idea that a person is guided in his or her actions by figuring out precarious estimates of future happenings and results. Inside the ‘black box of human rationality’ is a rational actor, who can perceive his/her own best interest once it

is revealed to him/her. Any commitment to change and human progress is based on scientific rationality, where the shackles of tradition and ignorance are replaced by knowledge. Changes in patterns of action and practice are just guided by changes in knowledge, information and intellectual rationalities. Accordingly, a change is often proposed by a change agent and adopted by the individual (or group) if it can be rationally justified and the individual (or the group) expect a payoff for agreeing to change. Thus, education appears as the leading vehicle of human progress. This means that when management provides opportunities deemed to extend knowledge, reason and knowledge-based action, change in behaviour is said to be complete.

In view of the paramount importance of education for rational actors' models, it is no wonder that group methods to enhance team effectiveness based on the theory of human rationality is a prevalent approach for decades. Sixty years ago, research and practice in management education and development provided the foundation for the 'socio-technical systems' movement, and 'scientific' endeavours were conceived of as a vehicle for creating healthier organizations. Their proponents rejected the technological determinism in favour of an image of a mutual relationship between the social and technical systems (Pasmore, 1988; Trist, 1993). Accordingly, a priority was to change the context in which people operate as well as to change 'soft' human behaviour in order to have any hope of achieving 'higher order' human needs (e.g., self-actualization) as well as 'higher' organizational interests (e.g., increasing productivity, profitability and performance). A classical exemplification on the socio-technical systems-based interventions is the pioneer work done at the Tavistock Institute, in London (Trist & Bamforth, 1951; Rice, 1953; Emery, 1959), although the original principles

have gone through some reformulations within various traditions of systems analysis in organizations (Porras & Bradford, 2004).

Outside the socio-technical systems tradition, other inroads have been made into shaping professional practice in management education. One development in the 1980s, with notable consequences for management development and training in the 1990's, was the increased emphasis on a simple cause and effect perspective for group performance. The typical question that nurtured the movement is 'what predicts team productivity and viability?' By adopting either implicitly or explicitly the mainstream input-process-output framework (McGrath, 1964), the emphasis is on inputs (i.e. group composition) over process and outputs. This trend diverted attention from traditional research on groups to rely heavily on individual psychology and personality theories. Here, the key tools in improving group functioning are assessment, selection, placement and guidance (Belbin, 1981; Belbin, 1993) and the individual contributions to groups can be provided by the different roles each one plays when interacting as a group (Stewart et al., 2005; Stewart et al., 1999).

By the 1990s team training moved the emphasis on group performance from the foundation of team roles to technically oriented knowledge, skills and attitudes, when groups are making decisions or communicating (Salas & Cannon-Bowers, 1997, 2000; Cannon-Bowers & Salas, 1998; Salas et al., 2001). Organizational change and effectiveness were no longer identified primarily with improved interpersonal skills needed in team environment. Instead, group members are now expected to improve specific competencies, in conformity with safety-driven interventions, at the same time that they reduce (or even eliminate) errors in executing critical group tasks (Cannon-Bowers & Bowers, 2011).

This brief historical overview of rational-economic training technologies charts a gradual transformation, elaborated in waves. From a position of great optimism regarding the socio-technical concept, as an opportunity for replacing the prevailing pattern of top-down bureaucracy by non-bureaucratic forms based on discovering the best match between the social and technical systems of an organization, we now confront an instrumental orientation to work that highlights specific competency requirements in work groups. We must ask how this transformation occurred, and what implications it has to understand the future prospects on management training. Should we give up the search for a refinement of a particular Western managerial discourse? Or, should we accept the diversity of practice as itself a positive affirmation of new and more positive ideals of self-regulating work groups in contexts of increasing levels of interdependency, complexity and uncertainty?

The purpose is to study how distinct training technologies emerged and how they gained ground within the domain of organizational change. Simply revising and updating was not possible, because the emphasis in the field has evolved through a number of phases and today its practitioners continue to shape the field with their modifications of some older methods and their attempts to develop something new (e.g. Ilgen et al., 2005). In discussing this evolution, the paper traces some of the major developments in using groups for driving change in organizations. Along the way, it is highlighted important historical milestones and draw conclusions where appropriate. This study differs from previous examinations of management training in organizations (e.g., Cannon-Bowers & Bowers, 2011) in that it is broader in the scope of its subject matter and it evaluates the literatures more

critically. In particular, the paper notes that the literature in this area is somewhat fragmented and attempts to contribute to a more complete understanding of management training. The reflection is intended to be incisive, not comprehensive. Rather, it highlights some of the themes and concepts that are most relevant and informative to deal with the full range of psychological and human problems in organizations (motivation and assumptions about human nature, groups in organizations, group behaviour, and technologies to develop the individual and small groups in organizational settings). This article now selectively discusses three rational-economic training technologies.

SOCIO-TECHNICAL SYSTEMS

Interest in socio-technical systems design began in the 1950s, when scholars started to give more attention to organizational context factors. They focused on the idea of working simultaneously on the issues of technical design and social interactions to introduce organizational change (Pasmore, 1988; Trist, 1993). The former consists of the equipment, tools and methods of operations used to transform raw materials into products or services valued by costumers; the latter includes the work structure that relates people to the technological components and to each other. The aim is to design more efficient organizations. Efforts to bring about an enduring change should give promise of raising both productivity and job satisfaction. This may involve changes in the technical conditions (e.g., equipment, techniques and process layout), the work structure (e.g., work roles and their relationships), or both. The idea is that social and technical dimensions of work influence each other, and that, to be effective, organizations need to discovery the ‘best match’ between employees and technology – something that Emery (1959)

labeled the principle of joint optimization. Implicit in this perspective is the concept of open systems, borrowed from the general systems theory (Bertalanffy, 1950), which provides a new way of looking at the dynamic processes within the organization and between the organization and its environment. This means that, beyond matching the requirements of the technical and social systems, organizations must also meet the demands of the task environment – those external elements that challenge the capacity to achieve relevant goals and, in turn, its continuity.

Socio-technical systems typically use the work group rather than the individual jobholder as the basic building block for organizational design. The perspective is to join individuals with interdependent tasks in order to ensure cooperation, personal involvement in the design of their tasks with the minimum of supervision, and opportunities for individuals to meet their needs for growth, learning, social support and recognition. A real outcome of this trend was the promulgation of autonomous work groups (Cummings, 1978) or self-managing work teams (Hackman, 1978) in core business journals and best-sellers management books, creating much awareness of its benefits (Herbst, 1974) but in a potentially biased fashion.

To put it in another way, in pursuing the quest for efficiency, the proponents on social-technical systems tend to use science and engineering to inform their initiatives. Although some scholars have suggested the symbiosis between the issues of technical design and social structures (Pasmore, 1988; Trist, 1993), most have adopted “an analytical orientation – focus on the numbers, focus on the work processes -, not on the human processes” (Porrás & Bradford, 2004: 397). For them, the emphasis was on bottom-line productivity and their energy was used in those areas which would

produce the most visible and quantifiable effects in the organization (Church & Burke, 1995; Greiner & Cummings, 2004). Despite some theoretical differences, those scholars converged on the idea that organizations could be controlled by managing boundaries between ‘subunits’ internal to the total organization and by adjusting the ‘input/output interface’ between the organization and the external environment. This represents, in practice, a complete reversal of early writings, where the later perspective can be seen as a more complete theorization of the scientific management thought. First, the causal interaction between technology and social structures typically emphasised one-way, cause-effect relationship between technology and productivity (Trist, 1993), while the causal power of social system is mediated through major corporate interests (Deetz, 1994). Second, workers were viewed as either passive beings, depersonalised from their feelings and emotions, who mechanically perform the tasks assigned to them, or rational actors, who had a narrow, instrumental attitude towards the work and act on the basis of rational calculation and ‘cognitive decision-making’. Third, efficiency is a matter of means/ends calculations or inducement/contribution ratios (Simon, 1960). Thereby, in the process of planning, organizing, forecasting and controlling (Wehrich & Koontz, 1993), the development and implementation of collaborative work is simply a calculative activity that helps outlining more efficient bureaucratically-organized systems. Accordingly, working in groups requires special qualities that can be provided in a rational manner – training programmes that help workers acquire new knowledge, skills and knowledge-based attitudes.

TEAM-ROLE TRAINING

The 1990's gave rise to a new interest in the use of personality and motivational characteristics on group effectiveness. In general, researchers and practitioners claimed that there is a link between aggregated team-member personality constructs and team performance (Jackson, 1992; Barrick et al., 1998). Specifically, studies suggest that different compositions may be more or less effective. For some researchers and practitioners, it appears that there are some universal constellations (e.g. Belbin, 1981; Margerison & McCann, 1995). For some others, the findings suggest that they depend on the task, the amount of member interaction required for effective group performance or the stage of team development (e.g. Parker, 1990; Barry & Stewart, 1997; Neuman & Wright, 1999; LePine et al., 2000).

Concerns with the inevitable conflict between individual needs and organizational demands are here alleviated through selection instead of training and development – selection of the 'right person for a particular organizational slot'. The emphasis relies on assessing individual differences and matching people to roles and jobs. In this case, difficulties in translating knowledge into practice may be explained by the unfitness of the individual occupying a certain position with his or her job characteristics and demands. There is no attempt to modify either the individual or the organization (Bennis, 1966). There is no recognition that multiple factors influence the fit; neither is the fit a dynamic interaction between people and the organization, with each influencing the other over time.

Relevant to this development is the work conducted at the Administrative Staff College, at Henley, in the UK (Belbin, 1981, 1993). For Belbin, team roles are individual preferences based on

static clusters of personality characteristics. The concept is a psychological value-laden construct; it takes no account of the social construction of human behaviour. For instance, a person might naturally be a good producer of ideas and adopts this role fairly consistently in any group context. Another individual might be good at bringing the group members together, while another might take the lead of challenging the point of equilibrium.

Underlying this perspective, there are several basic assumptions. (1) Personal cognitive abilities and personality are determinant to what the individual achieves and how he or she can contribute to group work. (2) Individual preferences with respect to team roles can be predicted through personality assessments and team-role inventory. (3) The ideal person for a given job does not exist but a group of individuals often does. And, (4) group performance can be predicted through knowledge of team role profiles for each member.

Following this approach, there has been a growing interest and practical guidance in designing and developing ideal groups in terms of their composition. The idea is to identify the right mix of people in terms of ability, preferences and predispositions so that 'high-performing' groups can be created. The important outcome to be reached from this is that attempts to improve team effectiveness are here essentially centred on the areas of assessment, selection, placement and guidance.

It is no coincidence that there has been an explosive growth of taxonomies where people are catalogued in 'boxes' according to their presumed personality. Belbin (1981) describes eight behavioural profiles that positively contribute to group functioning; later the author adds another one (Belbin, 1993). Woodcock (1989) and Woodcock and Francis (1994) identify twelve; Parker (1990) suggests four; Davis

et al. (1992, cited in Partington & Harris, 1999) describe five; Spencer and Pruss (1992, cited in Partington & Harris, 1999) suggest ten; Herriot and Pemberton (1995) identify four; and, Margerison and McCann (1995) propose nine. All advocates state to have observed the proposed profiles in multiple teams in distinct organizations. According to different writers, different team roles can be identified. There is some overlap between different nomenclatures, but some roles seem to be unique to a particular author.

TEAM TRAINING

The increased attention focused on how best to select, train and develop effective groups led to a number of advancements in management education and development. The 1990s onwards have been a time of considerable use of simulation techniques; and, a number of training programmes have been conducted in laboratory settings with ‘artificial’ groups involving essentially the commercial aviation industry and the military arena (Cannon-Bowers & Bowers, 2011). The expression used to refer such methods is often team training (Tannenbaum & Yukl, 1992).

This strategy for affecting changes in human systems again aims to improve organizational profitability. However, the rhetoric used tends to be quite subtle as the discourse highlights enhancing safety by reducing errors in executing critical group tasks. Thereby, it focuses on task simulation to help participants develop the kind of knowledge, skills and attitudes relevant to make decisions and communicate effectively in critical moments during their group trajectory.

Given the centrality of cognition to individual behaviours, team training programmes are grounded on the knowledge, skills and attitudes framework applied at the individual level. For example, some studies have investigated

the effects of knowledge structures (i.e., mental modes) on group processes and outcomes (Marks et al., 2000; Marks et al., 2002). Others have trained participants to monitor the performance of their group members and to provide constructive feedback (Smith-Jentsch, 2008). And, others have provided generic skills, including planning and task coordination, communication or collaborative problem-solving (Ellis, 2005) – those skills that can be applied in different work groups. However, the field is not free of criticisms. Some doubts focus on delivering group training to individual workers (Moreland et al., 1998), on conducting training programmes outside the organizational settings where work actually occurs (Lave & Wenger, 1991), and on using participants from few environments making difficult any attempt for generalization (Cannon-Bowers & Bowers, 2011).

DISCUSSION AND CONCLUSION

The historical record of rational-economic training technologies seems to suggest that since World War II at least three reasonably distinct rhetorical waves successively embellished management training. The timing of each new wave appears to be seductive, as it often restores old ideas in a manner that both academics and practitioners found appealing.

Although each approach promises managers greater productivity and profitability, with particular emphasis on efficient use of structures and technologies, it seems safe to say that the processes used to arrive at a certain management training programme are typically fragmented, evolutionary and largely intuitive (Quinn & College, 1978). The measurable quantitative factors are only one building block transmitted in the series of decisions made by key decision makers. Among other things, the psychological, power and behavioural

relationships in decision-making processes provide important insights on discursive processes at any given moment.

This paper addresses these problems by directing attention to value systems and human interests in the study of planned change interventions that concentrate on human processes. It is suggested that the collective beliefs on work motivation are central to the production and diffusion of behavioural knowledge of change (McGregor, 1960, 1967; Schein, 1980). Therefore, it was chosen the ideas derived from the model of rationality that prevails in conventional economic theory – but also in some branches of sociology (Parsons, 1937) and social psychology (e.g., Homans, 1958) – to review some selective training technologies.

Individual action is guided by the attitudes to the relationship of man to his environment; but in the presence of such values, some intentionality can be found. Unfortunately, however, studies have been conducted in settings far removed from the realities of management training. Future research would explore, for example, the relationship between boredom or career needs and management training practices.

In addition, external events, over which management had essential no control, would precipitate piecemeal decisions, which inexorably shape the organization's future management-training strategy. For example, successful companies' stories are often appropriated and promoted by fashion industries populated by gurus, consultants and publishers (Sahlin-Andersson & Engwall, 2002). The biases toward success stories can generate faddish cycles, leading to a collective belief that a particular technique is the 'management secret' responsible for the economic progress. Whenever it happens, paradoxically, companies imitate blindly popular practices even when they are worthless, or near so (Strang & Macy, 2001), because they attend to popularity rather than performance.

But, here again, the decision is conscious and purposeful. Logic dictates that managers proceed flexibly and experimentally from broad values toward specific commitments. This trajectory tends to evolve as internal and external forces flow together to achieve cohesion and identity with new directions. It allows managers to deal with power relations and individual behavioural needs, and permits them to use the best possible informational and analytical inputs in choosing his major course of action.

REFERENCES

- Abrahamson, E. & Fairchild, G. (1999). Management fashion: Lifecycles, triggers, and collective learning processes. *Administrative Science Quarterly*, 44, 708-740.
- Barrick, M.R., Stewart, G.L., Neubert, M.J. & Mount, M.K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology*, 83(3), 377-391.
- Barry, B. & Stewart, G.L. (1997). Composition, process, and performance in self-managed groups: The role of personality. *Journal of Applied Psychology*, 82(1), 62-78.
- Bennis, W.G. (1966). *Changing organizations: Essays on the development and evolution of human organization*. New York: McGraw-Hill Book Company.
- Belbin, R.M. (1981). *Management teams: Why they succeed or fail*. Oxford: Butterworth-Heinemann.
- Belbin, R.M. (1993). *Team roles at work*. Oxford: Butterworth-Heinemann.
- Bertalanffy, L. (1950). The theory of open systems in physics and biology. *Science*, 111, 23-29.
- Cannon-Bowers, J. A. & Bowers, C. (2011). "Team development and functioning". In S. Zedeck (ed.), *APA handbook of industrial and*

- organizational psychology, Vol. 1: Building and developing the organization, pp: 597-650. Washington, DC: American Psychological Association.
- Cannon-Bowers, J.A. & Salas, E. (eds) (1998). Making decisions under stress: Implications for individual and team training [electronic resource]. Washington, DC: American Psychological Association.
- Chin, R. & Benne, K.D. (1984). General strategies for effecting changes in human systems. In W.G. Bennis, K.D. Benne and R. Chin (eds), The planning of change. 4th edn. Pp. 22-45. Fort Worth, TX: Holt, Rinehart and Winston, Inc.
- Church, A.H. & Burke, W.W. (1995). Practitioner attitudes about the field of organization development. Research in Organizational Change and Development, 8, 1-46. Greenwich, CT: JAI Press.
- Cummings, T.G. (1978). Self-regulating work groups: A socio-technical synthesis. Academy of Management Review, 3(3), 625-634.
- de Cock, C. & Hipkin, I (1997). TQM and BPR: Beyond the beyond myth. Journal of Management Studies, 34(5), 659-675.
- Davis, J., Millburn, P., Murphy, T. & Woodhouse, M. (1992). Successful team building: How to create teams that really work. London: Kogan Page.
- Deetz, S. (1994). The micro-politics of identity formation in the workplace: The case of a knowledge intensive firm. Human Studies, 17, 23-44.
- Ellis, A., Bell, B., Ployhart, R., Hollenbeck, J. & Ilgen, D. (2005). An evaluation of generic teamwork skills training with action teams: Effects on cognitive and skill-based. Personnel Psychology, 58, 641-672.
- Emery, F. (1959). Characteristics of sociotechnical systems. London: Tavistock Institute.
- Goodman, P.S. (1980). Quality of work life projects in the 1980s. Labor Law Journal, 487-494.
- Greiner, L.E. & Cummings, T.G. (2004). Wanted: OD more alive than dead! Journal of Applied Behavioral Science, 40(4), 374-391
- Hackman, J.R. (1978). The design of self-managing work groups. In B. King, S.S. Streufert and F.E. Fiedler (eds), Managerial control and organizational democracy, pp. 315-342. Washington, DC: Winston & Sons.
- Herbst, P.G. (1974). Socio-technical design. London: Tavistock.
- Herriot, P. & Pemberton, C. (1995). Competitive advantage through diversity: Organizational learning from difference. London: Sage Publications.
- Homans, G. (1958). Social behaviour as exchange. American Journal of Sociology, 63, 597-606.
- Ilgen, D.R., Hollenbeck, J.R., Johnson, M. & Jundt, D. (2005). Teams in organizations: From input-process-output models to IMOI models. Annual Review of Psychology, 56, 517-543.
- Jackson, S.E. (1992). Consequences of group composition for the interpersonal dynamics of strategic issues processing. In P. Shrivastava, A. Huff and J. Dutton (eds), Advances in strategic management: A research manual, Vol. 8, 345-382. London: JAI Press Inc.
- Katzenbach, J.R. & Smith, D.K. (1993). The discipline of teams. Harvard Business Review, March-April, 111-120.
- Kerr, N.L. & Tindale, R.S. (2004). Group performance and decision making. Annual Review of Psychology, Vol. 55, 623-655.
- Lave, J. & Wenger, E. (1991). Situated learning Legitimate peripheral participation. New York: Cambridge University Press.

- LePine, J.A., Colquitt, J.A. & Erez, A. (2000). Adaptability to changing task contexts: Effects of general cognitive ability, conscientiousness, and openness to experience. *Personnel Psychology*, 53(3), 563-593.
- Margerison, C. & McCann, D. (1995). *Team management: Practical new approaches*. Oxford: Management Books 2000.
- Marks, M.A., Burke, C.S., Sabella, M.J. & Zaccaro, S.J. (2002). The impact of cross-training on team effectiveness. *Journal of Applied Psychology*, 87(1), 3-13.
- Marks, M.A., Zaccaro, S.J. & Mathieu, J.E. (2000). Performance implications of leader briefings and team-interaction training for team adaptation to novel environments. *Journal of Applied Psychology*, 85(6), 971-986.
- McGrath, J.E. (1964). *Social psychology: A brief introduction*. New York: Holt, Rinehart and Winston.
- McGregor, D. (1960). *The human side of enterprise*. New York: McGraw-Hill Book Company, Inc.
- McGregor, D. (1967). The professional manager. In C. McGregor and W.G. Bennis (eds). New York: McGraw-Hill Book Company.
- Mintzberg, H.S. (1994). *The rise and fall of strategic planning*. New York: Free Press.
- Moreland, R.L., Argote, L. & Krishnan, R. (1998). Training people to work in groups. In R.S. Tindale et al. (eds.), *Theory and research on small groups*, pp: 37-60, New York: Plenum Press.
- Mueller, F., Proctor, S. & Buchanan, D. (2000). Teamworking in its context(s): Antecedents, nature and dimensions. *Human Relations*, 53(11), 1387-1424.
- Neuman, G.A. & Wright, J. (1999). Team effectiveness: Beyond skills and cognitive ability. *Journal of Applied Psychology*, 84(3), 376-389.
- Parker, G.M. (1990). *Team players and teamwork: The new competitive business strategy*. San Francisco: Jossey-Bass Publishers.
- Parsons, T. (1937). *The structure of social action*. New York: McGraw-Hill.
- Partington, D. & Harris, H. (1999). Team role balance and team performance: An empirical study. *Journal of Management Development*, 18(8), 694-705.
- Pasmore, W.A. (1988). *Designing effective organizations: The sociotechnical systems perspective*. New York: John Wiley & Sons.
- Porras, J.I. & Bradford, D.L. (2004). A historical view of the future of OD: An interview with Jerry Porras. *Journal of Applied Behavioral Science*, 40(4), 392-402.
- Quinn, J.B. & College, D. (1978). Strategic change: "Logical incrementalism". *Sloan Management Review*, 20(1), 7-21.
- Rice, A.K. (1953). Productivity and social organization in an Indian weaving shed: An examination of some aspects of the socio-technical system of an experimental automatic loom shed. *Human Relations*, 6(4), 297-329.
- Sahlin-Andersson, K. & Engwall, L. (2002). Carriers, flows, and sources of management knowledge. In K. Sahlin-Andersson and L. Engwall (eds), *The expansion of management knowledge: Carriers, flows, and sources*, pp. 3-44. Stanford, CA: Stanford Business Books.
- Salas, E., Burke, C., Bowers, C. & Wilson, K. (2001). Team training in the skies: Does crew resource management (CRM) training work? *Human Factors*, 43, 641.
- Salas, E. & Cannon-Bowers, J. (1997). Methods, tools, and strategies for team building. In M. Quinones and A. Ehrenstein (eds), *Training for a rapidly changing workplace: Applications of psychological research*, pp. 249-279. Washington, DC: American Psychological Association.

- Salas, E. & Cannon-Bowers, J.A. (2000). The anatomy of team training. In S. Tobias and D. Fletcher (eds), *Training and retraining: A handbook for businesses, industry, government, and military*, pp. 321-335. Farmington Hills, MI: Macmillan.
- Schein, E.H. (1980). *Organizational psychology*. 3rd edn. Upper Saddle River: Prentice-Hall, Inc.
- Simon, H.A. (1960). *The new science of management decision*. New York: Harper and Row.
- Smith-Jentsch, K., Cannon-Bowers, J., Tannenbaum, S. & Salas, E. (2008). Guided team self-correction: Impacts on team mental models, processes, and effectiveness. *Small Group Research*, 39, 303-327.
- Spencer, J. & Pruss, A. (1992). *Managing your team*. London: Piatkus.
- Stewart, G.L., Fulmer, I.S. & Barrick, M.R. (2005). An examination of members roles as a multilevel linking mechanism for individual traits and team outcomes. *Personnel Psychology*, 58, 343-365.
- Stewart, G.L., Manz, C.C. & Sims, H.P. Jr. (1999). *Team work and group dynamics*. New York: Wiley.
- Strang, D. & Macy, M.W. (2001). In search of excellence: Fads, success stories, and adaptive emulation. *American Journal of Sociology*, 107(1), 147-182.
- Tannenbaum, S.I. & Yukl, G. (1992). Training and development in work organizations. *Annual Review of Psychology*, 43, 399-441.
- Trist, E. (1993). Introduction to volume II. In E. Trist and H. Murray (eds), *The social engagement of social science: A Tavistock anthology*. Vol. II. The socio-technical perspective, pp. 36-60. Philadelphia: University of Pennsylvania Press.
- Trist, E.L. & Bamforth, K.W. (1951). Some social and psychological consequences of the longwall method of coal-getting: An examination of the psychological situation and defences of a work group in relation to the social structure and technological content of the work system. *Human Relations*, 4(1), 3-38.
- Wehrich, H. & Koontz, H. (1993). *Management: A global perspective*. 10th edn. New York: McGraw-Hill, Inc.
- Woodcock, M. (1989). *Team development manual*. 2nd edn. Aldershot, UK: Gower.
- Woodcock, M. & Francis, D. (1994). *Teambuilding strategy*. Aldershot, UK: Gower.
- Zbaracki, M.J. (1998). The rhetoric and reality of total quality management. *Administrative Science Quarterly*, 43(3), 602-636

THE EFFECTS OF NEGATIVE PLOT FILMS ON DESTINATION IMAGE: THE CASE OF BRAZIL

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ABSTRACT

The present study aims to assess the effects of films with negative plots on the image of the destinations they depict. For that purpose, the case of the image of Brazil and the film City of God were adopted. The film was screened in closed sections in which participants were solicited to fill out one questionnaire before and one after seeing it. The results suggest that negative plot films tend to turn viewers' evaluations on the image attributes generally more negative, including on the aspects not directly related to the film's content. However, it is also corroborated that such films tend not engender dramatic changes on the general image, since the previous image was rather reinforced. The results also call for more empirical studies within the influence of films with negative plots on the depicted destinations, such as their long-lasting effect on the destination image.

Key words: Film-tourism, destination image, Brazil, City of God.

INTRODUCTION

The destination image is the product of all the experiences of an individual. As so, it is subject to the influence of a variety of information sources, of both commercial and spontaneous natures. The latter includes all the products of the cultural industry, and amongst them, cinema. Thus, films serve as sources of information on destinations, associate affective meanings with them on spectators' minds and may engender visit intentions through the portrayal of its attractions.

There are different academic views about the effects of films on the image of destinations. However, it is mostly acknowledged that this effect tends to be in accordance with the film's content, (Campo, Brea, & Muñiz, 2011; Gammack, 2005; Hahm & Wang, 2011; Im & Chon, 2008).

Studies on the effects of films that portray destinations in a positive way, highlighting its attractions and positive experiences of the characters, are relatively abundant. In a smaller proportion, studies on the effects of films that contrast great natural or cultural

attractions with some negative aspects, like social or structural problems, can also be found. Nevertheless, as far as we searched, using data bases of scientific journals (such as EBSCO, Emerald, Elsevier, Science Direct, Springer, Taylor & Francis, Wiley, ISI web of knowledge) no studies focused on films that present a mostly negative portrayal of the destination were found during the literature review for this article. Understanding the impact of such films is important, since they serve as a relevant information source about many lesser known destinations. That importance is increased when those films are based or inspired in recent history, since they actually mean to reflect the place's reality, in contrast with total fictitious films. For those reasons, Beeton (2005) highlights the need for specific studies on this field.

In this vein, the current study intends to contribute to reducing this gap in knowledge. With that purpose, an experimental design is employed to investigate the effects of the film "City of God" on the image of Brazil. The context of Brazilian cinema and tourism is adequate to that purpose, since the great majority of Brazilian films with

international repercussion on the last fifteen years are based or inspired on recent history and highlights the most negative aspects of the country's reality.

The fact that most of those films are financed by tax waivers mechanisms due to the culture incentive laws, also increases the interest on knowing their effects to the country's image. The film *"City of God"* particularly was chosen for being the main representative of Brazilian recent negative plot films with relevance to the country's image, since it is the most internationally known and commented Brazilian film, the most laureate one.

The results obtained are expected to provide relevant insights mainly for the future relationships between the stakeholders involved on tourism management and cinema in Brazil, especially the national tourism management and marketing entities, culture entities and film-makers. The results should also be relevant for many destination management organizations throughout the world, since any destination might have its image subject to the influence of films with negative plots.

Following the introduction, next sections provide a theoretical foundation for the present study. Then, the article describes the research methodology of the empirical study. Finally, the results, discussion, implications, limitations, and suggestions for future research are presented.

Destination Image Formation Process

Destination image issues started being academically studied in the early 70's of 20th Century (Gunn, 1972), but only in late 90's (Baloglu & McCleary, 1999) became a preferred study area with relevant conceptualization. Since then, various aspects of destination image were investigated, such as the concept and the dimensions of the image (Gunn, 1972; Echtner & Ritchie, 1993; Baloglu & McCleary, 1999; Bigné et al., 2009; Mackay & Fesenmaier, 1997), the

destination image formation process (Echtner & Ritchie, 1993; Baloglu & McCleary, 1999; Andersen et al., 1997; Qu, kim, & Im, 2011; Bigné et al., 2009; Beerli & Martín, 2004; Mackay & Fesenmaier, 1997); the evaluation and measurement of the image (Gunn, 1972; Echtner & Ritchie, 1993); destination image management policies (Echtner & Ritchie, 1993; Kotler et al., 1994; McKay & Fesenmaier, 1997) and the influence of destination image on the tourist behavior (Prentice & Andersen, 2000; Mackay & Fesenmaier, 1997).

Nevertheless, after four decades of studies, there is not yet a common sense about the destination image concept (Echtner & Ritchie, 2003). Actually, as Gallarza, Saura, and García (2002) observe, there are almost as many definitions for destination image as scholars dedicated to study this relativistic subject.

There is certain academic consensus about the fact that the image consists on one's global impression of the destination (Echtner & Ritchie, 2003; Kotler et al., 1993; Qu et al., 2011), however, the determination of the components that integrate this image reveals different academic views.

In order to ease the lack of consistency between the approaches and methodologies used towards the subject, Echtner & Ritchie (2003) proposed a multidimensional model for definition and measurement of the destination image. According to this model, the image is composed by three dimensions, each one ranging between two extreme points: "formed by attributes / holistic image", "functional / psychological" and "common / unique".

As noticed by Bigné, Sánchez, and Blas (2009), the consideration of the affective dimension is also important. This aspect was already acknowledged regarding the association of emotional meanings to places since Russell (1980)

proposed a model in which those meanings were conceptualized on a bipolar Cartesian graphic, including the axis “arousing”/“sleepy” and “pleasant”/“unpleasant”.

For the purposes of the present study, the definition of destination image adopted is the one provided by Baloglu and McCleary (1999), according to which the image of tourist destinations consists in the mental representation of one’s knowledge, feelings and general impression on it. Such definition was selected for being considered the most complete. Besides the idea of general impression on the destination, it also embodies the cognitive (referred as the knowledge) and affective (referred as the feelings) evaluations, which makes it more adequate to orienting the present work.

According to Baloglu and McCleary (1999), the cognitive evaluations refer to one’s beliefs and knowledge about the attributes of the place, while the affective evaluations refer to the feelings towards or attachment to it. Both evaluations sum to form the destination’s general image. Gartner (1993) states that, besides the cognitive and affective components, the destination image comprises as well the conative one, which refers to the intentions to visit the place in question. Furthermore, it is also acknowledged that destination image is the product of the relationship between perceived stimuli and cognitive organization of those perceptions (Stern & Krakover, 1993). Therefore, image is formed and influenced by a series of stimuli from the environment, as well as by the processor’s own cognitive structure, which depends on characteristics such as social and demographic variables (Andersen, Prentice, & Guerin, 1997; Beerli & Martín, 2004; Echtner & Ritchie, 2003; MacKay & Fesenmaier, 1997) and willingness to visit the place (Bozbay, 2008).

In this context, the tourist image about a destination is subject to the influence of information from different sources, including those of commercial, as well as spontaneous nature. The latter include all kinds of products of the cultural industry, and amongst them, films, in which focuses the present study.

Film Tourism

The mass media agents, such as cinema, television and literature, promote, confirm and reinforce images of places to their audiences. Thus, they play a highlighted role on the destination image formation and decision making process (Campo et al., 2011; Shani et al., 2009). Such a great role is due to the fact that cultural products, such as the news are so deeply incorporated on people’s daily life that they end up providing market penetration (Kim & Richardson, 2003; Shani et al., 2009) to the products, or in this case, the tourist destinations they depict.

As media products, films also have the power of influencing their spectators’ behavior. When this influence results on visitation, the phenomenon of film tourism is characterized. The term “film-tourism” encompasses any movement of people directly or indirectly motivated by audio-visual products (Beeton, 2005; Connell, 2012; Hudson & Ritchie, 2006).

Thus, the termination includes various types of motivations and trips, ranging from the ones made by filming crews to the filming places to those motivated by the depiction of a destination’s attractions on a film (Connell, 2012). The term also includes trips motivated by the empathy generated by the film with its character’s (Stern & Krakover, 1993) or by one’s wish to flee from everyday reality and experience an alternative one through the visit to the depicted place (Schofield, 1996).

The Role of Films on Destination Image

As proved by a great amount of studies, films influence both the image of a destination (Campo et al., 2011; Hahm & Wang, 2011; Hudson & Ritchie, 2006; Hudson, Wang, & Gil, 2011; Kim & Richardson, 2003; O'Connor & Bolan, 2008; O'Connor, Flanagan, & Gilbert, 2006; O'Connor, Flanagan, & Gilbert, 2010; Shani, Wang, Hudson, & Gil, 2009), particularly in the absence of actual visitation; and the decision making process of the potential tourists about their destinations (Beeton, 2004; Hudson & Ritchie, 2006; Hudson et al., 2011; O'Connor et al., 2010). As a consequence, they also influence the volume and profile of tourists in the destinations (Croy, 2010; Hudson & Ritchie, 2006; Hudson et al., 2011; Im & Chon, 2008; Jewell & McKinnon, 2008; O'Connor & Bolan, 2008; Shani et al., 2009) with all the outcomes it brings on.

Regarding the attraction of tourists, Macionis (2004) states that films engender visitation intentions through three elements: place (expressed by landscapes and scenarios), personality (materialized on characters and actors) and performance (shown by the storyline of plot). It is also widely acknowledged that, as autonomous sources of information, films are perceived as less biased than common advertisement, for example. For that reason, they are seen as more reliable sources, and thus, exert a stronger and more lasting influence on destination images (Campo et al., 2011; Hudson & Ritchie, 2006; Hudson et al., 2011; H. Kim & Richardson, 2003; Shani et al., 2009).

However, recent studies have showed that films are not always such autonomous and unbiased sources of information. Each time more aware of the phenomenon, destination managers have been using varied techniques to control the image that is transmitted through films. Hahm & Wang (2011) propose a complete set of actions to be taken since before studios

show any interest on filming on the destination until after the release of the productions, aiming to maximize the benefits of film tourism. Those actions include a proactive attitude in order to attract studios, the matching of interests between tourism and cinema stakeholders, the active sponsorship of productions and a conjoint work to maximize advertising efforts.

Although the common belief is that the exposition in films is always advantageous, studies like Warnick et al. (2006) have revealed cases in which seeing the film did not increase viewers' intentions to visit the country. Besides, Beeton (2004), Campo et al. (2011) and O'Connor et al. (2008) state that a negative portrayal of the destination might will not boost tourism on the region and can engender the opposite effect. In addition, Connell (2012) observes that even a favorable portrayal might bring about negative outcomes, by attracting tourists of an undesired profile or in a volume that exceeds the destination's load capacity. In those cases, film tourism might engender the same negative effects of regular mass-tourism when poorly planned.

In spite of that, few studies went beyond the typical view of the phenomenon. While positive effects are well acknowledged, little attention has been paid to the effects of films that portray negative aspects of the destination. For that reason, Beeton (2005) observes the need for studies on the specific effects of films with negative plots on the image of the depicted destinations. Corroborating such observation, no studies with that specific goal were found during the literature review for this study, although a few studies on the effect of films that mix great attractions with negative aspects on the second plan were consulted. Nevertheless, understanding the effects of such films is important, since they serve as information sources for many destinations throughout the world, influencing the

image held by their audiences about those places, as well as their visit intentions.

The Film City of God

The film *City of God* was adopted as a sample of Brazilian cinema due to a series of aspects. Besides being the most internationally known Brazilian film, it is also the most laureate one, both nationally and internationally, the one with more indications to the Oscar and the best rated recent Brazilian film in the International Movie Database (IMDb).

The film tells the story of Rocket, a young and poor photographer, in the context of the actual facts that took place on the favela “*Cidade de Deus*” (*City of God*) in the 70’s of 20th Century. The film also focuses on Li’l Zé’s story, from his already bloody childhood, when he starts his journey of crime and cruelty; to his short and violent adulthood, when after being rebaptized in a Quimbanda ritual, he attempts to take control of all the traffic businesses on the Favela.

During this task, Li’l Zé provokes the anger of the then pacific ex-soldier Knockout Ned, by raping his wife and killing his uncle during a massive attack to his house. Pursuing vengeance, Knockout Ned joins a rival gang to fight Li’l Zé, establishing a real war in the favela. Meanwhile, gains importance on a local newspaper by covering the main facts of the war, to which he has access since he lives in the *City of God*.

Various elements in the film bring about the opportunity to explore an array of theoretical aspects of film-tourism through the influence of *City of God* on Brazil’s image as a tourist destination. In spite of having a controversial and negative plot based on actual facts, the film doses certain amounts of romance and adventure in the whole negative context, which in addition with the story and all the symbolic elements, might influence viewers’ both cognitive and affective

image, as well as their visit intentions, which is investigated by the present study.

METHODOLOGY

The data collection procedures, which took place in September 2012, consisted in screening the film in closed sessions to 150 university students in Lisbon, who were solicited to fill one questionnaire before and one after seeing the film. The questionnaire applied before the film was divided in two parts. The first part was formed by multiple choice questions that aimed to form a brief demographical profile of the sample and determine their film seeing profile, focusing on Brazilian films.

The second part was formed by three sets of sentences about their impressions on Brazil, to which the participants should show their level of agreement in a Likert type scale ranging from 1, which meant “Strongly disagree” to 5, which meant “strongly agree”. The first of those set of sentences presented 35 attributes of cognitive destination image; the second one, presented nine affective image attributes; and the third one presented four behavioral intentions regarding the visit to the place in question.

The 35 five destination image attributes included the ones from the tri-dimensional model for definition and measurement of destination image provided by Echtner & Ritchie (2003), as well as other added due to their relevance to the context studied. The nine affective destination attributes included the eight that compose the Cartesian model of association of emotional meanings to places provided by Russel (1980), in addition to the meaning “hostile”, also added due to its relevance to the current study. Finally, the four behavioral intentions attributes were retrieved from the hierarchy of effects model (Strong, 1925).

The questionnaire applied after screening the film was constituted by the same three sets of sentences with the 5 point Likert scale, only absent the demographical part. Thus, the means achieved before and after screening the film could be compared in order to measure its influence on the sample's cognitive and affective image about Brazil as a tourist destination, as well as on their behavioral intention on visiting the country.

As previously observed, the film's negative plot, the duality of negative and positive elements and the history might have a strong influence on the viewers' cognitive and affective image, as well as on their visit intentions. To investigate this, the means achieved by the participants on the attributes of cognitive image, affective image and behavioral intentions were compared through a paired sample t-test, so the film's influence in each one of those variables could be assessed.

RESULTS

The sample adopted was constituted 60% by women and 40% by men; mostly undergraduate students (95,5%), while the rest were mastering, between 19 and 25 years old (72,7%), and a little less than half of them (40,9%) had a job besides studying. On what concerns to the participants' film seeing profile, more than half of them (56,1%) watches between one and three films weekly, and 56,5% normally watch Brazilian films.

Amongst the last, *"Elite Squad II: the enemy within"* was the mostly mentioned as last Brazilian film watched (39,4%), followed by *"City of God"* (33,3%) and *"Bruna Surfistinha"* (6,21%). Most of the participants had never been to Brazil (80,3%). Amongst the ones who had, 53% (10,44% of the total) had been to Rio de Janeiro, city portrayed in the film.

The pre-test results revealed relatively good impressions of the participants regarding Brazil, since most attributes had high means. However, the image of a "savage paradise", where beautiful landscapes contrast with precarious structure and human development also made present, since all cognitive attributes with means higher than 4 were related to natural attractive factors while all attributes with means 3 or lower were related to structural issues.

Cognitive image

The results of the paired samples t-test on the 35 cognitive image attributes showed that in a confidence interval of 99%, 24 (68,57%) of the 35 attributes had statistically significant negative changes in mean on the post-test comparing to their results on the pre-test, while the remaining 11 (31,43%) attributes had no significant change, as showed on Table 1, although nine of the last did have lower rates on the post-test.

The attribute with largest decrease in mean was "People there are friendly" ($md = 0,87 / p < 0,01$), followed by "There is a lot of interesting cultural events, fairs and exhibits" ($md = 0,66 / p < 0,01$), "It's a restful place to visit" ($md = 0,63 / p < 0,01$), "The cities are attractive" ($md = 0,60 / p < 0,01$) and "The tourist attractions are famous" ($md = 0,60 / p < 0,01$).

Most of these negative changes were predictable, since those attributes are directly related to the negative aspects the film depicts. The attribute "People there are friendly", for example, which had the largest decrease, was expected to negatively change, since the film depicts mostly cruel and unscrupulous bandits, so it is normal that it negatively affects viewers' ideas about the friendliness of people in Brazil.

However, other attributes that are not related to the films content also had high decreases on mean, such as "There is a lot

of interesting cultural events, fairs and exhibits” ($md = 0,66 / p < 0,01$), and “The tourist attractions are famous” ($md = 0,60 / p < 0,01$). This shows that besides turning viewer’s beliefs more negative on the aspects displayed, the film also drags attention away from other aspects, about which viewers had highly positive impressions. Therefore, after seeing the film, spectators associate the destination so intensely with the negative aspects displayed, that they give less credit even to the positive aspects that are not displayed.

Another interesting result is the fact that, despite the negative changes in most of the attributes, the participants ranked them in a very similar way before and after seeing the film. Just like on the pre-test, the attributes with lowest rates on the post-test were the ones related to structural issues. The attributes related to natural

attractive aspects were also the ones with higher means on both pre-test and post-test.

Those results show that, although the film had a significant effect on most of the attributes, its influence on the general image was rather discrete. This way, the “savage paradise” image referred on the exposition of the pre-test results was much more reinforced, than actually deeply changed.

Affective image

The results of the t-tests on the affective dimensions are similar to the ones obtained with the cognitive destination attributes. As shown on Table 1, most of the positive affective attributes had negative changes, while most of the negative ones had positive changes.

Table 1. Mean changes on cognitive destinations attributes

	Pre-test mean	SD	Post-test mean	SD	Mean difference	df	t	Sig.
Attributes with negative change								
People there are friendly	3,84	0,66	2,97	1,09	0,87	122	6,11	0,000
There is a lot of interesting cultural events, fairs and exhibits	3,87	0,69	3,21	0,93	0,66	122	5,09	0,000
It’s a restful and relaxing place to visit	3,00	0,83	2,37	1,12	0,63	122	4,21	0,000
The cities are attractive	3,69	0,78	3,10	0,94	0,60	122	4,63	0,000
The tourist attractions are famous	4,15	0,74	3,55	0,88	0,60	122	5,48	0,000
The country has a lot of natural beauty	4,58	0,67	4,03	0,83	0,55	122	5,01	0,000
It’s a good destination for an educational or learning travel experience	3,32	0,97	2,85	1,16	0,47	122	3,50	0,001
The country has high levels of education and professional qualification	2,98	0,80	2,52	0,95	0,47	122	4,36	0,000
The urbanization is good	2,95	0,71	2,48	0,88	0,47	122	4,01	0,000
The country has a great bio-diversity	4,27	0,75	3,82	0,90	0,45	122	4,04	0,000
There are good places for shopping	3,61	0,80	3,16	0,94	0,45	122	3,88	0,000
There are good places to make sports	3,92	0,77	3,48	0,97	0,44	122	3,60	0,001
There is a good availability of accommodations and restaurants	3,68	0,76	3,29	1,05	0,39	122	3,28	0,002
The weather is good	4,58	0,62	4,21	0,77	0,37	122	3,89	0,000

There is a lot of open-air activities	4,13	0,77	3,77	0,79	0,37	118	3,86	0,000
The country has a good political stability	3,06	0,85	2,69	1,10	0,37	122	3,50	0,001
There are good beaches there	4,60	0,66	4,24	0,76	0,35	122	3,73	0,000
The life quality is high	2,82	0,64	2,47	0,86	0,35	122	3,36	0,001
Good tourist information is readily available	3,42	0,78	3,06	0,97	0,35	122	2,91	0,005
There is a good nightlife there	3,35	0,79	3,02	0,86	0,34	122	3,01	0,004
A vacation in Brazil is an adventure	4,18	0,76	3,85	0,90	0,32	122	2,82	0,006
There prices are low / our Money has a lot value there	3,76	0,92	3,45	0,90	0,31	122	3,27	0,002
Local standards of cleanliness and sanitation are good.	2,89	0,66	2,58	0,84	0,31	122	3,01	0,004
There is a lot of natural reserves and wild areas	4,18	0,80	3,90	0,84	0,27	122	3,17	0,002
Attributes with no significant change								
Everything is different and fascinating	3,27	0,89	2,94	1,02	0,34	122	2,49	0,015
The architecture is familiar	3,32	0,76	3,02	0,78	0,31	122	2,07	0,043
There are lots of museums and places of historical interest	3,34	0,65	3,13	0,82	0,21	122	1,98	0,052
There is a great cultural and religious diversity	3,74	0,77	3,52	0,94	0,23	122	2,23	0,030
The food is good	3,56	0,69	3,66	0,81	-0,10	122	-0,97	0,334
The food is familiar	3,03	0,81	3,40	0,90	-0,37	122	-2,45	0,017
The streets and highways are in good conditions	2,82	0,64	2,53	0,76	0,29	122	2,46	0,017
The public transportation is good	2,68	0,72	2,42	0,86	0,26	122	2,34	0,022
In general, it is a safe place to visit	2,39	0,89	2,29	1,05	0,10	122	0,83	0,410

In sum, two from the three (66,6%) positive attributes had means significantly decreased, while two from the three negative attributes from Russel's dimensions plus the added attribute "hostile" (totalizing 75%), higher means on the post-test.

From the two neutral attributes, "Arousing" had a negative change and "Sleepy" had no significant change. The remaining one positive and one negative attributes had no significant change either. The positive attribute with larger decrease was "pleasant" ($md = 0,55 / p < 0,01$) and the negative one with larger increase was "distressing" ($md = 0,56 / p < 0,01$).

It is worth to mention, however, that only on the dimension "relaxing-distressing" the mean differences were enough to actually make the viewer's perception dominantly negative after seeing the film, since only this dimension, the negative attribute's mean did surpass the positive one on the post-test. On all other dimensions, despite the decreases on the positive attributes' means and the increases on the negatives', viewers' overall emotional evaluations remained positive (see table 2).

Table 2: Mean differences on affective image attributes

	Pre-test mean	SD	Post-test mean	SD	Mean difference	t	df	Sig. (2-tailed)	Change
Positive attributes									
Pleasant	3,90	0,72	3,40	1,15	0,55	4,05	122	0,000	Negative
Relaxing	3,60	0,78	3,10	1,05	0,47	3,73	122	0,000	Negative
Exciting	3,90	0,71	3,60	1,00	0,27	2,21	122	0,031	Not significant
Negative attributes									
Unpleasant	1,90	0,89	2,40	1,00	-0,45	-3,01	122	0,004	Positive
Distressing	2,70	1,16	3,20	2,63	-0,56	-1,57	122	0,121	Not significant
Glooming	2,20	0,94	2,70	1,09	-0,53	-3,72	122	0,000	Positive
Hostile	2,87	0,77	3,00	0,96	-0,13	-0,86	122	0,393	Positive
Neutral attributes									
Arousing	4,30	0,77	3,90	0,96	0,48	4,07	122	0,000	Negative
Sleepy	2,10	0,98	2,20	0,92	-0,11	-0,84	122	0,404	Not significant

This reinforces the results obtained with the cognitive image attributes, showing that, also on what concerns to the affective image, the film has the power to significantly change the attributes, but has little influence on the general image.

Behavioral intentions

Three (75%) from the four sentences representing behavioral intentions had means decreased after the film. Meanwhile, the item "I'm currently interested in getting more information on traveling to Brazil" did not have statistically significant change, although its post-test mean was also lower, as shown on Table 3.

2. Moreover, like the cognitive

destinations attributes and affective image dimensions, the t-test on the behavioral intentions did not reveal any item actually positively influenced by the film. Therefore, it can be inferred by the paired sample t-tests that the film negatively influence viewers' impressions about Brazil in most aspects, and plays no significant influence on the others. In other words, after watching "City of God", people tend to have all of their ideas, emotional associations and visit intentions about Brazil either negatively influenced or unchanged, while none of those aspects tend to be positively affected.

Table 3: Mean differences in behavioral intentions

	Pre-test mean	sd	Post-test mean	sd	Mean difference	t	df	Sig.
With negative change								
I currently desire to visit Brazil	3,86	1,148	3,24	1,316	0,62	5,22	124	0,000
I'm currently very likely to book a vacation to Brazil	3,70	1,173	3,14	1,318	0,56	5,14	124	0,000
I currently consider Brazil as a suitable tourism destination for me	3,62	1,038	3,17	1,314	0,44	3,54	124	0,001
With no significant change								
I'm currently interested in getting more information on traveling to Brazil	3,51	1,014	3,32	1,229	0,19	1,89	124	0,064

DISCUSSION AND CONCLUSIONS

Although the influence of media products (Kim & Richardson, 2003) and films in particular (Campo et al., 2011; Hahm & Wang, 2011; Hudson & Ritchie, 2006; Hudson, et al., 2011) on destination image is well acknowledged, studies on this field of research rarely go beyond the most typical approach to the film-tourism phenomenon. As a consequence, the effect of films with negative plots is not well known, which results in a precipitate common knowledge that any exposition in films is advantageous.

In this context the present study aimed to contribute to the understanding of the effects of films with negative plots on the image of tourist destinations by investigating the effects of the film *City of God* on the image of Brazil. Thus, this study differentiates from most investigations on film tourism, which explore the effects of films that portray the destination in favorable or romantic ways.

It also differentiates from studies like Shani et al. (2009) and Warnick et al. (2003), which also went beyond the mentioned typical approach, by investigating the effect of controversial movies. However, although the films adopted in such studies showed negative aspects of the destinations, they also showed with more intensity, great landscapes and adventures.

On the other hand, *City of God* focuses on some of the worst aspects of Brazilian reality: violence, poverty, the precarious life condition on the suburbs and the urban war caused by the drug trafficking, while only one landscape is briefly depicted.

The results show that the influence of the film on viewer's cognitive and affective image of Brazil, as well as on their intentions on visiting the country is negative. In sum, most of the attributes tested had significant decrease in means, while the remaining ones did not have significant changes. Thus, all the ideas and

beliefs, associated emotions and intentions to visit the country of the participants were either decreased or unchanged.

The results also show that the conclusion of Shani et al. (2009), according to which, even films with controversial plots can be advantageous as long as they depict positive elements strong enough to balance do not apply for films with dominantly negative plots. This inference is based on the fact that the landscape and the adventure environment depicted on "*City of God*" were not enough to overcome the effects of the violence and poverty, resulting in a decrease on the visit intentions.

The fact that even the aspects that were not depicted on the film also had negative changes suggests that, besides negatively affecting spectator's views on the negatively depicted aspects, films with controversial plots also make viewers give less credit to other aspects, which they used to have good impressions about. In other words, the results suggest that films with predominantly negative contents turn viewers' cognitive evaluation of the depicted place generally lower, including on the aspects not directly depicted on the film.

Although the film negatively influenced most of the cognitive and affective destination image attributes of Brazil, it had a discrete effect on the country's general image. Also, regarding the affective image in particular, the change was not enough to turn it from positive to negative, except on the one case in which it was already close from neutral, namely the affective dimension "relaxing-distressing".

Thus, the image revealed by the pre-test, of a bother line "savage paradise" combining beautiful landscapes and precarious structure was reinforced by the film, rather than actually changed. This result reinforces the one obtained by Shani et al. (2009), proving that, also on the case of films with mostly negative content,

their effect on the destination image is much more noticeable on the image attributes than on the general image.

Those results raise important concerns for destination managers, especially Brazilian national tourism management and marketing entities, which seem to disregard the potential of national cinema as destination image formation agents. Naturally, films like “*City of God*”, “*Carandiru*” and *Bus 174*” cannot just stop being made in benefit of the country’s tourism, since they have a great artistic and commercial value.

However, their effect should be considered by national and state DMOs, which should as well work together with filmmakers, in order to match their interests, as proposed by Hahm and Wang (2011). The public organ responsible for the country’s tourist marketing could take advantage of the fact that most major films are funded by culture incentive programs to have some control over the image transmitted through them.

There could be defined, for example, items on the edicts for the selection of projects, in favor of films with a potential of positive influence on the country’s image. Naturally, this should not be done aiming to reduce national cinema production to films that look more like tourist advertising pieces, since it would jeopardize, not only the films’ quality, but also their potential positively changing the image, as the advantage of films as image formation agents is exactly their non-advertising and unbiased character.

However, a matching could be done on the interests of national tourism and national cinema, since both are beneficial for the country and the former is managed by the government while the latter has an indirect participation, since it is funded with tax wavier. This way, the country could use films to overcome the image of a “savage paradise”, which they currently reinforce, as showed by the present work’s results.

Limitations and future research

In spite of the the rigor adopted on the procedures involved on the present study, it clearly has limitations that should be pointed out. Firstly, the work shares a restraint with many others that have similar methods employed, which is the homogeneity of the sample, more specifically, its limitation to university students. Also, the fact that the participants were either Portuguese or residents in Portugal, and thus have a high familiarity with Brazil, might also have influenced the results.

Still regarding the sample, it was slightly below the ones used in similar studies, which range around 200. On what concerns to the subject of work, due to the exploratory nature of the work, the results are still limited to the case studied.

In this context, future research with bigger and more varied samples, including participants with other main occupations and other nationalities would be useful to a more accurate validation of the results. It should also be observed that destination image is formed by perception and cognition, where the latter is influenced, amongst other factors, by social demographical characteristics, which also highlights that need.

Researches with other Brazilian are also necessary to assess the influence of other films on the original image shown by the pre test results. Equally, studies with films from other countries are important to empirically check the generalization of the results, as well as finding differences in each reality researched.

The present research did not address aspects like the long-term effects of films with negative plots and did not explore more minutely the cases in which the film actually increased the visit intentions. Thus, researches aiming to assess the long-lasting effect of films with negative plots, as well as the relevance of each influencing factor on the incentive exerted

by those films on specific audiences are also recommendable.

REFERENCES

- Andersen, V., Prentice, R., & Guerin, S. (1997). Imagery of Denmark among visitors to Danish fine arts exhibitions in Scotland. *Tourism Management*, 18(7), 453-464. doi:10.1016/S0261-5177(97)00054-X
- Beerli, A., & Martín, J. D. (2004). Factors influencing destination image. *Annals of Tourism Research*, 31(3), 657-681. doi:10.1016/j.annals.2004.01.010
- Beeton, S. (2004). Rural tourism in Australia — has the gaze altered? Tracking rural images through film and tourism promotion. *International Journal of Tourism Research*, 6(3), 125-135.
- Beeton, S. (2005). *Film-induced tourism*. Clevedon, UK: Channel View publications.
- Bigné, E. A. E., Sánchez, I. G., & Blas, S. S. (2009). The functional-psychological continuum in the cognitive image of a destination: A confirmatory analysis. *Tourism Management*, 30(5), 715-723. doi: 10.1016/j.tourman.2008.10.020
- Bozbay, Z. (2008). The Assessment of Greece's Image as a Tourism Destination. *MIBES Transactions*, 2(1), 14-27.
- Campo, L. R., Brea, J. A. F., & Muñoz, D. R. T. (2011). Tourist destination image formed by the cinema: Barcelona positioning through the feature film Vicky Cristina Barcelona. *European Journal of Tourism, Hospitality and Recreation*, 2(1), 137-154.
- Connell, J. (2012). Film tourism – Evolution, progress and prospects. *Tourism Management*, 33(5), 1007-1029. doi:10.1016/j.tourman.2012.02.008
- Croy, W. G. (2010). Planning for Film Tourism: Active Destination Image Management. *Tourism and Hospitality Planning & Development*, 7(1), 21-30. doi:10.1080/14790530903522598
- Echtner, C. M., & Ritchie, J. R. B. (2003). The Meaning and Measurement of Destination Image. *The journal of tourism studies*, 14(1), 37-48.
- Gammack, J. (2005). Tourism and Media. *Annals of Tourism Research*, 32(4), 1148-1149. doi:10.1016/j.annals.2005.05.004
- Gartner, W. C. (1993). Image Formation Process. *Journal of Travel and Tourism Marketing*, 2(2/3), 191-215.
- Hahm, J., & Wang, Y. (2011). Film-Induced Tourism as a Vehicle For Destination Marketing: Is it Worth the Efforts? *Journal of Travel & Tourism Marketing*, 28(2), 165-179. doi:10.1080/10548408.2011.546209
- Hudson, S., & Ritchie, J. R. B. (2006). Promoting Destinations via Film Tourism: An Empirical Identification of Supporting Marketing Initiatives. *Journal of Travel Research*, 44(4), 387-396.
- Hudson, S., Wang, Y., & Gil, S. M. (2011). The influence of a film on destination image and the desire to travel: a cross-cultural comparison. *International Journal of Tourism Research*, 13(2), 177-190.
- Im, H. H., & Chon, K. (2008). An Exploratory Study of Movie-Induced Tourism: A Case of the Movie The Sound of Music and Its Locations in Salzburg, Austria. *Journal of Travel & Tourism*

- Marketing*, 24(2-3), 229-238.
doi:10.1080/10548400802092866
- Jewell, B., & McKinnon, S. (2008). Movie Tourism—A New Form of Cultural Landscape? *Journal of Travel & Tourism Marketing*, 24(2-3), 153-162.
doi:10.1080/10548400802092650
- Kim, H., & Richardson, S. L. (2003). Motion picture impacts on destination images. *Annals of Tourism Research*, 30(1), 216-237.
doi:10.1016/S0160-7383(02)00062-2
- Macionis, N. (2004, 24-26 November 2004.). *Understanding the film-induced tourist*. Paper presented at the International Tourism and Media Conference, Melbourne, Australia.
- MacKay, K. J., & Fesenmaier, D. R. (1997). Pictorial element of destination in image formation. *Annals of Tourism Research*, 24(3), 537-565.
doi:10.1016/S0160-7383(97)00011-X
- O'Connor, N., & Bolan, P. (2008). Creating a Sustainable Brand for Northern Ireland Through Film-Induced Tourism. *Tourism Culture & Communication*, 8(3), 147-158.
doi:10.3727/109830408786177515
- O'Connor, N., Flanagan, S., & Gilbert, D. (2006). The importance of destination branding in movie induced tourism locations. *Proceedings of the University of Surrey Conference: Cutting Edge Research in Tourism—New Directions Challenges and Applications*. Guildford, UK: The School of Management, University of Surrey.
http://www.academia.edu/1653433/The_importance_of_destination_branding_in_movie_induced_tourism_locations
- O'Connor, N., Flanagan, S., & Gilbert, D. (2010). The use of film in re-imaging a tourism destination: a case study of Yorkshire, UK. *Journal of Vacation Marketing*, 16(1), 61-74.
- Russell, J. A. (1980). A Circumplex model of affect. *Journal of Personality and Social Psychology*, 39(6), 1161-1178.
- Schofield, P. (1996). Cinematographic images of a city: Alternative heritage tourism in Manchester. *Tourism Management*, 17(5), 333-340.
doi:10.1016/0261-5177(96)00033-7
- Shani, A., Wang, Y., Hudson, S., & Gil, S. (2009). Impacts of a historical film on the destination image of South America. *Journal of Vacation Marketing*, 15(3), 229-242.
- Stern, E., & Krakover, S. (1993). The Formation of a Composite Urban Image. *Geographical Analysis*, 25(2), 130-146.
- Strong, E. K. (1925). *The psychology of selling*. New York: McGraw-Hill.
- Warnick, R. B., Bojanic, D. C., & Sirianguk, A. (2006, 2005 April). *Movie Effects on the Image of Thailand Among College Student Travelers*. Paper presented at the 2005 Northeastern Recreation Research Symposium, Bolton Landing, NY.

THE IMPACT OF WEB SITE DESIGN FACTORS ON UNPLANNED PURCHASE BEHAVIOR

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ABSTRACT

National apparel brand Lativ was founded in Taiwan over 10 years, and its products were mainly sold to the market through internet shop. Recently, Lativ had to face lots of competitors, and the design of internet shop had become the opportunity of differentiation with the competitors in the market. Therefore, this study has taken the design factors of internet shop as the main influential factors. The results show that both the information function and pleasure function of internet shop have positive influence on Consumer's Buying Mood and browsing behavior. Besides, transaction function has positive influence on Consumer Buying Mood too. In addition, buying mood will in turn affect positively the consumer's Reminder Impulsive Buying Behavior, and browsing behavior will affect positively consumer's pure Impulsive Buying Behavior.

Key words: Web site design factors, mood, browse, Impulsive Buying Behavior.

INTRODUCTION

According to statistical survey made by Taiwan Network Information Center (TWNIC) on Feb. 2010, it was pointed out that the internet-surfing population in Taiwan area was about 16.22 million person times, and the internet-surfing rate of the public is about 70.5%, which showed an increase of 400 thousand person times as compared to the data of 2009. In Asia, this is next to Korea and Japan and is at the third place. Due to the popularization of internet, consumption through internet is in the increasing trend, and the diversity of product sold is in increasing trend too, hence, lots of enterprise or personal brand apparels have made aggressive way toward the setup and design of internet shop. Christine and Elzbieta (2002) and Hans van der Heijden and Creemers (2003) thought that web site design will affect the willingness, assessment and value of buying from the

consumer in the internet. In the past consumer behavior research, "Impulse Buying" is always important discussion topic in the marketing field. This study aims at investigating the impulsive buying behavior in broader sense, that is, "Unplanned Purchase". Iyer (1989) proposed that Unplanned Buying Behavior is something everyone has to encounter in the daily life, and it is popular phenomenon exists in the daily life for a long period of time. Koufaris (2002) pointed out that in the world of internet shopping, consumer's purchase behavior is complicated and interesting, and all the purchasing decisions are on one mouse click through one finger. Rook and Gardner (1993) proposed that positive emotion will have higher influence on consumer's Impulsive Buying Behavior, hence, this study has included buying mood too, and variables such as the internet shop design, Unplanned Buying Behavior thus form the main research

scope. Lativ has sold its products through internet shop channel in Taiwan over 10 years, and lots of consumers keep purchasing its brand apparel, hence, this study tries to use single brand Lativ as the main research target. According to the above research background and motive, this study is going to investigate how web site design factors of internet shop affect consumer's buying mood and browsing behavior, which in turn leads to Unplanned Buying Behavior from the consumers.

THEORETICAL BACKGROUND AND HYPOTHESES

Consumer's buying mood

Holbrook and Hirschman (1982) has defined mood as affective oral expression, which is personal subjective psychological state; when a person receives the external stimulation to generate affective reaction, emotional response is then generated. Chang (1991) pointed out that mood is body and mental excited state when an individual receives certain stimulation, although the occurrence of the state of mood can be experienced by the individual, yet the physiological change and behavioral reaction caused cannot be easily controlled by the individual. To sum up the above statement, this study has defined the consumer's buying mood as "the emotional response of the consumer in the shop caused when consumer receives stimulation from the external

environment (shop atmosphere and web site design), and such response will in turn affect consumer's consumptive behavior". Psychologist's view on "Can individuals sense at the same time the conflicting emotions?" is usually controversial. One of them thought that emotional valence is the result of two independent perspectives, hence, not only an individual can sense at the same time positive and negative mutually conflicting emotions, but also such joint experience is quite normal and occurs frequently; in another view, it was thought that an individual has limited capability to sense at the same time the conflicting emotions, and when this view is reflected on the scale and model, positive and negative emotion will then represent mutually opposite perspectives. The above are then bipolar and unipolar topics in the emotional research. Generally speaking, in the marketing research, emotion is usually divided into positive and negative faces. However, in the psychological research, positive and negative emotion is placed at two ends of single perspective. For such diversified situations, it was found in the researches of Babin, Darden and Babin (1998) that positive emotion and negative emotion, on certain cases, can be distinguished; positive and negative emotion is only semantic difference, they are two extreme factors on the same perspective. With an aim to develop research hypotheses, this paper outlines the research framework of this research is as shown in figure-1

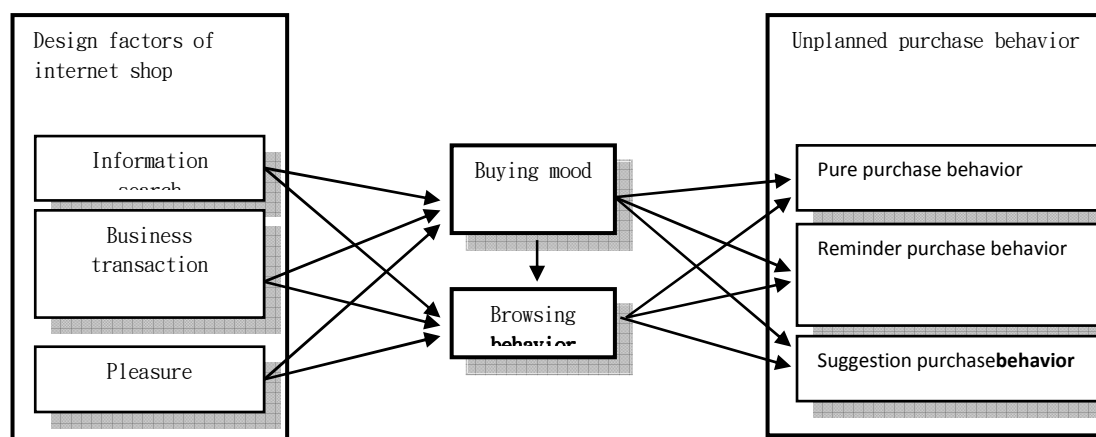


Figure-1 research framework

Internet shop design

What design factors should be included in successful internet shop design so that consumers are willing to spend time to browse on internet shop and consume? Nielsen (1999) pointed out that internet shop runner should start from the view of the web site user and learn how to run the web site from the view of the user. In the study on shopping web sites, Lee, Katerattanakul, Hong (2005) was found that effective shopping web site should include: 1. Information Search: In information search, what the consumers care are: browsing tool within the web site, customized information, complete product information, related information of the company, information related to the transaction rule, easy-to-understand display of the web site, efficient hyperlink and effective information. 2.

Business Transactions: Functions the consumers care are: web site security and reliability, consumer's personal information, consultation function, flexible and diversified payment ways, easy and simple transaction process, and the response time of the web site to consumer. 3. Pleasure: Consumer hopes that the web site can provide visual effects such as pleasant color, background, text font, image and desktop arrangement. According to lots of researches from many

scholars, it was found that the environment design of the shop was linked to the consumer's buying mood (Babin and Darden, 1996; Donovan and Rossiter, 1982; Wakefield and Baker, 1998). Grewal, Marmorstein and Sharma (1996) pointed out that several environmental stimulations provided by retail store can form a communication system, which is also the hint to the information collection process and decision made by the consumer. When it is extended to internet shop, it means that internet shop environment is filled with hint, message and suggestion of communication with consumer, and it not only creates or enhances consumer's buying mood and increase consumer's purchase desire, but also it affects consumer's reaction too. Based on the above theories, the hypotheses of this research are proposed:

H1a: The information search function of internet design factor significantly and positively affects the buying mood of the consumer.

H1b: The business transaction function of internet design factor significantly and positively affects the buying mood of the consumer.

H1c: Pleasure factor of internet design factor significantly and positively affects the buying mood of the consumer.

Impulsive Buying Behavior

The past consumer behavior research mainly used “product view point” and “consumer view point” to investigate Impulsive Buying Behavior. 1.

Product view point: Early studies were based on the product type as start, for example, in the researches of Cobb and Hoyer (1986), products that consumer wants to buy before entering the store were recorded first, then after the consumer leaves the store, products that the consumer has purchased were then compared to the product list that the consumer wanted to buy previously, products not listed in the purchase list were then classified as Impulse Buying, then comparison and research was done to see what products could easily cause the consumer to perform Impulsive Buying Behavior. 2. Consumer view point: Weinburg and Gottwald (1982) proposed that consumer’s emotion or mood can be used as one of the main factors affecting Impulse Buying. They thought that Impulse Buying was strong emotional reaction generated by the stimulations in the purchase environment and the subsequent immediate response. Rook and Hoch (1985) put the psychological method into the research and thought that to classify the product as “impulsive” subject is that the consumer has experienced impulsive consumption feeling, instead of the product. Past and traditional researches on Unplanned Buying Behavior can be mainly divided into three directions: the first is product item and product characteristic (Cox, 1964); the second is the consumption characteristic of unplanned purchase (Kollat and Willet, 1969); the third is the influence of the arrangement and allocation within the store on the Unplanned Buying Behavior of the consumer. Although for a long term, the research of Unplanned Buying Behavior of the consumers is mainly based on these three directions, yet there are still few researches trying to distinguish Unplanned Buying Behavior and

Impulsive Buying Behavior. Iyer (1989) had studied the influence of external stimulations on Unplanned Buying Behavior of the consumer, and such external stimulations include purchase time pressure, the recognition of the store environment deep in the heart of the consumer, and knowledge and memory. In addition, Stern (1962) proposed the concept of impulse mix, and he had defined the unplanned buying behavior to include the following four types: 1. Pure Impulse Buying: It means that consumer is attracted by curiosity, pleasure or the appeal provided by the product, and general rational purchase model is violated in this case, and the action taken is then Impulse Buying. 2. Reminder Impulse Buying: It means that when consumer sees certain product, this product suddenly reminds consumer’s previous purchase experience, for example, the consumer’s home might lack of certain product, or the consumer reminds the related advertisement or information of this information, and the consumer once planned to purchase it and had the consciousness of the need of this product, hence, consumer decides to purchase it temporarily. 3. Suggestion Impulse Buying: It means that the consumer does not have previous experience and understanding on the product, and the Impulsive Buying Behavior is caused by the stimulation provided by the product. 4.

Planned Impulse Buying: It means that the consumer has a plan before the purchase, but the consumer does not plan to purchase what product. The consumer will perform extra purchase depending on the real situation, and it will be true especially when there is coupon or there is any promotional activity on the product, hence, it belongs to rational purchase behavior. Weinburg and Gottwald (1982) thought that Unplanned Buying Behavior will occur on the consumer due to strong emotional response, lower recognition control, and the stay in the situation that

might stimulate consumer's Unplanned Buying Behavior. In addition, in the study of the previous cause that generates Unplanned Buying Behavior as performed by the Beatty and Ferrell (1998), it was found that when the buying mood of the consumer is positive, it will affect indirectly the level that an individual senses the stimulation, which in turn will affect Unplanned Buying Behavior. Dholakia (2000) also thought that when the consumer stayed in positive emotion, the consumer will have higher level to accept the risk, hence, the possibility to generate Unplanned Buying Behavior will be increased. Therefore, this study deduces that when the buying mood of the consumer is positive, it will obviously affect Unplanned Buying Behavior, and the following hypotheses are then proposed:

H2a: Consumer Buying Mood will positively affect Pure Impulsive Buying Behavior.

H2b: Consumer Buying Mood will positively affect Reminder Impulsive Buying Behavior.

H2c: Consumer Buying Mood will positively affect Suggestion Impulsive Buying Behavior. Browsing behavior

Bloch and Richins (1983) has defined browsing behavior as: After the consumer has observed the product sold by the retail store, for the information search or pleasure purpose, this behavior is the non-immediate purchase behavior. Therefore, we can know that when the consumer is performing store visit, they are not there just for performing purchase behavior, instead, it is for information acquisition or pleasure purpose. Pavlou and Fygenon (2006) also mentioned that when consumer performs consumption behavior, the consumer will not make single and total decision, however, there will be two obvious considering stages in the consumer's side, they are, the acquisition of product information and the

purchase of product, hence, in order to acquire the information, the consumer will make it through web site browsing behavior. In the large sea of internet world, the user needs to use browsing behavior to collect information or product. Pavlou and Fygenon (2006) mentioned that information acquisition and product purchase is more important decision factor to adopt e commerce. Therefore, it can be seen that the reason consumer performs browsing behavior is to obtain the information wanted and pleasure, and this is very important. Babin, Darden, Griffin (1994) proposed that when consumer performed pure browsing behavior, or strolled around the street for purchase behavior without specific purpose, the consumer tended to get more impressed and pleasant as compared to real product purchase, and the consumer tended to enjoy the fun by being personally on the scene. Beatty and Ferrell (1998) pointed out that the spontaneous browsing behavior within the store is very important factor to form Impulse Buying process. And internet shopping meets such browsing behavior status quite well. When the consumer spends more time to do internet shop browsing behavior, the consumer tends to receive more external stimulations from the internet shop, and there will be higher chance for the consumer to perform unplanned purchase of the product. Therefore, the following hypotheses are proposed:

H3a: Consumer's browsing behavior will positively affect Pure Impulsive Buying Behavior

H3b: Consumer's browsing behavior will positively affect Reminder Impulsive Buying Behavior.

H3c: Consumer's browsing behavior will positively affect Suggestion Impulsive Buying Behavior.

In the past, there were lots of literature investigating the influential relation among store's environment stimulation, customer's emotional perception and

consumer's behavior. Hence, it was pointed out in lots of researches that when the consumer stayed in pleasant mood, positive consumption behavior tends to be generated on the consumer, for example, the consumer will stay longer time in the store, or will have more interaction with the service personnel. But if the consumer stays in negative mood, emotional perception to leave will be generated, or the consumer will lose patience to the service provided by the service personnel. Donovan, Rossiter, Marcoolyn and Nesdale (1994) mentioned in their research that when consumer is in pleasant mood, the consumer tends to have more extra stay and increase in the consumption value with a proportion of 9% to 11%. Therefore, consumer's emotional variable has very large influence on consumer's extra time spent in the store for browsing behavior. Therefore, the following hypotheses are proposed for this study:

H4: Consumer Buying Mood will positively affect consumer's browsing behavior in internet shop

In the relation between web site design factor and browsing behavior, scholars Dreze, and Zufryden (1997) pointed out that internet attributes such as background color, image size, voice display and recommendation by famous people tend to affect the frequency and time for a consumer to have browsing behavior on the web site. In addition, Mummalaneni (2005) had performed study on web site design and atmosphere, and it was found that it will make the emotion of the web site browsing person pleasant and excited, and it will further affect the satisfaction, staying time and quantity of product purchased of internet shopping person. Some scholars even pointed out that consumer will obtain three results from the purchasing process, the first is the product itself, the second is product information, and the third is the pleasure effect. Therefore, the following hypotheses are proposed:

H5a: The information search function of internet design factor positively affects consumer's browsing behavior

H5b: The business transaction function of internet design factor positively affects consumer's browsing behavior

H5c: The pleasure of internet design factor positively affects consumer's browsing behavior

METHODOLOGY

Measurement

The questionnaire uses Likert 5 point scale for the scoring, and the person under test has to fill personal feeling on the question according to the meaning of the question, from "very disagree" to "very agree", the score is evaluated in the range 1 to 5.

Internet shop design factor: This study has referred to the study of Lee, Katerattanakul, Hong (2005) to divide the design factors of internet shop into the following three functions of internet shop:

1. Information search function: It means that the functions the consumer cares about are: browsing tool within the web site, customized information, complete product information, corporate related information, transaction rule related information, web site display that is easy to understand, efficient hyperlink and effective information. The information search function is divided into nine perspectives, which are respectively "Completeness and richness of information", "just-in-time characteristic of information", "understandability of information", "information correctness", "information consistence", "navigation function", "assistance function", "linking efficiency" and "customization". For example: "We think it is very important to provide complete product information", etc., which comes to a total of 12 questions.

2. Business transaction function: It means things the consumer cares about, for example, web site security and reliability, customer's personal information, instruction function, flexible and diversified payment method, simple and easy transaction process flow and the response time for the web site to respond to the consumer, that is, any service, attitude and service quality on the internet the service personnel of internet shop provide to the consumer, and all the above factors make the consumer willing to consumer in the internet. Five perspectives of business transaction, "security", "privacy", "just-in-time characteristics", "interactive response time" and "convenience", are used respectively to design the question item, for example: "I think it is important to explain on the security transaction system used by the web site", etc., for a total of 4 questions.

3. Pleasure: It means that the consumer hopes the web site can provide visual display effects such as pleasant color, background, text font, image, desktop setting, etc. Three perspectives of web site pleasures, "desktop setting", "visual stimulation", "display style", are used respectively to design the question item, for example: "I think that neat web page setting is very important", etc for a total of 3 questions.

Customer's buying mood: The developed by Machleit and Englu (2000) is adopted, which includes five assessment questions such as "pleasant---unpleasant", "surprised---non-surprised", "love it---not love it", "satisfied---not satisfied" and "impressed---not impressed".

Browsing behavior: This study has referred to the study of Bloch and Richins(1983) to define the browsing behavior as the behavior that after the consumer has watched the product sold by the retail store, for just information search or pleasure objective, the consumer does not take immediate purchase action. Two perspectives of browsing behavior,

namely "acquisition of information" and "pleasure and enjoyment", are used respectively to design the question item, for example: "This internet shop make you spend more time for browsing behavior than expected", "This internet shop makes you make more extra browsing counts", etc., for a total of two questions.

Unplanned Buying Behavior: This study has referred to the research of Iyer (1989) and proposed that after the consumer has entered the store and before the consumer has left the store, the consumer has purchased some unplanned purchase products before the consumer enters the store. This study has referred to the survey questionnaire design in the literature of Unplanned Buying Behavior and has come out three types of Impulsive Buying Behavior for Unplanned Buying Behavior, namely, survey questionnaire design question of "Pure Impulsive Buying Behavior", "Reminder Impulsive Buying Behavior" and "Suggestion Impulsive Buying Behavior", for example: "I will not think about the final result when I purchase in the internet" and "I am usually attracted by the exhibition of the product function in the web page and by the product", etc. for a total of 7 questions.

RESULTS

Reliability and validity analysis

This study conducted the reliability and validity analysis in two stages to ensure its integrity. In the first stage, we computed the Cronbach's α for all measures, and all have been found to be higher than 0.7. In the second stage, Confirmatory Factor Analysis was used to examine the reliability and validity. An adequate fit of the data was achieved for the measurement portion of the model. The results revealed the chi-square to degrees of freedom ratio=2.79, GFI=0.90, AGFI=0.88, CFI=0.91, RMSEA=0.02, and NNFI=0.92. All of the t statistics for the

indicator variables were greater than 2.31 and significant at $p < 0.01$. No standard errors were near zero. The results showed that measures had good convergent validity. Discriminant validity is shown by the confidence interval of 2 standard errors around the correlation between each

respective pair of factors in the model. Discriminant validity is demonstrated when the confidence interval does not include 1.0. None of the confidence intervals included 1.0, supporting discriminant validity among the factors in the model.

The results of the research hypotheses

The results of the hypothetical paths are as in the following table-1.

Table-1 The results of hypothetical path

Hypothesis	Variable relation	coefficients	t	Hypotheses	conclusion
H1a	Information search function of internet design factor → Consumer Buying Mood(γ_{11})	0.13	2.69*	+	supported
H1b	Transaction function of internet design factor → Consumer Buying Mood(γ_{12})	0.27	2.19*	+	supported
H1c	Pleasure of internet design factor → Consumer Buying Mood(γ_{13})	0.36	6.34*	+	supported
H2a	Consumer Buying Mood → Pure Impulsive Buying Behavior(β_{11})	0.04	1.49	+	Rejected
H2b	Consumer Buying Mood → Reminder Impulsive Buying Behavior(β_{12})	0.08	2.28*	+	supported
H2c	Consumer Buying Mood → Suggestion Impulsive Buying Behavior(β_{13})	0.00	-0.08	+	Rejected
H3a	Consumer's browsing behavior → Pure Impulsive Buying Behavior(β_{21})	0.10	2.27*	+	supported
H3b	Consumer's browsing behavior → Reminder's Impulsive Buying Behavior(β_{22})	-0.06	-1.15	+	Rejected
H3c	Consumer's browsing behavior → Suggestion Impulsive Buying Behavior(β_{23})	0.12	1.87	+	Rejected
H4	Consumer Buying Mood → Consumer's browsing behavior(β_{21})	0.28	6.94*	+	supported
H5a	Information search function of internet design factor → Consumer's browsing behavior(γ_{21})	0.74	6.81*	+	supported
H5b	Transaction function of internet design factor → Consumer's browsing behavior(γ_{22})	0.11	-1.32	+	rejected
H5c	Pleasure of internet design factor → Consumer's browsing behavior(γ_{23})	-0.23	-2.86*	+	supported

Note: 1. The results of the hypotheses model: GFI=0.89; AGFI=0.87; NFI=0.94; RMSEA=0.031. 2. In t column, * means the standard coefficient $|t| \geq 2$.

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Conclusions

1. The relationship between internet shop design factors and buying mood
The information search function, transaction function and pleasure of internet shop all have significant influence on Consumer Buying Mood. It means that the consumer thought that the apparel of company information provided by Lativ is useful and complete, hence, when consumer gets more company's information or apparel information, consumer will have good impression on the corporate image and apparel of Lativ brand, and consumer will then spend more time and frequency browsing the web site, and finally, reaching the purchase behavior. In addition, in the internet transaction function and pleasure function as constructed by Lativ, the consumer says that the transaction is simple and easy to use, and pleasure is diversified and comfortable, hence, consumer can gain happy mood from the entire process.

2. The relationship between internet shop design factors and browsing behavior

The research hypothesis of the significant relation between the information search function and pleasure of Lativ internet shop and consumer's browsing behavior is supported. In this part, scholars Bloch and Richins (1983) had defined browsing behavior as: It is the behavior that after the consumer has watched the product sold by the retail store, for information search or pleasure objective, the consumer does not take immediate purchase behavior. Since the reason for the consumer to perform browsing behavior is to acquire product information, hence, the information and pleasure provided by Lativ makes it possible for the consumer to get the objective of browsing behavior while the consumer is performing browsing

behavior in the internet shop. However, the correlation between transaction function and browsing behavior is not significant, the reason might be because that transaction function is only used in a series of behaviors after the consumer has decided to purchase the product, and because this process occurs after browsing behavior, there is thus no significant influential relation.

3. The relationship between buying mood and browsing behavior

The hypothesis of positive influential relation between consumer Buying Mood and browsing behavior is supported, which is consistent with the hypothesis of this research. It means that when the buying mood of the consumer becomes higher, the consumer's time or frequency spent in internet shop for browsing behavior will be increased, and the theory proposed by Mummalaneni (2005) is thus proved, that is, the design or atmosphere in the web site will make the browsing behavior performer of the web site pleasant and excited, and the retention time of the internet shopper will be further affected.

4. The relationship between buying mood and Impulsive Buying Behavior

The hypothesis of the relation between consumers' buying mood and reminder impulse purchase behavior is matched, and the result is consistent with the hypothesis of this research. When the consumer's buying mood is pleasant, during the purchase process and through the apparel information and image, etc. provided by Lativ, the consumer will remind his purchase and utilization experience, hence, it is reminder purchase behavior generated when the consumer reminds if he is in need of this product or not, or if the consumer reminds Lativ's related information or the related information from the relatives and friends. Meanwhile, there is no significant relation between buying mood and Pure and Suggestion Impulsive Buying Behavior.

Lots of researches have pointed out that consumer will use purchase behavior to enhance the emotional quality, hence, the so-called Unplanned Buying Behavior will be generated. Pure and Suggestion Impulsive Buying Behavior all rely on the Unplanned Buying Behavior caused by temporary curiosity and excited emotion of the consumer. However, the product type provided by Lativ web site is more conservative, it might be not fully sufficient to stimulate consumer's emotion to generate Pure and Suggestion Impulsive Buying Behavior.

5. The relationship between browsing behavior and Impulsive Buying Behavior

When the consumer spends more time and frequency to do browsing behavior, consumer will have more chance to do Pure Impulsive Buying, and this result is consistent with the hypothesis of this research. When the consumer is browsing Lativ's internet shop, if the browsing behavior time is longer or if the frequency is higher, more curiosity will be generated on Lativ's apparel product, and when the consumer gains more information and pleasure, uncontrollable impulse and strong emotion will be generated to generate pure purchase behavior. In addition, there is no significant relation between browsing behavior and Suggestion and Reminder Impulsive Buying Behavior. The possible reason might be because when the time and frequency of browsing behavior increases, it has exceeded the time point of Suggestion Impulsive Buying Behavior generated by the consumer.

Managerial Implications

The low barrier to enter internet shop market has created today's severely competitive apparel internet shop, hence, how to stimulate consumer's consumption behavior and to increase profit has become one of the topics most concerned by lots of

apparel internet shop business operators. No matter it is internet shop that has existed in the market for a long time or internet shop that newly enters the market, internet shop design factor plays very important role to stimulate customer's internal perception, through the control of design factor, the store can even get rebirth. From the above literature review and confirmatory result, it can be seen that the entire internet shop design factor of Lativ affects positively consumer's buying mood and browsing behavior, which means that when the consumer is browsing Lativ internet shop, consumer's buying mood and browsing behavior will be affected due to Lativ's internet connection speed, we page design color, text or the product information providing, and consumer's Impulsive Buying Behavior will be affected accordingly. Based on the research results, the following management meanings are proposed.

1. Update or enhance constantly the information search function of the web site

According to the research result of this study, the information search function of Lativ internet shop has positive influence on Consumer Buying Mood, meanwhile, browsing behavior also shows positive influential relation to Pure Impulsive Buying Behavior, hence, Lativ can enhance consumer's buying mood and increase the browsing time the consumer spent on Lativ web site through the following ways, namely, constant update and increase of detailed product information, the increase of the internet browsing speed, the providing of simple and easy transaction rule, or even the simplification of the web site browsing method, in other words, all of these are helpful to the increase of the consumer's browsing behavior time spent in the web site, meanwhile, consumer will have higher curiosity due to the product or detailed corporate information provided by the web site, and pure impulsive

purchase behavior could more likely to occur.

2. Increase the freshness the web page of Lativ can provide to the consumer

According to the research result of this study, although the pleasure function of Lativ web page has positive influence on the buying mood and browsing behavior of the consumer, yet if after certain period of time the pleasure function of web page can be changed, for example, visual effects such as web page color, text font, background or desktop setting, then the freshness of the web page can be enhanced, and consumer's purchase behavior can be stimulated again, consequently, consumer's Reminder Impulsive Buying Behavior will be affected too.

3. Enhance product's differentiation and stimulate consumer's sense and perception

Today, apparel internet shop in Taiwan's market is highly competitive, more and more emergent internet shops that have their appeals of simplicity, leisure style and low price, and these internet shops have products very similar to the product of Lativ. Under such competitive environment, Lativ cannot just provide the simple product as it did in the past, longer and longer, consumer will feel bored and tired on Lativ's product. Therefore, Lativ, under the premise of product differentiation, can increase its product diversification. Lativ can increase the design and season characteristic of apparel to stimulate the sense and perception of the consumer and to generate consumer's curiosity on the product, finally, the opportunity of Pure Impulsive Purchase Behavior can be enhanced.

REFERENCES

- Babin, B. J. and Darden, W. R. 1996. Good and bad shopping vibes: spending and patronage satisfaction. *Journal of Business Research*, 35, 201-206.
- Babin, B. J., Darden, W. R., and Babin, L. A. 1998. Negative Emotions in Marketing Research: Affect or Artifact? *Journal of Business Research*, 42, 271-285.
- Babin, B. J., Darden, W. R. and Griffin, M. 1994. Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value. *Journal of Consumer Research*, 20, 644-656.
- Beatty, S. E. and Ferrell, M. E. 1998. Impulsive Buying: Modeling Its Precursors. *Journal of Retailing*, 74 (2), 169-191.
- Bloch, P. H. and Richins, M. L. 1983. A Theoretical Model for the Study of Product Importance Perceptions. *Journal of Marketing*, 47, 69-81.
- Chang, C. X. 1991. Modern psychology, Hwa Tai cultural Co., Ltd. Taipei.
- Christine, P. and Elzbieta, L. W. 2002. Web equity: A framework for building consumer value in online companies. *Journal of Consumer Marketing*, 19(2/3), 231-247.
- Cobb, C. J. and Hoyer, W. D. 1986. Planned Versus Impulse Purchases Behavior, *Journal of Retailing*, 65, 384-409.
- Cox, K. R. 1964. The responsiveness of food sales to shelf-space changes in supermarkets. *Journal of Marketing Research*, 1 (May), 63-68.
- Dreze, X. and Zufryden, F. 1997. Testing Web Site Design and Promotional Content. *Journal of Advertising Research*, 77-91.
- Dholakia, U. M. 2000. Temptation and Resistance: An Integrated Model of Consumption Impulse Formation and Enactment. *Psychology and Marketing*, 17(11), 955-982.
- Donovan, R. J. and Rossiter, J. R. 1982. Store Atmosphere: An Environmental Psychology Approach. *Journal of Retailing*, 58, 34-57.

- Donovan, R. J., Rossiter, J. R., Marcoolyn, G. and Nesdale, A. 1994. Store Atmosphere and Purchasing Behavior. *Journal of Retailing*, 70, 283-294.
- Grewal, D., Marmorstein, H. and Sharma, A. 1996. Communicating Price Information through Semantic Cues: The Moderating Effects of Situation and Discount Size, *Journal of Consumer Research*, 23.
- Hans van der Heijden, V. T. and Creemers, M. 2003. Understanding online purchase intentions: Contributions from technology and trust perspectives. *European Journal of Information Systems*, 12(1), 41.
- Holbrook, M. B. and Hirschman, E. C. 1982. The experiential aspects of consumption: Consumer Fantasies, feelings, and fun, *Journal of Consumer Research*, 132-140.
- Lee, S.M., Katerattanakul, P. and Hong, S. 2005. Framework for user perception of effective E-tail web sites. *Journal of Electronic Commerce in Organizations*, 3 (1), 13-34.
- Iyer, E. S. 1989. Unplanned Purchasing: Knowledge of Shopping Environment and Time Pressure. *Journal of Retailing*, 40-57.
- Kollat, D. T. and Willett, R. P. 1969. Is impulse purchasing really a useful concept for marketing decisions? *Journal of Marketing Research*, 4, 21-31.
- Koufaris, M. 2002. Applying the Technology Acceptance Model and Flow Theory to Online Consumer Behavior. *Information Systems Research*, 13(2), 205-223.
- Machleit, K. A. and Eroglu, S. A. 2000. Describing and Measuring Emotional Response to Shopping Experience. *Journal of Business Research*, 49, 101-111.
- Mummalaneni, V. 2005. An empirical investigation of web site characteristics, consumer emotional states and on-line shopping behaviors. *Journal of Business Research*, 58(4), 526-532.
- Nielsen, J. 1999. User interface directions for the web. *Communications of the ACM*, 42(1), 65-72.
- Pavlou, P. and Fygenson, M. 2006. Understanding and prediction electronic commerce adoption: An extension of the theory of planned behavior. *MIS Quarterly*, 30(1), 115-143.
- Rook, D. W. and Hoch, S. J. 1985. Consumer Impulses, *Advances in Consumer Research*, 12, Morris B. Holbrook and Elizabeth C. ed., Hirschman, Provo, UT: Association for Consumer Research, 23-27.
- Rook, D. W. and Gardner, M. P. 1993. In the Mood: Impulse Buying's Affective Antecedents. *Research in Consumer Behaviour*, 6, 1-28.
- Stern, H. 1962. The Significance of Impulse Buying Today. *Journal of Marketing*, 26(4), 59-62.
- Wakefield, K. and Baker, J. 1998. Excitement at the Mall: Determinants and Effects on Shopping Response, *Journal of Retailing*, 74(4), 515-539.
- Weinburg, P. and Gottwald, W. 1982. Impulsive Consumer Buying as a Result of Emotions. *Journal of Business Research*, 10, 43-57.

THE MANAGEMENT BY OBJECTIVES IN PORTUGUESE ADMINISTRATION: CONSIDERATIONS ABOUT A WORKING METHODOLOGY

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ABSTRACT

We equate the roots of the movement reform of Portuguese administration that could give rise to the current SIADAP. To this we refer the characterization of Administration (OA) of the Constitution of constant Portuguese Republic (CPR), the rights and duties enshrined in the Code of Procedure Administration (CPA). In this legislative review will seek to recognize the traits and their dominant management implications for employee attitudes. In theory the organizational behaviors tend to be planned, coordinated and managed in line with the objectives of the performance appraisal of the employees of an organization and their teams can meet its contribution to their success. We argue that this work by evaluating a function of achievement of objectives is possible to know if performance produces desired results for the organization. In this work we present the methodology of evaluating employees and draw the unfolding cascade of goals in the hierarchical structure of institution.

Key Words: Performance evaluation, organizational change, administrative reform, communication strategy, work force Empowerment

INTRODUCTION

The Law No.66-B/2007 establishing the Integrated Management and Assessment Performance in Public Administration (SIADAP), is only one of several instruments the same legislative assembly that induces change and modernization in the Administration.

Portuguese Public corresponding to phase reformation introduced by XVII constitutional. This law, published on December 28, 2007, had applied immediate evaluation of 2008 performance. This new legal support, also referred SIADAP 2nd generation, replaced an earlier 2004 law already regulated one first version of the evaluation system performance.

In 2008, Public Administration undertook a concerted plan and guided to implement the new SIADAP in eleven of their services. Under this plan, we applied a process organizational development, and

leadership based on the processes that unfolded especially in conjunction with senior and middle managers.

This involvement will result in essentially the implementation of a communication plan, resulting from a communication and information strategy which will tend to establish a climate conducive to change through information sharing, transparency process and creating bonds of trust.

SIADAP: ORIGINS, COMPOSITION AND CHARACTERIZATION

Characterization of the Portuguese Government in CRP

In Portugal, the reform of the AP is properly framed by principles enshrined in the Constitution of the Portuguese Republic in 1976, whose last revision date of 2005 and the Code of Administrative Procedure. In article 266 of the Title IX of the PRC stipulates that the Public

Administration's principle essential to the public interest, settling for the actions of their organs and agents, the principles of legality, equality, proportionality, justice, impartiality and good faith. The public interest is a constant in the characterization Administration, returning to be highlighted in the articles on the rules governing civil service (Article 269). In turn, the rights and guarantees of citizens are safeguarded in article 268 °.

In general duties of employees performing public functions, in light of the statutory Recent Disciplinary Regulations approved by Law No. 58/2008, of 9 September, in addition to be reaffirmed the same principles are still entitled to the following: duty exemption, duty of disclosure, duty of care, duty of obedience, duty of loyalty, duty correction, the duty of due diligence and punctuality.

On the organization of public services, the Constitution also intervenes establishing guidelines for a more rational and less bureaucratic administration and determining a logical approach to citizens and to ensure the participation of interested in " its effective management, particularly through (...) forms of democratic representation. " On the processing of administrative activity, CRP provides that it shall be subject to a special law to safeguard the rationalization of media and citizen participation in making decisions that affect them (principle of hearing of the parties). This intention is embodied in the law through Article No. 268 of the CRP that is dedicated to the rights and guarantees of citizens.

On the question of the relation of Public Administration and citizens, externally, are safeguarded the public interest, the rights, freedoms and constitutional guarantees translated by early hearing of parties in matters that concern them and for their participation in the management of the Administration through forms of representation democratic (pressure groups, trade unions,

etc.). The entire construction indicates the accountability of public officials and accountability in both directions, the superiors and citizens, as is characteristic of public management model New Public Management"(NPM) No. 268 of the CRP that is dedicated to the rights and guarantees of citizens.

Summary of the Most Recent Stage of Administrative Reform in Portugal

The Resolution of the Council of Ministers (RCM) No. 53/2004 of 21 April operationalizes the latest stage of Administrative Reform in Portugal, whose lines guidance had been announced, conceptually, the RCM n ° 95/2003 of 30 July. Significantly, the preamble of SPC 2004 begins with a reference to a culture of public service to citizens and businesses and also emphasizes the importance rationalization of resources and motivation of employees:

The development of the country requires a government guided by objectives service to citizens, communities and companies, structured according to models flexible addressed responsibly and providing human resources mobilized and qualified.

Are invoked characteristics of the external environment to justify changes proposals, in particular, to follow the new dynamics developed by tissue economic markets in the face of free competition, which are not compatible with a Administrative and bureaucratic stonewalling, strongly hierarchical, focused on means and facing itself, where entrepreneurship is hampered and decision processes are complex and lengthy. The Administration opens up new scenarios of action, so will have to acquire new skills, become more skilled, more efficient and more productive.

This need emerges drawn by the organizational phase of Reform Public Administration relaunched from

2004/2005, which we recognize as inspired NPM model, based mainly on the introduction of new management practices that integrate a clear definition of objectives, functions and working methods, upcoming models followed in the private sector, electing the management by objectives as the paradigm of change and the adoption of the principles of effectiveness, efficiency and transparency for resource management public to which it is assigned. The organizational level introduces the possibility of services subunits adopt more flexible as well as the reduction of hierarchical levels in order the simplification of decision circuits. This reform is also inseparable from the use of systematic and rational use of new technologies of information and communication, which are a precondition transversal to the whole process. According to premises of this framework public officials should play a essential role since they are the protagonists of change and all agentes Reform process. The employees on the organization's goals and values public service is viewed as a decisive factor for the success of this reform.

In summary, the assumptions that underlie the reform of the PA can be summarized thus:

- Increase the quality and efficiency of public services, making them more timely, agile, simple, appropriate, affordable and accessible;
- Increasing the efficiency of AP, optimizing resource consumption financial, human, technological and infrastructure associated with the provision of services, subject to the levels of quality and effectiveness in;
- Promoting motivation, appreciation and professional development officials, investing in their training and qualification and introducing a new concept of performance evaluation and incentive to merit.

To operationalize these objectives, the process of administrative reform was structured according to seven priorities, as set out in the Council Resolution of Ministers No. 53/2004 of 21 April due to its importance for the environment.

The Dimensions of Accountability and the Involvement of Employees in SIADAP

In the preamble of the Justification of the Proposal that led to Law No. 66 -B/2007 reads as follows:

“The Government intends, with this bill, which gives the Public Administration new steps in developing a culture of evaluation, accountability and involvement of all those who work in the implementation of public policies that citizens improvement of service delivery to citizens and society reward for their work and motivation to future”.

Analysis of the text of the Law No.66-B/2007 can reveal characteristics we aggregated according to the following factors:

- (i) The SIADAP as a tool for effective promotion of a culture of evaluation, accountability and accountability (accountability) of public officials ;
- (ii) SIADAP as a tool to promote employee engagement through the values of communication, information, disclosure transparency and even of impartiality and discretion prevention ;
- (iii) The SIADAP as system of rewards and motivation through the generator enhancement and professional development of civil servants.

The activity arising from the new culture of management by objectives of public administration involves the evaluation of results and performance and

accountability, actions indispensable to a process guided by transparency, accountability and motivation PA officials.

SIADAP as a tool for evaluating the performance is first and itself even an instrument of responsibility and accountability. As mentioned above, by under the Constitution and its own statutes, the principle of accountability is inherent functions of public officials or leaders.

At the conceptual level we distinguish between the notions of accountability and accountability. Mozzicafreddo (2002) makes the match demands for accountability that citizens turn to the Administration, in three dimensions.

An organizational dimension, internal or structural, in which it is to own Administration accountable for the results, not only the use of public resources entrusted to him - financial, human, material - but also of acts, decisions, procedures, job performance, etc... This strand is also called accountability. We distinguish also an institutional dimension and a dimension contract, in which both will reflect the feelings triggered by the Administration in its practices and professional ethics among citizens.

For the author, the concept of responsibility, a sense ethical, democratic and legitimizing transcends the concept of accountability or accountability, this concept being more confined to factos resource efficiency.

The Accountability Factor

In SIADAP, in a more direct appeals to the accountability of officials, that is, the accountability for the results achieved, citizens and the upper hierarchical.

By Act No.66-B/2007 we can identify the three subsystems, elements structuring forces corresponding to the dimensions of accountability and the provision of accounts, leading to the implementation of

an evaluation culture. Say the responsibility and accountability correspond to two stages of the same cycle

Similarly to what happens in SIADAP with setting goals and presentation results.

In a first stage, there has accountability, that is the assumption of a commitment to achieve certain goals and to achieve a particular goal.

This phase is accomplished by QUAR services, the mission statements of the leaders and by Assessment Sheets of middle managers and employees. At the end of cycle management gives to accountability, ie, we present the results, either by annual self-evaluation of services, the summary reports of the directors or through the Data Self-Assessment of employees. The confrontation between the intentions and commitments made at the beginning of the cycle and the results obtained at the end of it, resulting performance evaluation in the three subsystems.

In this evaluation system, the judgment of the evaluators is not the only perspective participant. The law provides mechanisms openness to participation by various actors. in the case self-evaluation of services (SIADAP 1), foreign participation is encouraged in the form of assessment on the part of service users on the quantity and quality of services. The externality in assessing SIADAP 1 is still evidents by setting standards for comparability with the performance of similar services national and international, or benchmarking. In the evaluation of senior managers is the possibility of intervention of middle managers in the specific but optional.

The participation of other agents that do not direct the evaluators, the evaluation of evaluated, reaches its highest expression in the case of middle managers, although this

Also optional is a situation arising from a specific regime. In this case, accountability occurs in different

directions, forming a network effect: the effect bottom up, to superiors towards top down when the mechanism is actuated that allows evaluators to collect elements of subordinates, laterally when contributions collected evaluative pairs. It is also worth mentioning the role of monitoring, mandatory, the process evaluation. Part in it, under parity, evaluators and evaluated, expressing each other regularly their opinions on the evolution of the system or introducing corrections. The Joint Committee is also a figure that can be classified as external participation, already exceeding the duo evaluator / evaluated the expression of opinions during the evaluation process.

The Engagement Factor

It is intended as a tool to evaluate the SIADAP to promote employee engagement through the values of information, disclosure transparency and impartiality and even prevention of discretion.

This integrated evaluation system should encourage the involvement of employees soon from the stage of defining the objectives of QUAR, responsible officers and shall be able to convey the necessary conditions for proper resource policy human and professional development, with particular emphasis on training plans, their implementation and impact on service.

In preparing SIADAP, lawmakers intended to introduce mechanisms to convey to employees on the one hand, the importance of their participation in the process, thus facilitating the generation of feelings of belonging, sharing and motivation. The same so inculcated up the idea of the interest in his personal evolution by providing a step identification of development potential, or diagnosis of training needs workers. On the other hand, was intended to highlight the notion that merit is rewarded through

incentives. It appears that the employee is assigned a role relevant for participation in a number of steps that make up the SIADAP.

Among the possibilities of participation is to enhance the power of initiative emerging from situations such as the possibility to request review meetings and monitoring and the possibility of Excellent Performance proposal.

Similarly, the performance monitoring process allows analysis shared in a number of situations which enhances the possibility of reshaping purposes. This participation can be simple, or negotiating going on in the second fundamental step in the process for the official himself, that is, at the meeting of contracting. However, the nature of this involvement is mitigated by the fact that it is always leaders to the last word in the aforementioned technical negotiations. Let us say that this is a negotiating incomplete or contracting in a virtually unilateral emphasizes the role of discretion in the performance of managers and evaluators. This discretion in the application reaches a wider range of article 46 of Law 12-A/2008 of 27 February. Regarding the possibility of participation simple, this is verified in following situations:

- Participation of the units in the definition of performance indicators the QUAR - cascading effect (Article 12, paragraph 3) ;
- Hearing of middle managers and other workers in the self-assessment service (article 15, 2, f) ;
- Participation of workers and middle managers in defining objectives and results to be achieved by organic units.

The characteristics of transparency of the system are revealed mainly by publication binding of a series of acts, which simultaneously helps to motivation of evaluators and the acceptance of the system.

While the publication is a form of accountability, transparency serves to counter any tendency discretionary.

Finally, it should also be noted that in the Act establishing the SIADAP, are also foreseen complaints mechanisms that are considered under the general principles of safeguarding the rights and guarantees of citizens - workers. This fact does not prejudice one situation of empowerment in order to strengthen their relative position, as they are inherent in a Democratic State.

In addition to the enforcement mechanism SIADAP services and workers leaders or not, it is noted the purpose of performance evaluation, the three subsystems, to assess the importance of them to the recipients.

Finally, the third factor that will not be studied in this work project refers to the behavior of the system while SIADAP and rewards generator through the enhancement of motivation and professional development public officials. It is recalled that the purpose of applying SIADAP may result a system of rewards or incentives or, conversely, that a number of penalties focus in the three subsystems at the following levels:

- Awards performance (cash, vacation days,...)
- Progression in remunerative positions
- Valuation Professional (sabbaticals, internships, training...)

IMPLEMENTATION SIADAP IN HOSPITAL SETTINGS

The hospital is extremely complex, co-exist in cooperation a medical and a hierarchical administrative structure. With the structural changes that have occurred in the health sector, particularly in hospital has become increasingly important to study their implications for management of health professionals, particularly with regard to motivation and leadership.

The high human performance in the hospital context more than reflect the

competence and expertise of its professionals is an expression of organizational culture and climate in the workplace. Although, much remains to better understand the controversies about the institutional logic in the decision-making processes for the implementation of management policies of the human performance in particular to promote and develop the organizational and professional identity.

In terms of human resource management, performance assessment has had a prominent role in that it can have a significant impact on productivity, either directly as a process control performance, and indirectly, through their relationships with the selection training, professional development, promotion and remuneration of the organization.

Performance appraisal is a formal and systematic to appraise the work of the employees of an organization. In general, any system of performance evaluation can be conceptualized as integrating a set of three components: objectives, instruments and procedures. Benchmarking allows you to keep a check on the progress of the activity, constituting a fundamental development of the relationship between the organization and its employees, through the moment of self reflection and critical discussion of results provides between supervisors and subordinates.

When referring to the importance of evaluation and performance management, Caetano (1996) states that " a time when human resources are widely regarded as one of the main factors determining the competitiveness of organizations, professional performance evaluation emerges as one of the most critical management processes must solve. "

McGregor (1957) considers that the main objectives that lead organizations to implement a system of performance evaluation relate to the satisfaction of three needs, one of the two organization and the individual. At the organizational

level, performance appraisal helps administrative decisions related to transfers, to pay, etc. At the individual level, allows the appraised meet the assessment is made about their performance and allows the evaluator to advise the employee in his career.

In this line of research, Jacobs et al. (1980) indicated that performance evaluation allows support decisions of disciplinary action, give feedback, employee development, serve as a criterion for promotion to selection, to training / supervision and diagnosis and organizational development.

According to David Guest, a conference held in Portugal in 2007, the performance evaluation of human potential, undergoes measure individual work, team work, the interaction between the teams, as well as a set of practices of HR management. It is essential that the internal practices are appropriate to the company's external environment.

When we focus on the specific case of the health sector, the system performance assessment aims to detect the factors that influence job performance and collect training needs, while it is used as one of the bases to support the promotion of workers.

The Law n. 66-B/2007 of 28 December, establishing the integrated management and performance evaluation in Public Administration (SIADAP), applying to the performance of public services, their leaders and other workers, implementing an integrated systems management and evaluation, allowing align, consistently, the performance of services and those who work in them.

SIADAP embodies the principles, objectives and rules defined in the Law n. ° 66 - B/2007, however, may be approved alternative systems to SIADAP tailored to the specifics of the administrations concerned. The adaptations to SIADAP are made respecting the provisions of this law on matters of: Principles, objectives

and subsystems SIADAP; performance evaluation based on a comparison between objectives and results; differentiation of performances, respecting the minimum number of mentions evaluation and the value of the maximum percentages set out in the law.

SIADAP articulates with the planning system of each ministry, according to their management cycle, providing a tool for assessing compliance with the multiannual strategic objectives determined superiorly and objectives and annual business plans, based on measurement indicators results to obtain the services.

The evaluation and performance management fit into the process of modernization of the public administration, with the aim of continuous improvement of services. For this continuous improvement is possible you will need to develop a culture of managing for results based on previously established objectives, mobilizing workers around the core mission of service, guiding their activity as a function of clear and transparent evaluation criteria.

The performance evaluation of employees is determined based on the parameters Results and Skills. Results are set annually at least three goals for each employee and for each objective must be established indicator of performance measurement. The objectives to be set, namely:

- ☐ From the production of goods and services or acts ;
- ☐ Quality, innovation-driven, service improvement and satisfaction of user needs ;
- ☐ From efficiency, towards simplification and streamlining of procedures and deadlines for procedural management and reduction of operating costs;
- ☐ De improvement and development of individual skills, techniques and behavioral worker.

Competencies are chosen from those contained in the approved list for the respective professional group in number not less than five for each worker.

It established a Joint Committee (Article 59), working with the top manager of each service, with advisory jurisdiction and evaluate proposals with the aim of evaluation made known to workers evaluated before approval. It is composed of four members: two representing the Directors (being a member of the Coordinating Council of Evaluation), and 2 representatives of workers.

Until now, doctors in the NHS lacked a common performance assessment. In each health institution applied its rules. However with Ordinance 209/2011, of 25 May, this gap was corrected by applying the rules of SIADAP also to physicians, whether they work in the public sector administrative or corporate hospitals. This ordinance defines objectives of the evaluation process of medical workers:

- Contribute to improving the management and performance of the units providing health care;
- To promote the efficiency and effectiveness of services;
- Develop a culture of managing for results based on previously established objectives, while also promoting teamwork;
- Identify training needs and professional development to improve the performance of medical workers;
- Promoting motivation and behavioral skills development and qualifications of medical workers;
- Recognize the merits, ensuring differentiation and optimization of the performance levels.

As with SIADAP for the remaining workers, also the evaluation of physicians annually and is carried out through the following parameters:

- "individual objectives" should be established in line with the objectives of its organic unity, and should cover at least three of the following areas : Healthcare and productivity ; Training, Research, Organization, Attitude and Professional Communication ;
- "Skills Performance", aimed at evaluating the appropriateness of good medical practice and behavior consistent with the duties of the evaluated based on the evaluation criteria and standards of professional performance previously set by the board of assessment coordinator.

The self - assessment is just another similarity with SIADAP for the remaining workers and aims to involve the medical worker in the evaluation process, promoting reflection on your practice, professional development and performance improvement conditions. However, despite the existence of this new decision, not all medical workers, agree with its implementation, showing the main fault, the continued existence of quotas evaluation.

CONCLUSION

In recent decades, the states had the need to adapt their forms of government to the new trends in global competitiveness, attending to the inevitable erasure of the role of social status, or "positive," according to the terminology Majone's (1997), and the proportional increase of the role of the regulatory state.

Inevitably, this trend has been accompanied by the respective Administrations which the public, then organized according to bureaucratic model, embarked reform movements, eventually acquiring special importance to approach the New Public Management

model, characterized by proximity to a logic market.

In this framework, the need for organizational change becomes a requirement for public organizations by requiring them to incorporate and respond to changes in the environment: technological innovations, changes in values and relationships power, legislative changes and changes in labor relations.

Reform movement in the Portuguese Public Administration where emerges SIADAP shws the relevance of the Law No.66-B/2007 where the management by objectives became truly unavoidable, taking as a large matrix of change in

Public Administration. With the SIADAP the need for development of leadership and accountability of leaders reflecting on system assessment, the development of meritocracy at all levels of responsibility, the emphasis on vocational training, adherence to a management culture, emphasizing the principles of quality, transparency and accountability, and accountability.

REFERENCES

- Caetano, A. & Vala, J. (2000). *Gestão de recursos humanos: contextos, processos e técnicas*. Lisboa, Editora RH.
- Cameron, Kim e Robert Quinn (2006), *Diagnosing and Changing Organizational Culture:Based on the Competing Values Framework*, Reading, Addison-Wesley.
- Chevallier, Jacques (1986), *Science Administrative*, Paris, PUF.
- Chevallier, Jacques *et al.* (1983), *La Communication Administration-Administrés*, Paris, PUF.
- Law nº 66-B/2007, de 28 de Dezembro
- Mozzicafreddo, Juan (2002), “A responsabilidade e a cidadania na Administração Pública”, in Juan Mozzicafreddo *et al.* (org.), *Ética e Administração, como Modernizar os Serviços Públicos*, Oeiras, Celta Editora.

THE RELATIONSHIPS AMONG VOLUNTEERISM AND DONATIONS PRACTICES DRIVERS

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ABSTRACT

This paper deals with the question: to what extent do drivers of donations practices contribute to volunteering? Besides, we want to deepen understanding of the relation between volunteerism and key drivers in donations practices and thus better inform charities how to obtain volunteer work and manage fundraising practices. Thus, we argue that there is an interaction between the effects of gender, age, religious affiliation, compassion, altruism, egoism, and religiosity on the level of volunteerism of the donor. A sample of 612 Portuguese donors was selected from among the population of donors of the charities. The key findings show that there is an interaction effect between the voluntarism of a donor and both his level of religiosity and his religious affiliation. With regard to other drivers of donations practices, we found that both altruism and compassion displace a positive on donor's volunteerism.

Keywords: *volunteerism, prosocial behavior, religiosity, donations practices*

INTRODUCTION

Much attention has been paid to questions addressing volunteering as a vital behavior in a society (Fisher and Ackerman 1998; Wilson 2000; Allison, Okun et al. 2002; Briggs, Peterson et al. 2009), as an honorable tradition of community service (Horn 2012). Since early in history, voluntarism has been a powerful force in the educational shifting for the better of humanity, as a major force in the solving of human problems. Overall, different organizations have always depended on volunteering work as a vital resource for the accomplishment of their proposals. Moreover, among other variables of charities interest, how much donors give, what kind of people give, and what are the causes donors want to support, have been highly researched (Webb, Green et al. 2000; Bennett and Sargeant 2003; Ranganathan and Henley 2008).

Charities rely heavily in these sources of income: volunteerism and donations, or time and money. Conversely, recruiting volunteers and obtaining donations are seen nowadays as vital activities for every organization pursuing its mission in a responsible way.

Nowadays, more research has been claiming that time and money go hand in hand (Clain and Zech 1999), they are complementary at charities resources management (Bekkers 2010), being so highly useful for charities considering both altogether. On the whole, different aspects have been considered while studying these two prosocial behaviors: volunteerism and donations practices (Abreu 2012). And these so valuable behaviors from the citizens in general, volunteerism and donations practices, have been under deep scrutiny and thus originating the exploitation of different drivers that can explain these behaviors.

Nevertheless, the study around the impact of different drivers of prosocial behavior on volunteerism can be considered limited. Important questions as the relationship of people's volunteerism and their donations practices combined with their level of religiosity or level of altruism are scarce in academia and, so, this paper attempts to add some contributions to fill this gap.

A deeper understanding of volunteers' life choices, attitudes, interests, prosocial behavior and motivation, are indeed needed for a better and useful knowledge for volunteering purposes and charities survival. And, consequently, this knowledge surplus can increase and leverage the charitable donation of time and turn it a more fair accomplishment with obvious gains to the society at large.

Thereafter this paper presents data and the analysis of one of the most important variable around the lives of people while considering their prosocial behavior at large: volunteering.

Moreover, an analysis of the impact of the donor's volunteerism into their donations' practices is provided, uncovering the relationship between volunteerism in different donors and their donations practices. On this matter different studies have illustrate this relation (Lee and Chang 2007; Pelozo, Hudson et al. 2009) and usefulness for organizations (Abreu 2012). The main research question addresses the impact of different drivers of prosocial behavior on volunteerism. Is it advisable to consider the join impact of different aspects while observing the level of voluntarism? Can we use different characteristics of donor to look for who will be volunteer?

This paper considers the main concepts being researched, claims the gaps and propositions, and then offer the results of a survey, analyses the data, discusses the results and presents some conclusions.

PROSOCIAL BEHAVIOUR AND VOLUNTEERISM

Volunteering is considered a form of prosocial behavior (Wilson 2000), and also acclaimed as a key aspect within prosocial behavior, i.e., an intentional and voluntary behavior valued by the society or a significant segment of it (Eisenberg 1982; Piliavin and Charng 1990; Penner, Dovidio et al. 2005). Prosocial behavior is also considered as a broad sort of activities that benefit other people such as helping, sharing, altruistic behavior and sympathy, cooperation, giving, donating, and being sensitive and responsive, regardless of personal motivation for that behavior (Eisenberg 1982; De Concillis 1993; Penner, Dovidio et al. 2005).

Volunteering can be defined as a behavior involving a prosocial action in an organizational context, which is planned and that continues for an extended period (Penner, Dovidio et al. 2005). Volunteering, giving, philanthropy or humanitarianism, have been applied more or less interchangeably, all terms mirroring the progression of the noble human tradition of helping the less fortunate though the work of organizations.

As a matter of fact, the ones that are worried with social problems are more related with volunteering, tending to be the ones that are engaged in civic

compromise. And it has been quite examined that all sorts of people (Plagnol and Huppert 2010) are contributing their time to assist others in a barely credible variety of ways. Not surprisingly, volunteering has also been recognized as a source of well being to the volunteer himself, and impact in a positive way in serious human behaviors as morbidity and mortality (Poulin 2013).

Different studies have tried to explain the reason why people engage in volunteering activities, and the main motivations can be grouped in individual attributes, and on social influences (Wilson 2000); moreover, demographic attributes as age and gender have been focused and related to both sources of explanation (Luoh and Herzog 2002; Plagnol and Huppert 2010).

Around this huge debate of volunteering motivation, some authors, like Tienen et al. (2010), argue the need to deeper the analysis of the direct or indirect influence that religion has in people's volunteering, especially in the European countries characterised by a strong decline in religious participation. As a matter of fact, the idea of people helping other people also as a religious duty has been historically recognized.

Nowadays, there has been an expansion in number of people volunteering for services in different charities, also volunteering in the so-called third world, especially young people and elderly retired people at a more local level. The discussion is also around if an action can be consider volunteer if it gets some kind of remuneration, and also if volunteering has pre-determined intention, or if volunteering can be solely defined as an output (Wilson 2000).

DRIVERS OF VOLUNTEERING

Various disciplines have been actively engaged with charities in their volunteering activities and an understanding of motivation of volunteering is extremely important (Bales 1996; Withers, Browner et al. 2013). Within volunteering and prosocial behavior literature, the drivers behind this activity have been one of the most debated aspects. One can say that the drivers of a specific behaviour are the set of processes and mechanisms that precede an action. And, moreover, drivers for volunteering are extremely important to be uncover and getting a better understanding of volunteers.

The literature has been overwhelming explaining and classifying the drivers for volunteerism. For instance, Allison et al.(2002) have identified motives as career, esteem, protective, social esteem or understanding. Religious topics have been identified as the most important drivers for volunteering (Cnaan and Boddie 2001; Saroglou, Pichon et al. 2005; Bekkers and Theo 2008; Tienen, Scheepers et al. 2010; Krause and Hayward 2012).

Different constructs have been regarded on this topic as religious affiliation, religiousness, or religiosity. On this regard Tienen et al. (2010) concluded that volunteering can be increased by a so-called informal spirituality, and in its turn the religious practice and church attendance are more related with formal volunteering. On its turn, Einolf (2013) claims that spirituality is significant as a predictor of volunteerism , in spite of the attendance of a particular church.

Demographic variables have been highly debated in volunteering (Plagnol and Huppert 2010). Age (Krause and Hayward 2012; Principia, Chiattia et al. 2012; Knowles, Hyde et al. 2013), for instance, has been under inspection, as volunteerism is often associated with getting older. Gender is another variable under scrutiny but with various outcomes in relation with volunteerism (Wilson 2000).

Within prosocial behavior at large, various terms have been debated as compassion, implying feelings like caring and loving, resulting sometimes in actions like sharing, giving, serving, and supporting (Callahan 1992). Likewise, compassion has been related with benefiting others (Batson, Harris et al. 1979; Shariff and Norenzayan 2007), and so associated with volunteerism.

Altruism (Magat 1989; Andreoni 1990; Clary and Snyder 1995; Hibbert and Horne 1996; Smith 2003; Bruce 2005; Hur 2006), another so-called type of prosocial behavior, has been heavily debated and also correlated with volunteerism (Cooper, Cripps et al. 2013), and also the egoism level of a person can also be tested for explaining the levels of volunteerism (Horn 2012).

GAPS AND CONCEPTUAL MODEL

Consistent with the literature, the gaps identified are: i) the pattern between volunteerism and religion stays complex and controversial; ii) there is the need of a deeper understanding of altruism and egoism motives predicting donations and its relationship with volunteerism; and iii) little is known about how the three types of donors, religious, religious but non-

church goer, and secular, are similar or different with respect to their donation practices, considering their level of volunteerism.

The gaps lead to an inquiry about the influence and interaction of different drivers on volunteerism, being considered as driver's gender and age, religious affiliation, religiosity, compassion, egoism, and altruism.

The literature revealed the importance of volunteerism for charities as it is one of the donations drivers and that are some characteristics of the individuals that are related with volunteerism (Lee and Chang 2007; Abreu 2012). Moreover, literature is not unanimous about the role of religiosity regarding the explanation of volunteerism and, consequently, of donations practices (Batson 1976; Ji, Pendergraft et al. 2006; Reistma, Scheepers et al. 2006).

In this scenario this study aims to explore and test the role of religiosity in the relation between the characteristics of the individuals and their volunteerism level, conduction to the following conceptual model (Figure 1) and seven propositions:

- Proposition 1: There is significant effect of religiosity on the level of volunteerism.
- Proposition 2: There is significant interaction between the effects of gender and religiosity on the level of volunteerism.
- Proposition 3: There is significant interaction between the effects of age and religiosity on the level of volunteerism.

- Proposition 4: There is significant interaction between the effects of religious affiliation and religiosity on the level of volunteerism.
- Proposition 5: There is significant interaction between the effects of compassion and religiosity on the level of volunteerism.
- Proposition 6: There is significant interaction between the effects of egoism and religiosity on the level of volunteerism.
- Proposition 7: There is significant interaction between the effects of altruism and religiosity on the level of volunteerism.

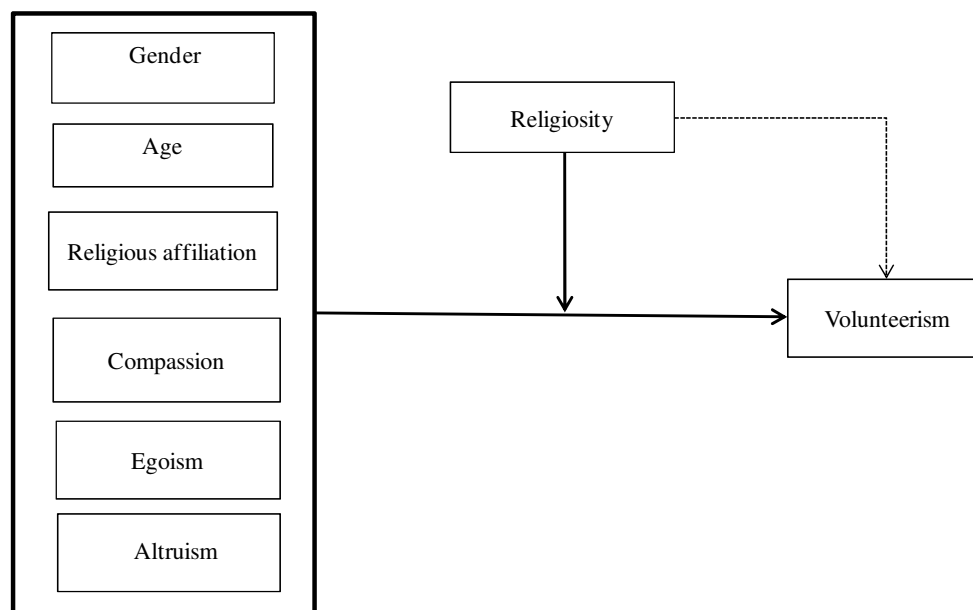


Figure 1. Conceptual Model

METHODOLOGY

For this study, the data were collected through a massive survey to donors of the Portuguese charities. A large scale questionnaire was delivered to the organizations the 3rd of February of 2010, being on-line till the 9th of April. We took this approach in an effort to diversify who would be representative of the average

donor and also to avoid the possible biases of donors direct survey.

Six hundred and twelve donors to Portuguese charities participated in this study, being 66.3% female and aged between 15 and 77 years old (mean 36.8 years with a standard deviation of 11.2 years). Considering the religious affiliation, the sample comprises 51.4% religious, 28.3% non-church goer and 20.3% secular donors. Thus, despite the sample selection was not random, we can

conclude that the diversity of the population characteristics is incorporated in our big sized sample.

To measure volunteerism we used De Concillis (1993) items already validated. We used a 5-point Likert scale with anchors “totally disagree – totally agree” and the unidimensionality of the scale was tested with Principal Components Analyses (PCA) and Cronbach’s Alpha of 0.824 was obtained. The scale score were based on the average of the itens.

The same procedure was followed for religiosity (Reistma 2007), compassion (De Concillis 1993), altruism and egoism (Batson and Shaw 1991) scales. Table 1 presents all the scales Cronbach’s Alpha, suggesting a good level of reliability. For a better interpretation of the results these scales were re-coded in two categories: low level for a value equal or less 3 (center point of the scale) and high level otherwise.

Table 1. Descriptive statistics of the scales used

Scale	Volunteerism	Religiosity	Compassion	Egoism	Altruism
Cronbach’s Alpha	0.824	0.971	0.860	0.837	0.723

The seven propositions will be analyzed with 2-way ANOVA, a statistical procedure to analyze the influence of two categorical independent variables (the drivers of volunteerism) on one continuous level dependent variable (the volunteerism level). This statistical procedure has three assumptions (Laureano 2012): i) the samples must be independent; ii) the populations from which the samples were obtained must be normally or approximately normally distributed; and iii) the variances of the populations must be equal. All of them were verified, except for the analysis of the interaction between compassion and religiosity where the variances are significantly different ($Levene_{(4;608)} = 4.931; p=0.002$). Each proposition from 2 to 7 is corroborated if the differences in the mean level of volunteerism for two levels

of one volunteerism driver are not the same across all levels of the second volunteerism driver. In this case, the interaction between the two drivers is significant.

RESULTS

Tables 1 presents the descriptive statistics for the scales used, namely, volunteerism (as dependent variable), religiosity as moderator factor, and compassion, egoism and altruism as independent variables. Volunteerism (mean 2.49) is lower as a type of prosocial behavior rather than compassion (mean 3.92). Religiosity displaces high values. The mean level of altruism (3.37) is much higher than for egoism (1.73) suggesting altruism as much stronger driver for donation practices.

Table 2. Descriptive statistics of the scales used

Scale	Number	Mean	Standard Deviation	Minimum	Median	Maximum
Volunteerism	612	2.49	0.81	1.00	2.40	5.00
Religiosity	612	3.50	1.28	1.00	3.90	5.00
Compassion	612	3.92	0.74	1.33	4.00	5.00
Egoism	612	1.73	0.51	1.00	1.67	3.89
Altruism	612	3.37	0.92	1.00	3.50	5.00

The perception of religiosity is related with the level of perceived volunteerism, being the mean level of volunteerism higher when the donor has higher religiosity (mean=2.60; standard deviation =0.82) then when has low religiosity (mean=2.24; standard deviation=0.74), and this difference is significant for 0.05 level ($t_{(610)}=5.052$; $p<0.001$). This conclusion is also supported by all 2-way ANOVA tests where religiosity, as main effect, is found significant in all of them.

The results of the different 2-way ANOVA performed are presented in the six profile plot (interaction plot) where the points represent the volunteerism mean values for each combination of two levels of the two drivers plotted (see Figures 2 to 7).

The results allowed to conclude that just the interaction between the drivers religious affiliation and religiosity is significant ($F_{(2;606)}=2.726$; $p=0.066$, $\eta^2=0.009$). In fact, secular donors vary from low to moderate voluntarism level depending on which level of religiosity they have. Seculars with low level of

religiosity have, on average, a volunteerism level of 2.23 (standard deviation=0.72) but if their religiosity is high than the mean level of volunteerism is higher (mean=3.02; standard deviation=0.96).

With previous results we can state that propositions 1 and 4 are corroborated and the remaining five are not. Although, despite just one interaction effect was found, three significant main effects were significant, not including the religiosity main effect as just analyzed:

- a) the effect of religious affiliation ($F_{(2;606)}=3.341$; $p=0.036$, $\eta^2=0.011$) as religious donors have higher perceived volunteerism level (mean=2.64; standard deviation=0.81) than those that are non church goer (mean=2.33; standard deviation=0.79) or secular (mean=2.30; standard deviation=0.78), being the differences between these two groups not significant as showed by the Scheffé post hoc test ($p=0.946$);
- b) the effect of altruism ($F_{(1;608)}=30.492$; $p<0.001$, $\eta^2=0.048$) as donors with high level of altruism have higher

- perceived volunteerism level (mean = 2.63; standard deviation = 0.81) than those that have low level of altruism (mean=2.33; standard deviation = 0.75);
- c) compassion effect (assumptions of the test are not verified) as donors with

high level of compassion have higher perceived volunteerism level (mean=2.59; standard deviation=0.81) than those that have low level of compassion (mean=1.91; standard deviation=0.58).

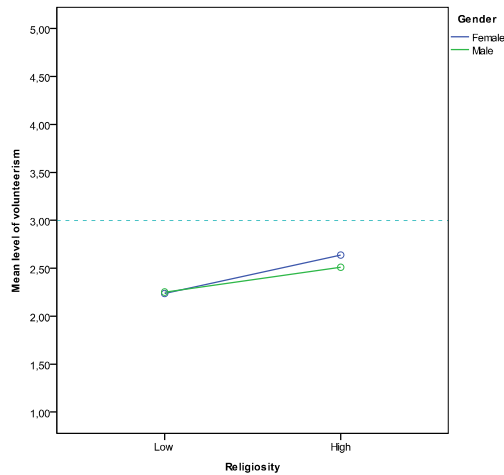


Figure 2. Perceptions of volunteerism under two levels of religiosity and gender

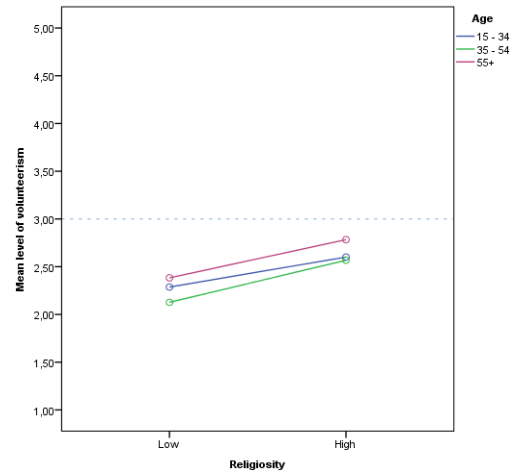


Figure 3. Perceptions of volunteerism under two levels of religiosity and age

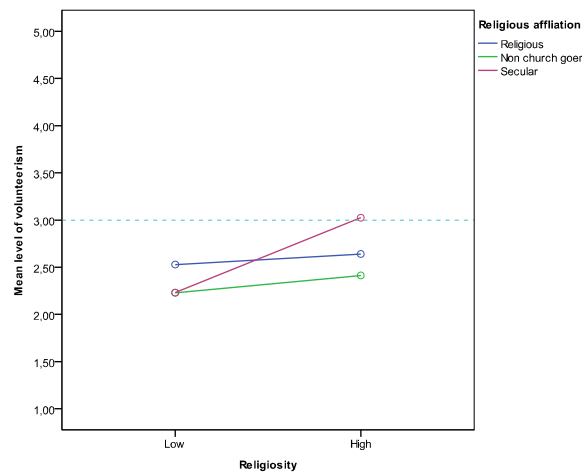


Figure 4. Perceptions of volunteerism under two levels of religiosity and three levels of religious affiliation

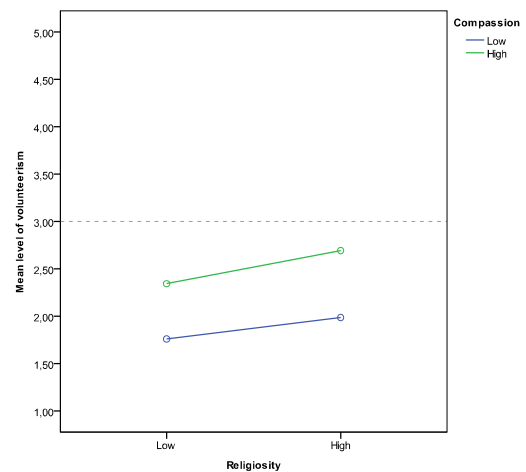


Figure 5. Perceptions of volunteerism under two levels of religiosity and two levels of perceived compassion

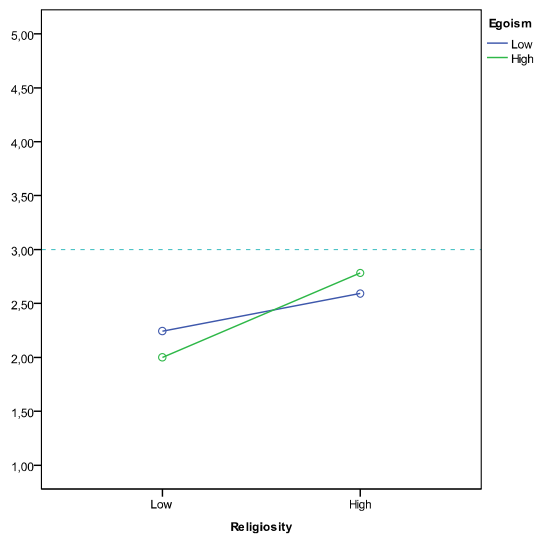


Figure 6. Perceptions of volunteerism under two levels of religiosity and two levels of perceived egoism

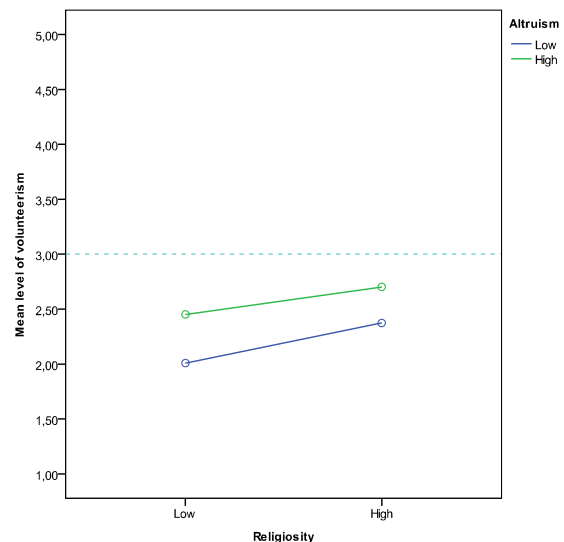


Figure 7. Perceptions of volunteerism under two levels of religiosity and two levels of perceived altruism

DISCUSSION

The values for volunteerism (see Table 2) are low, being the exception the value for the secular donors, when their religiosity is also high. In contrast, the values for compassion, the other type of prosocial behavior, are much higher. This probably occurs because volunteering costs time for the donor, it is not a remunerated task (Wilson 2000), and so a more difficult type of prosocial behavior to administered by a charity.

Religiosity, both by its main effect, and while combined with the religious affiliation (interaction effect), does have a positive relation with the level of volunteerism of the donors. This is also in line with other studies, even if in this paper we have only applied volunteering as a

general construct: Tienen et al. (2010) found that spirituality positively impact on informal volunteering, and the religious attendance impacting on related formal volunteering.

The demographic characteristics at stake, gender and age, are not associated with voluntarism, and the interaction effect of religiosity is not found, and thus propositions 2 and 3 are not corroborated. As a matter of fact, different outcomes have been found for the relation between gender and voluntarism ; on the other hand, getting older has been highly appraised as a condition for volunteerism (Plagnol and Huppert 2010; Krause and Hayward 2012; Principia, Chiattia et al. 2012; Knowles, Hyde et al. 2013). This study show that there is a slightly tendency

for older displacing higher values of volunteerism, but this difference is not significant.

Compassion displays a direct effect on volunteerism, a result also found in previous studies (e.g. Batson, Harris et al. 1979; Shariff and Norenzayan 2007).

Egoism is not related with the level of voluntarism, and, this relation has been discussed in other studies where egoistic values are shown as competing with prosocial values and behavior (Horn 2012). On its turn, the literature suggests that altruism can indeed make a difference in volunteerism (Batson and Shaw 1991) and also this study revealed that altruism does have a positive effect, on the other way around, the interaction effect of altruism and religiosity was not found.

CONCLUSION

The aim of this study was to analyse and to have a deeper understanding of the relation between different drivers of volunteerism, often uncovered by the literature. In addition, there was the purpose to analyze the influence of religiosity on volunteerism.

The present analysis is the use of seven different types of drivers of volunteerism: age, gender, altruism, egoism, compassion, religious affiliation, and religiosity. As far as one can tell, papers applying these particular different drivers and mixing demographic traces, attitudinal intentions, and religious variables, have not been developed so far.

Based upon a big scale of donor, this study indicates that religiosity, altruism, and compassion, can enhance the

volunteerism level of the donor. Besides, religiosity positively influences the volunteerism of a donor, and also in conjunction with the religious affiliation of the donor.

In addition, charities can look upon the joint impact of religious affiliation and religiosity: higher level of religiosity for the ones who are not religious can increase their level of volunteerism.

Like most studies, the present study suffers from limitations. First of all, the sample was not random but rather purposive because the lack of national data bases with donors in Portugal. Also, the sample was the Portuguese donors, and there could be different results in response to question of religion or volunteering in different countries in Europe; and moreover people that are volunteers and not donors have been inquired. Besides, future research should take further into consideration and use further scales of measurement. The large scale was of Portuguese donors,

In spite of the evidences found, the most striking difference with the literature is no indication of age as an important demographic characteristic in volunteerism. Perhaps this result is due to the contextual cultural differences from Portugal and other European countries and the United States, where older people are the higher volunteer group, a situation not found in European southern countries (Plagnol and Huppert 2010). And so this question can be explored in future research.

Another opportunity for forthcoming research is to obtain a deeper understanding of the intricate relation between different sorts of volunteering

(like formal and informal), religiosity and religious affiliation.

REFERENCES

- Abreu, M. E. d. (2012). Drivers of Donations Practices: Altruism and Religiosity Revisited. Business School. Lisbon, ISCTE – IUL (Superior Institute of the Sciences for Labor and Enterprises –Lisbon University Institute). PhD.
- Allison, L. D., M. A. Okun, et al. (2002). "Assessing Volunteer Motives: A Comparison of an Open-ended Probe and Likert Rating Scale." Journal of Community & Applied Social Psychology 12(2): 243–255.
- Andreoni, J. (1990). "Impure Altruism and Donations to Public-goods - A Theory of Warm-glow Giving." Economic Journal 100(401): 464-477.
- Bales, K. (1996). "Measuring the Propensity to Volunteer." Social Policy & Administration 30(3).
- Batson, C. D. (1976). "Religion as Prosocial: Agent or Double Agent?" Journal for the Scientific Study of Religion 1(15): 29-45.
- Batson, C. D., A. C. Harris, et al. (1979). "Compassion and compliance - alternative dispositional attributions for ones helping behavior " Social Psychology 42(4): 405-409.
- Batson, C. D. and L. L. Shaw (1991). "Evidence for Altruism: Toward a Pluralism Of Prosocial Motivation." Psychological Inquiry 2(2): 107-122.
- Bekkers, R. (2010). "Who gives what and when? A scenario study of intentions to give time and money." Social Science Research 39(3): 369-381.
- Bekkers, R. and S. Theo (2008). "And who is your neighbor? Explaining denominational differences in charitable giving and volunteering in the Netherlands." Review of Religious Research 1(50): 74-96.
- Bennett, R. and A. Sargeant (2003). "The nonprofit marketing landscape: guest editors' introduction to a special section." Journal of Business Research 58(6): 797-805.
- Briggs, E., M. Peterson, et al. (2009). "Toward a Better Understanding of Volunteering for Nonprofit Organizations: Explaining Volunteers' Pro-Social Attitudes." Journal of Macromarketing 30(1): 61-76.
- Bruce, I. (2005). Charity Marketing - Meeting Need Through Customer Focus. London, ICSA Publishing Limited.
- Callahan, K. L. (1992). Giving and Stewardship In an Effective Church. San Francisco, Jossey-Bass.
- Clain, S. H. and C. E. Zech (1999). " A household Production analysis of religious and charitable activity." American Journal of economics and sociology: 923-946.
- Clary, E. G. and M. Snyder (1995). Motivation for volunteering and giving: a functional approach. How heritage, gender, wealth, and values influence philanthropy. C. H. Hamilton and W. F. Ilchman. California, Jossey-Bass Publishers. Cultures of Giving II: 111-123.
- Cnaan, R. A. and S. C. Boddie (2001). "Philadelphia census of congregations and their involvement in social service

- delivery." Social Service Review 75(4): 559-580.
- Cooper, S. B., J. H. Cripps, et al. (2013). "Service-Learning in Deaf Studies: Impact on the Development of Altruistic Behaviors and Social Justice Concern." American Annals of the Deaf 157(5): 413-427
- De Concillis, A. (1993). Individual Differences Correlate of Prosocial Behavior: A Comparison of Three Models. Baltimore. MD., Loyola College.
- Einolf, C. J. (2013). "Daily Spiritual Experiences and Prosocial Behavior." Social Indicators Research(110): 71-87.
- Eisenberg, N., Ed. (1982). The development of prosocial behavior. Development Psychology Series. New York, Academic Press.
- Fisher, R. J. and D. Ackerman (1998). "The Effects of Recognition and Group Need on Volunteerism: A Social Norm Perspective." JOURNAL OF CONSUMER RESEARCH 25: 262-275.
- Hibbert, S. and S. Horne (1996). "Giving to charity: questioning the donor decision process." Journal of Consumer Marketing 13(2): 1-13.
- Horn, A. S. (2012). "The Cultivation of a Prosocial Value Orientation Through Community Service: An Examination of Organizational Context, Social Facilitation, and Duration." Journal of Youth and Adolescence 41(7): 948-968.
- Hur, M. H. (2006). "Exploring the Motivation Factors of Charitable Giving and their Value Structure: A Case Study of Seoul, Korea." Social Behavior and Personality 34(6): 661-680.
- Ji, C.-H. C., L. Pendergraft, et al. (2006). "Religiosity, Altruism, and Altruistic Hypocrisy: Evidence from Protestant Adolescents." Review of Religious Research 48(2): 156-178.
- Knowles, S. R., M. K. Hyde, et al. (2013). "Predictors of Young People's Charitable Intentions to Donate Money: An Extended Theory of Planned Behavior Perspective." JOURNAL OF APPLIED SOCIAL PSYCHOLOGY 42(9): 2096-2110.
- Krause, N. and R. D. Hayward (2012). "Volunteer Work in the Church Among Older Mexican Americans." Cultural Diversity and Ethnic Minority Psychology 18(3): 277-284.
- Laureano, R. M. S. (2012). Testes de hipóteses com o SPSS: o meu manual de consulta rápida. Lisboa, Edições Sílabo.
- Lee, Y.-K. and C.-T. Chang (2007). "Who Gives what to charity? Characteristics affecting donation behavior." Social Behavior and Personality 35(9): 1173-1180.
- Luoh, M.-C. and A. R. Herzog (2002). "Individual consequences of volunteer and paid work in old age: Health and mortality." Journal of Health and Social Behavior 43(4): 490-509.
- Magat, R. (1989). Philanthropic Giving. New York, Oxford University Press.
- Peloza, J., S. Hudson, et al. (2009). "The Marketing of Employee Volunteerism." Journal of Business Ethics 85(2): 371-386.
- Penner, L. A., J. F. Dovidio, et al. (2005). "Prosocial Behaviour: Multilevel

- Perspectives." Annual Review of Psychology(56): 365-392.
- Piliavin, J. A. and H.-W. Charng (1990). "Altruism: A review of recent theory and research." Annual Review of Sociology(16): 27-65.
- Plagnol, A. C. and F. A. Huppert (2010). "Happy to Help? Exploring the Factors Associated with Variations in Rates of Volunteering Across Europe." Soc Indic Res(97): 157–176.
- Poulin, M. J. (2013) Volunteering Predicts Health Among Those Who Value Others: Two National Studies. Health Psychology DOI: 10.1037/a0031620
- Principia, A., C. Chiattia, et al. (2012). "The Engagement of Older People in Civil Society Organizations." Educational Gerontology 32(2): 83-106.
- Ranganathan, S. K. and W. H. Henley (2008). "Determinants of charitable donation intentions: a structural equation model." International Journal of Nonprofit and Voluntary Sector Marketing 13(1): 1-11.
- Reistma, J. (2007). Religiosity and Solidarity - dimensions and relationships disentangled and tested. Published doctoral dissertation. Nijmegen, The Netherlands, Radboud Universiteit.
- Reistma, J., P. Scheepers, et al. (2006). "Dimensions of individual religiosity and charity: Cross-national effect differences in European countries?" Review of Religious Research 47(4): 347-362.
- Saroglou, V., I. Pichon, et al. (2005). "Prosocial behavior and religion: new evidence based on projective measures and peer ratings." Journal for the Scientific Study of Religion 44(3): 323-348.
- Shariff, A. F. and A. Norenzayan (2007). "God is watching you." Psychological Science 18(9): 803-809.
- Smith, D. H. (2003). "Paved with good intentions." New Directions for Philanthropic Fundraising(42): 109-116.
- Tienen, M., P. Scheepers, et al. (2010). "The Role of Religiosity for Formal and Informal Volunteering in the Netherlands." VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations 22(3): 365-389.
- Webb, D. J., C. L. Green, et al. (2000). "Development and validation of scales to measure attitudes influencing monetary donations to charitable organizations." Journal of the academy of marketing science 28(2): 299-309.
- Wilson, J. (2000). "Volunteering." Annual Journal Soc.(26): 215–240.
- Withers, M., C. H. Browner, et al. (2013). "Promoting Volunteerism in Global Health: Lessons from a Medical Mission in Northern Mexico." Journal of Community Health 38(2): 374-384.

TO WHAT EXTENT DOES THE DEGREE OF BRAND PERSONALITY FIT

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ABSTRACT

This paper focuses attention on a poorly debated area in charity branding: the fit between donor's personality and brand personality. It draws on the current literature in the areas of branding, brand personality in organisations and in individuals, and the 'fit' between brand personality in a charity and its' donors. Based upon this, a model for further testing is proposed and hypotheses drawn. This paper therefore offers an important development in the field of maximising charity donations through branding and has implications for academia and charity marketing practitioners.

Key Words: Brand personality, charity, donors, brand fit

INTRODUCTION

Branding is a broadly debated domain in the for profit world, and recently this subject has gained increasing attention in the non-profit sector marketing literature (Hankinson, 2000).

In practice, non-profit organisations, in particular charities, can possess strong brands in a similar way to commercial organisations but it may be argued that many charitable organizations do not consciously control this valuable asset (Voeth and Herbst, 2008). In particular they may fail to explore the specific characteristics of their brand (the brand personality) as key determinants of why stakeholders choose their organisation.

Moreover, recent theory has underlined how crucial is for charities to consider the personality traits of actual and potential donors, e.g., their brand values or brands personalities (Mort *et al.*, 2007). Indeed, the donor's traits must be reflected in the charity brand personality in order to get higher donations.

The aim of this paper is to address to what extent is there a direct relationship between donors personality traits and the charity brand personality, and if it is possible to measure this relationship, i.e., if there is a direct relationship and how can we measure it? The intention is to find out

if an understanding of donor's personality and the matching with 'charity personality' can leverage higher donations in a crowded market. Hence, the assessment of the charity brand personality is a central goal for fundraising purposes.

This paper addresses thus the following areas: branding, brand personality, brand personality in individuals, the relationship between brand personality in organisations and in individuals, charity branding, benefits of a good fit, and propensity to give. The research method consists of a literature review on the topic.

BRANDING

Brands are complex offerings that are conceived by organisations but ultimately reside in consumers' minds (De Chernatony, 2010) and it may therefore be argued that 'brand' is a somewhat subjective term. Brands as a concept are subject to interpretation and "in reality, no one is talking about precisely the same thing" (Kapferer, 2001, p. 3).

Many writers such as de Chernatony and Mc William (1990), Pringle and Thompson (1999) and Caldwell and Freire (2004) suggest brand definitions based on 'emotional' and 'rational' factors and indeed most definitions have a degree

of resonance with this approach. De Chernatony and Riley (1998, p. 427) seem to summarise this in succinct terms when they suggest that a brand is “a multidimensional construct whereby managers augment products or services with values and this facilitates the process by which consumers confidently recognise and appreciate these values”.

There is an acceptance that organisations need to develop strong brands as part of their strategy (Kay, 2006; Keller, 2001) and an organisation’s success depends heavily on its brand’s success.

But while an organization brand was recognised as important by the marketing literature, the branding literature undervalued the importance of charity branding overall. Ten years ago little scholarly research had been devoted to branding in the non-profit sector (Hankinson, 2001): how brand is defined, how realistically it represents the charity and how it should be communicated has been overlooked or even ignored in literature (Hankinson, 2000; Mort *et al.*, 2007).

Nevertheless, more recently interest in this field as part of marketing has grown rapidly (Bennett *et al.*, 2010). In fact, recent studies in marketing show that branding is critical to charities referring to it as the most important competitive advantage for these organisations (Laidler-Kylander and Simonin, 2009). Overall, charity branding is a crucial aspect for organisations in a turbulent environment.

As a matter of fact, the growing challenges charities are facing nowadays has contributed to the increased attention by academia. Different challenges these organisations are facing can be reported in the rising number of charities and the complexity in managing the different sources of revenue. At present time, there is a growing competition between charities for support and funding, and a conflict

between for-profit and non-profit for government subsidies.

BRAND PERSONALITY

It is well known that brand image has an important role for consumers decision making (Keller, 2001); consumers do have a brand image associated with the product and the organization that encapsulates the impression in consumers’ minds of that brand. Moreover brand image has for some time been associated with the metaphor of brand as a person (Lau and Phau, 2007; Voeth and Herbst, 2008), and accordingly that brands are endowed with humanistic personality traits that are collectively termed ‘brand personality’, as consumers interpret the meaning of marketing activity behind a brand and project values onto the brand (De Chernatony *et al.*, 2011).

Although it has been argued that some current scales of brand personality do not in fact measure brand personality, but merge a number of dimensions of brand identity (of which brand personality is one) (Azoulay and Kapferer, 2003), there is a significant body of opinion that the work on brand personality scales has been empirically tested to the point where it is now a solid theoretical base for exploration of the concept (Lau and Phau, 2007; VenableM. *et al.*, 2005; Voeth and Herbst, 2008). In particular Aaker’s (1997) paper is widely utilised and much recent work examining brand personality is based upon her scale (VenableM. *et al.*, 2005; Voeth and Herbst, 2008). Indeed, Aaker (1997) categorised brand personality into five dimensions (sincerity, excitement, competence, sophistication and ruggedness) and since then specific scales of brand personality have become widespread in academic circles (Azoulay and Kapferer, 2003).

However, although Aaker’s scale may be considered reliable, it has limitations in the context of non-profit organisations,

particular in terms of non-profit specific traits (such as trustworthiness or idealism) that are lacking (Voeth and Herbst, 2008) and that donors seek social benefits when supporting a charity. Both Venable, Rose and Gilbert's (2005) and Voeth and Herbst's (2008) brand personality scales for the non-profit sector are therefore important context specific evolutions.

Building on the work of Aaker (1997) categorising brand personality into five dimensions, Venable et al. (2005) identified four dimensions for a charity brand personality: integrity, ruggedness, sophistication, and nurturance. Indeed, it is valuable for a charity to be identified in these four dimensions and, additionally, to establish a link of these traits with donors personality.

Hankinson (2000) defines the brand personality for a non-profit organisation, as a concept that encompasses the cause of the institution (which is intended and to whom) and the values associated with their mission (as distinct from the others with the same mission). Thus we can say that the personality of the brand is the brand image built by the organisation and defines how the organisation wants to be recognised and differentiated from all others, helping to build the way you want to position the sub sector where operates.

Mort et al. (2007) also recognise the importance of a charity brand personality discussing the importance of values in this realm. They stress that a charity, being a service, has to stress intangible assets such as personality, and these intangibles or symbolic aspects of the charity need to be tied to the charity stakeholders. This is because they are a source of emotional ties the organisation can use in its branding management. Mort et al. (2007) highlight the importance of values for a charity and their unique characteristics as non-negotiable traits ingrained in the charity personality. This last aspect is promising as a strategic source of knowledge because charities tend to have brands with a strong

heritage (Mort *et al.*, 2007) and this set of values turn to be a rich arena for the identification of the charity brand personality.

However, specifics of brand personality in the non-profit sector are still not wholly understood (Voeth and Herbst, 2008) and in particular their relationship to the personality of charity donors and their giving behaviours is under researched.

THE RELATIONSHIP BETWEEN BRAND PERSONALITY IN ORGANISATIONS AND IN INDIVIDUALS

The underlying concept that consumers choose brands that are a reflection of their own personality traits is generally embraced by theory and practice (De Chernatony *et al.*, 2011) and it is argued that brand personality assumes great importance for many products and services as it unifies elements of the brand in an overall proposition that is difficult for competitors to copy and therefore offers a real point of distinction (De Chernatony, 2010) and enhances customer preference (Aaker *et al.*, 2004).

Moreover a discussion of brand personality inevitably leads into the discipline of psychology research and the relationship between the personality of the organisation and the degree to which that resonates with the personality of their target consumers. This last proposition has clear applicability to the not for profit sector.

Personality has been extensively researched and five individual personality traits commonly identified to the point where they have become empirical generalisations (Matzler *et al.*, 2011); these 'big five' personality traits are neuroticism, extraversion, agreeableness, openness and conscientiousness and these traits have been embraced by marketing

academics to study a number of behavioural variables.

Self-congruence theory in particular relates to the linking of the individual consumer and the brand, as certain brands help consumers define and sustain a sense of their own personality, and, consequently, become emotionally relevant for their owners (Matzler *et al.*, 2011). Self-congruence is defined as fit between the consumers' self and the brand personality (Malar *et al.*, 2011), and is important as when a brand personality fits well with a consumer's self-concept, providing them with a sense of ease and is often a good predictor of consumer behaviours such as brand loyalty (Alex and Joseph, 2012). Indeed previous research suggests that brand personality is strongly positively associated with customer self concept (Hou and Tian, 2009).

What is essentially under consideration is consumers' interpretation of human traits of a brand and how well these fit with their self-concept, and self concept of consumers is argued to significantly influence brand selection (Hou and Tian, 2009). There are, however, two types of self-concept; the real self and the ideal self (Alex and Joseph, 2012) and the extent to which each of these should be targeted by marketers is an important consideration (Malar *et al.*, 2011).

The nature of the brand itself is also a determinant of the degree of self-congruence and ensuring brand attachment; more specifically, self-congruence is argued to be more important for hedonistic/ symbolic brands (aesthetic, experiential and enjoyment related benefits) than for utilitarian brands (functional and practical benefits) in creating emotional brand attachment.

There are therefore a number of interesting variables at play in consideration of brand personality, individual personality and the degree to which self-congruence between the two is

important in building brand preference and ultimately brand loyalty for organisations. There has been a reasonable amount of research that explores this although empirical rules and models are not necessarily universal or proven.

However, the vast majority of existing work applies to the commercial for-profit context, and often product brand marketing in particular. Given the extent to which the non-profit sector has embraced the principles and practice of marketing (Bennett *et al.*, 2010; SargeantFord *et al.*, 2008) and more particularly that modern charities have often developed sophisticated brands intended to maximise strategic goals (such as donations) among their stakeholders, exploration of the relationship between a charity's brand personality and the personality traits of individual stakeholders (donors in particular) and the effect upon donation levels is timely and valuable. In particular the self-congruence between charity donors and the brands to which they give is a critical relationship. This also suggests that variables such as charity type (loosely comparable to symbolic or utilitarian brands) and the extent to which actual or ideal self are determinants of donation levels are possible influences.

BENEFITS OF A GOOD 'FIT' IN ABOVE

Few authors have discussed the factors or variables that can boost brand value in third sector organisations (Ewing and Napoli, 2005; Laidler-Kylander and Simonin, 2009). Consequently, there seems to be a void in the academic literature regarding this issue.

Nevertheless, branding is a vital matter in the not-for-profit world and certainly the development of branding, as a strategic issue (VenableRose *et al.*, 2005), can be applied in the non-profit world (Mort *et al.*, 2007). There is a consensus that the

for-profit tools of marketing can also often be judiciously applied in the context of the non-profit world (Keller, 2011).

Furthermore, the logic that a brand personality that is favourable /unique to the consumer legitimises the brand as a partner and results in more positive reciprocal exchanges applies to the non-profit sector as reliable partnerships are desirable from both sides of the charity-donor relationship (Hou and Tian, 2009).

Also Sargeant et al. (2008) advocated the importance of creating a strong brand for a charity, assuming it to be a key aspect for all the organisation audiences.

For the internal audience (Laidler-Kylander and Simonin, 2009), literature suggests that a brand creates a greater unity of the staff for the cause, encouraging organisational change and contributing to the professionalism of the sector (Hankinson, 2000); on the other hand, for external audiences there is a link between the donations by the public and the image of this organisation, and consequently contributions are higher as the image is more positive (Ewing and Napoli, 2005).

Despite the limited literature on this specific topic for the not for profit sector, key findings indicate that there is potential impact. For instance, Hankinson (2001) suggests that creating a strong brand identity can leverage the donations. The fit between donor's trait and the charity brand personality is also a valuable source for volunteer engagement and support, and it has been extensively acknowledge that volunteers are important for the level of donations (Abreu and Laureano, 2012).

The main focus of this paper therefore lies in the practice of improving donations. In fact, it has been extensively recognised by the literature that donation is one of the most widely researched topics in the funding of charities (Armstrong, 2002; Bekkers, 2010; Bennett and Sargeant, 2003; Gittell and Tebaldi, 2006; Hibbert and Horne, 1996; Webb et al., 2000).

Extant literature recognises that one of the main sources of funding for charities is private donations (apart from government and business support). In addition, as stated, there are serious and growing challenges in the funding of charities.

The reasons why individuals are willing to donate to particular nonprofits have been empirically examined from perspectives such as sociology, psychology, anthropology and economics (Hou and Tian, 2009), and more recently the marketing perspective has been increasingly investigated (Sargeant, 2009), but only limited work has explored the propensity to donate and its relationship with the brand personality of the organisation (Sargeant, Ford and Hudson, 2008). When aspects of the personality of the donor are considered as mediating variables (e.g. self congruence, personality traits) a particular set of variables and ensuing conceptual model worthy of academic and practitioner attention becomes apparent in the quest to maximise donation levels. The work of Hou et al (2009) has similarities to this concept but looks at brand equity more widely in the Chinese market, rather than fit between brand personality and donor personality in the European context.

In conclusion, this fit is indeed a way for charities to obtain competitive advantages and achieving their mission and goals. Most of all, the aim is to raise donations and donor faithfulness.

Bearing in mind the aim of this paper (the fit between donor's personality and brand personality.) and the literature review, a conceptual model is proposed.

This conceptual model displays the brand personality of the charity (in its two types: symbolic or utilitarian) as a determinant of donation levels, i.e. highlighting a causal relationship; it also establishes the possibility of another dimension (self congruence between individual donor personality and charity

brand) as affecting this relationship as a mediator.

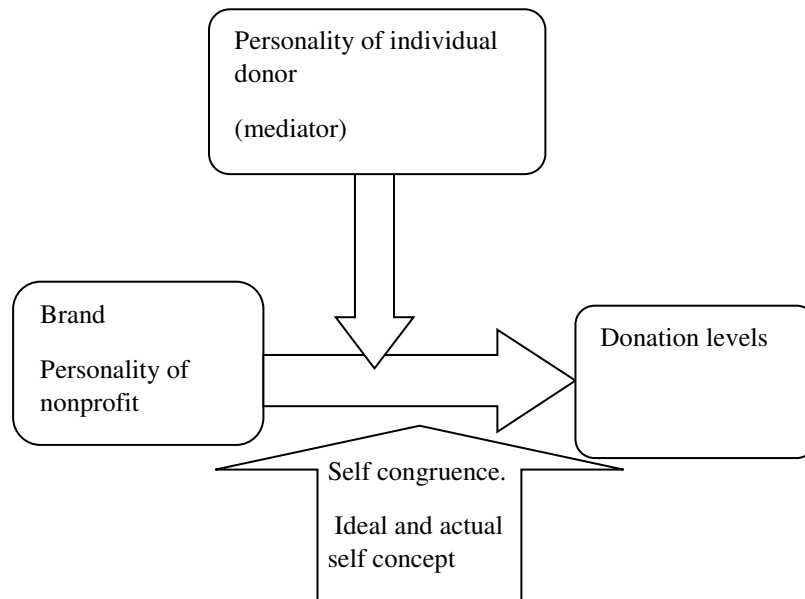


Figure 1. Brand personality as a determinant of donation with proposed mediators

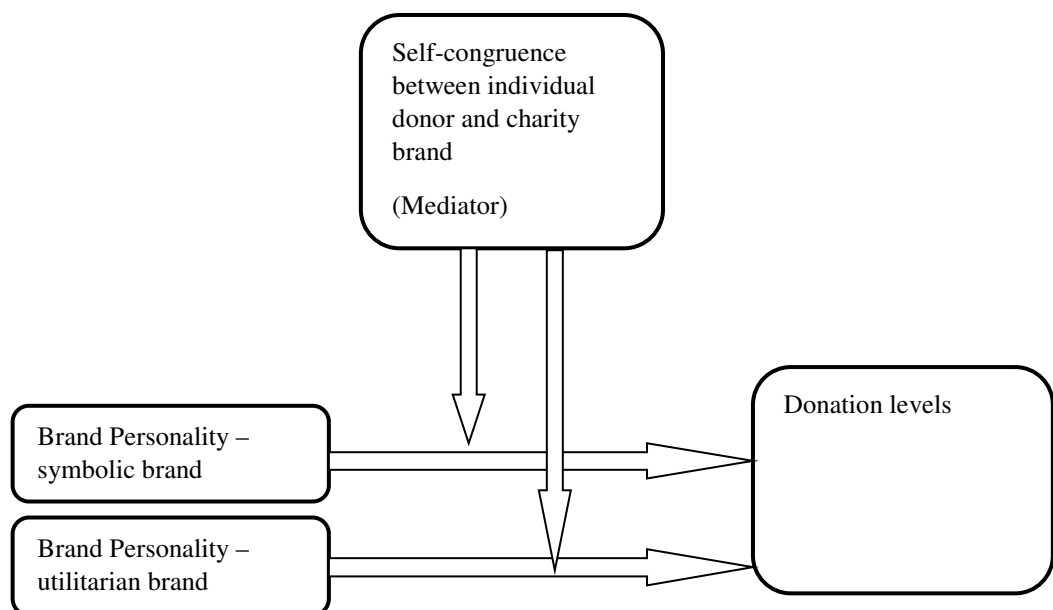


Figure 2. The two elements of brand personality and their relationship to donation levels and self-congruence in donors.

The following hypotheses particularly relate to Figure 2 and attempt to take these relationships into consideration.

Hypothesis 1: A charity identified as a symbolic brand influences positively donation levels.

Hypothesis 2: A charity identified as a utilitarian brand influences positively donation levels.

Hypothesis 3: A charity identified as a symbolic brand influences more donation levels than a charity identified as a utilitarian brand.

Hypothesis 4: Self-congruence between charity donors and the brands moderates the relationship between a symbolic brand and donation levels.

Hypothesis 5: Self-congruence between charity donors and the brands moderates the relationship between a utilitarian brand and donation levels.

CONCLUSIONS

Measuring brand personality and donors personality fit, as far as the authors know, has not being developed so far, and it seems important to have measures and processes to allow charities to analyse their fit with donor's personality. Moreover, the charity should be able to identify the specific branding issues relevant for fit as ultimately, this fit will contribute to levels of donations.

Therefore, in summary, we propose a brand model of the relationship between brand personality and donation levels, with a key mediator (Figure 2.) and also hypothesise that symbolic brands are better suited to maximising brand fit between donors and charity brand personality and therefore maximising donation levels. This work so far is based on the extant literature but clearly the next stage is to actually test this with representative samples.

We therefore offer this paper as a first stage in modelling the value of brand personality between charities and their donors.

REFERENCES

- Aaker, J., Fournier, S., and Brasel, S.A. (2004), When good brands do bad, *Journal of Consumer Research*(31), 1-16.
- Aaker, J.L. (1997), Dimensions of Brand Personality, *Journal of Marketing Research* 34(3), 347-356.
- Abreu, Madalena, and Laureano, Raul (2012), *USING CLASSIFICATION TREES TO PREDICT DONATION PRACTICES*, Paper presented at the Global Management Conference,
- Alex, N. J., and Joseph, A. (2012), Hedonic versus utilitarian values: the relative importance of real and ideal self to brand personality and its influence on emotional brand attachment, *XIMB Journal of Management*(September), 77-90.
- Armstrong, H.H. (2002). Commerce and Altruism in British Charities. Retrieved from <http://www.theses.com/idx/scripts/it.asp?xml=F:\index\idx\docs\all\55\it00493233.htm&subfolder=/search>
- Azoulay, A., and Kapferer, J.N. (2003), Do brand personality scales really measure brand personality?, *The Journal of Brand Management* 11(2), 143-155.
- Bekkers, René (2010), Who gives what and when? A scenario study of intentions to give time and money, *Social Science Research* 39(3), 369-381.
- Bennett, R., and Sargeant, A. (2003), The nonprofit marketing landscape: guest editors' introduction to a special section, *Journal of Business Research* 58(6), 797-805.

- Bennett, Roger, Kerrigan, F., and O'Reilly, D. (2010), Editorial, *Journal of Marketing Management* (26), 589-592.
- Caldwell, N., and Freire, J.R. (2004), The differences between branding a country, a region and a city: Applying the Brand Box Model, *Journal of Brand Management* TBC.
- De Chernatony, L. (2010), *From Brand Vision to Brand Evaluation*, Oxford, UK: Elsevier.
- De Chernatony, L., McDonald, M., and Wallace, E. (2011), *Creating Powerful Brands*, Oxford, UK: Routledge.
- De Chernatony, L., and McWilliam, G. (1990), Appreciating brands as assets through a two -dimensional model, *Journal of Marketing Management* 9(173-188).
- De Chernatony, L., and Riley, F.D.O. (1998), Defining A "Brand": Beyond The Literature With Experts' Interpretations, *Journal of Marketing Management*(14), 417-443.
- Ewing, Michael T., and Napoli, Julie (2005), Developing and validating a multidimensional nonprofit brand orientation scale *Journal of Business Research* 58(6), 841-853.
- Gittel, Ross, and Tebaldi, Edinaldo (2006), Charitable Giving: Factors Influencing Giving in U.S. States, *Nonprofit and Voluntary Sector Quarterly* 35(4), 721-736.
- Hankinson, Philippa (2000), Brand orientation in charity organisations: qualitative research into key charity sector, *International Journal of Nonprofit and Voluntary Sector Marketing* 5(3), 207-219.
- Hankinson, Philippa (2001), Brand orientation in the charity sector: A framework for discussion and research, *International Journal of Nonprofit and Voluntary Sector Marketing*(6), 231-242.
- Hibbert, Sally, and Horne, Suzanne (1996), Giving to charity: questioning the donor decision process, *Journal of Consumer Marketing* 13(2), 1-13.
- Hou, J., Du, L., and Tian, Z. (2009), The effects of nonprofit brand equity on individual giving intention: mediating by the self- concept of the individual donor, *International Journal of Nonprofit and Voluntary Sector Marketing*(14), 215-229.
- Kapferer, J. N. (2001), *Inventing the Brand*, London: Kogan Page.
- Kay, M., J. (2006), Strong brands and corporate brands, *European Journal of Marketing*(40), 742-760.
- Keller, Gary F. (2011), Comparing the Affects of Management Practices on Organizational Performance Between For-Profit and Not-For-Profit Corporations in Southeast Wisconsin, *Journal of Management Policy and Practice* 12(5), 86-95.
- Keller, K.L. (2001), Building Customer-Based Brand Equity, *Marketing Management*(10), 14-19.
- Laidler-Kylander, N., and Simonin, B. (2009), How international nonprofits build brand equity, *International Journal of Nonprofit and Voluntary Sector Marketing*(14), 57-69.
- Lau, K., and Phau, I. (2007), Extending symbolic brands using their personality: Examining antecedents and implications towards brand image fit and brand, *Psychology & Marketing* 24(5), 421-444.
- Malar, L., Krohmer, H., Hoyer, W.D., and Nyffenegger, B. (2011), Emotional brand attachment and brand personality: The relative importance of the actual and the ideal self, *Journal of Marketing*(75), 35-52.
- Matzler, K., Pichler, E., Fuller, J., and Mooradian, T.A. (2011), Personality, person-brand fit, and brand community: An investigation of individuals, brands, and brand communities, *Journal of Marketing Management*,(27), 9-10, 874-890.

- Mort, Gillian Sullivan, Weerawardena, Jay, and Williamson, Brett (2007), Branding in the Non-profit Context: The Case of Surf Life Saving Australia, *Australasian Marketing Journal* 2(15), 108-118.
- Pringle, H., and Thompson, M. (1999), *Brand spirit: how cause related marketing builds brands*, Chichester, UK: Wiley
- Sargeant, A. . (2009), *Marketing Management for Nonprofit Organizations* (3rd Edition ed.), Oxford: Oxford University Press.
- Sargeant, A., Ford, J. B., and Hudson, J. (2008), Charity Brand Personality: The Relationship with Giving Behavior, *Nonprofit and Voluntary Sector Quarterly* 37(3), 468-491.
- Sargeant, Adrian, Hudson, Jane, and West, D. C. (2008), Conceptualizing brand values in the charity sector: the relationship between sector, cause and organization, *Service Industries Journal* 28(5), 615-632.
- Venable, Beverly T., M., Rose Gregory, Bush, Victoria D., and Gilbert, Faye W. (2005), The role of brand personality in charitable giving: an assesemnt and validation, *Journal of the academy of marketing science* 33(3), 295-312.
- Venable, Beverly, T., Rose, Gregory M., Bush, Victoria D., and Gilbert, Faye W. (2005), The role of brand personality in charitable giving: an assesemnt and validation, *Journal of the academy of marketing science* 33(3), 295-312.
- Voeth, M., and Herbst, U. (2008), The concept of brand personality as an instrument for advanced non-profit branding- an empirical analysis, *Journal of Nonprofit and Public Sector Marketing* 19(1), 71-97.
- Webb, Deborah J., Green, Corliss L., and Brashear, Thomas G. (2000), Development and validation of scales to measure attitudes influencing monetary donations to charitable organizations, *Journal of the academy of marketing science* 28(2), 299-309.

WORKING CAPITAL IN THE TELECOM INDUSTRY

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ABSTRACT

We examine the relationship between profitability and efficiency of working capital management in the telecommunication services industry. Our sample consists of 48 companies classified by Reuters® as Integrated Telecommunication Operators, resulting in 488 firm-year observations for the period 1998-2009. We find evidence that the Net Trade Cycle is a better measure of efficiency of working capital management in the telecommunication industry, when compared with the Cash Conversion Cycle. Increasing the Net Trade Cycle represents an enhancement in the profitability of the telecom operators. This increase at the Net Trade Cycle level can be generated by reducing the number of day sales of accounts payable

Key Words: Capital, Profitability, Net Trade Cycle, Cash Conversion Cycle, Panel Data.

INTRODUCTION

The structure and management of working capital are important components of the firms' operational and financial policies that can have significant effects on its value. Short-term cash-flow management has become crucial in the past decade, in particular after the 2007/2008 financial crisis. A recent survey indicates the increase in focus given by financial executives to working capital management and liquidity, in particular during the latest period of credit crunch (CFO, 2010). This paper studies the management policies on working capital for the Telecom industry and its impact on profitability. We try to better understand how these companies manage their short-term operations, mainly the accounts receivables, the accounts payables and inventory, in order

to improve their assets profitability and overall value creation for the shareholders.

The Telecom industry has several characteristics that make it interesting to study at the working capital level, namely the high diversity of macro and micro clients and also of suppliers. At the product level it reaches two different spectrums, one considered essential in the development of the economy and its agents and other considered more as superfluous. The importance of the sector in the global economy is due to the facilitating role that it has on many other sectors. According to the International Telecommunication Union (ITU) report on the effects of the 2008 financial crisis, the overall sector represents up to 7.5% of the world GDP worldwide and has contributed greatly to its growth (ITU, 2009). According to that same report, the

number of subscribers of telecommunication services has remained steady in recent years, with the exception of mobile broadband services which has increased severely and surpass all other services. In recent years, the telecommunications sector has proved to be a solid sector on many levels. Since 1990, the sector has a compound average growth rate of 6% (OECD, 2009). The industry is characterized by a small number of large firms, where many resulted from the liberalization of the market in many countries in the 1990s³³. Increasing competition and innovation are also a constant presence in the market in recent years, which leads to more efficient companies and more concern over operational decisions.

We use a sample of the largest 48 companies classified by Reuters as Integrated Telecom Operators, for a total of 488 firm-year observations. The sample period goes from 1998 to 2009. To achieve our objectives we use two main measures of working capital: the Cash Conversion Cycle (*CCC*) and the Net Trade Cycle (*NTC*). We perform descriptive and correlation analysis, and also regression analysis using the Return on Assets (*ROA*) as our dependent variable and the *CCC*, *NTC* and their components as predictors. We also control for GDP and the size of the company.

Descriptive analysis shows that, on average, firms take 80 days of sales to collect the receivables from their clients, take 168 days to pay to suppliers and have inventory duration of 7 days. The results are similar when using both measures of working capital. The results show that telecom companies follow an aggressive working capital management strategy, with large

values of current liabilities financing smaller values of current assets. We find that the Net Trade Cycle is more fit to explain the variability in the Return on Assets than the Cash Conversion Cycle. Increasing the Net Trade Cycle by one day results in an increase in assets profitability of 0.047%. These results contradict those obtained by Shin and Soenen (1998), Deloof (2003) and Garcia-Teruel and Martinez-Solano (2007), where the authors find an inverse relation between both measures of efficiency and profitability.

LITERATURE REVIEW

The main purpose of this section is to give a brief introduction to working capital at a concept and empirical levels. For this, we analyze the key concepts associated with working capital management and list some of the most recent literature, mainly related to the relationship between short-term management efficiency and profitability, which will help define the main framework associated with this study.

In corporate finance literature we find extensive descriptions of methodologies for the evaluation of companies and projects, which are carried out considering different decision models whose purpose is to decide whether to invest or not. The evaluation analysis of these companies or projects usually has a considerable focus on long-term decisions, but also takes into account the investment or disinvestment in working capital. According to Ross *et al.* (2002), working capital results from the difference between current assets and current liabilities

³³ For more information on the regulatory environment please refer to (Duffy and Benlamlih, 1997) and (ITU, 2010).

of the company, and is then associated to the short-term financial management. The authors also point out the importance of the short-term decisions since they can impact on the overall value of the firm.

One of the major concerns of shareholders is the return on the investment made. Gitman (2002) refers that financial managers should only take actions that lead to an increase in value for the shareholder, taking into account the cash-flow and risk management. Efficient working capital management can improve the availability of cash internally generated, which in turn can lead to diminishing financing costs³⁴. The optimization of resources invested in working capital may impact on a greater financial flexibility, particularly with regard to growth strategies, and may lead to a better adaptability to changes in market conditions

The working capital components usually used in the literature are the Inventory and Accounts Receivable for the Current Assets, and the Accounts Payable for the Current Liabilities. By defining the different components, it is possible to infer that working capital is something that is constantly changing. Therefore, it becomes essential the existence of measures that assess the efficiency in its management. According to Deloof (2003), the Cash Conversion Cycle (CCC) is one of the most used measures, and it represents the time lag between the payment of purchases made and the receiving from sales. Another measure to assess the efficiency of working capital management is the Net Trade Cycle (NTC). Shin and Soenen (1998) suggest this measure as an alternative

to the CCC since they consider that the CCC is simply a measure based on the addition of different time lags (days of Inventories, days of Accounts Receivable and days of Accounts Payable). The NTC is a measure that contains components of the CCC but expressed as a percentage of sales. It allows a better insight of the performance of working capital management, since it takes into account the sales growth (Shin and Soenen, 1998).

The efficiency of working capital management is mainly based on the principles of receiving as soon as possible from customers and to pay as late as possible to suppliers. This rationale is implicit in the earlier mentioned measures of efficiency – Cash Conversion Cycle and Net Trade Cycle – since they pay a special attention to the periods of occurrence of cash inflows and outflows. The concern about the timings of the occurrence of cash flows is not innocent, and is related to the issue of profitability. In fact, Ross refers that “the link between the firms cash cycle and its profitability can be easily seen by recalling that one of the basic determinants of profitability and growth for a firm is its total assets turnover”³⁵, *i.e.*, the link between the Cash Conversion Cycle and Current Assets represents an impact on Total Assets, which implies an higher/lower Return on Assets³⁶ (ROA) (Ross *et al.*, 2002: 648). On the other hand, Shin and Soenen point out that “the shorter the NTC, the higher the present value of the net cash flow generated by assets and (...) the lower the need for external financing”, suggesting that the lesser the resource to external financing the lower

³⁴ The reader can find several advantages of using internal funds, for example, in Brealey and Myers (2003).

³⁵ The Total Assets Turnover Ratio is Net Sales divided by Total Assets.

³⁶ The Return on Assets ratio results from Net Income divided by Total Assets.

will be the average cost of debt, so the higher can be the shareholders return (Shin and Soenen, 1998: 38).

Concerning the connection between profitability and the timing of the cash-flows caused by Current Assets and Current Liabilities, Deloof suggests that “managers can create value for their shareholders by reducing the number of days accounts receivable and inventories to a reasonable minimum”, which implies that customers must pay sooner or that the company must have a trade credit policy that enhances the company revenues. About Accounts Payable, Deloof concludes that “the negative relation between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills”, *i.e.* , a late payment policy may not be converted into profitability, hence may not create value for shareholders’ (Deloof, 2003: 9).

The issue of the profitability that can be generated by an efficient working capital management usually brings up issues related to the managements’ policies that are carried out by companies. Garcia-Teruel and Martinez-Solano state that the companies can choose between two different strategies of working capital management, “they can minimize working capital investment or (...) adopt working capital policies designed to increase sales”, that is, companies can pursue strategies that have a direct impact on investments and that can be translated into reductions to safety margins of each working capital components, or alternatively, companies can pursue policies that permit a rational expansion of daily operations. Basically, the choice between these two strategies can be summarized in following: an aggressive or a conservative approach to working capital management. Garcia-Teruel and Martinez-Solano specify that the choice

between the two approaches must be based on the evaluation of the “trade-off between expected profitability and risk” (Garcia-Teruel and Martinez-Solano, 2007: 166).

The real difference between the aggressive and the conservative strategies is essentially supported on the balance between the weight of Current Assets and Current Liabilities. Weinraub and Visscher (1998) reveal that an aggressive strategy “results in capital being minimized in current assets versus long-term investments” and makes use of “higher levels of normally lower cost short-term debt and less long-term capital”. Thus, the strategy is focused on minimizing the Current Assets as much as possible and, on the other hand, maximizing the use of short-term financing, as commercial paper, bank financing or accounts payable. Unlike an aggressive policy, an “conservative policy places a greater proportion of capital in liquid assets” and “uses higher cost of capital but postpones the principal repayment of debt”, which means that a conservative strategy is based on an higher level of Current Assets due to their liquidity, and on a lower level of short-term financing, avoiding the cash outflows that result from the principal repayment of, for instance, commercial paper (Weinraub and Visscher, 1998: 12).

Concerning the link between the strategies adopted within the working capital management and profitability, Garcia-Teruel and Martinez-Solano point out that “aggressive policies would positively affect the profitability of the firm, by reducing the proportion of its total assets in the form of net current assets”. Actually, a reduction in the Current Assets (when considering optimal levels of Inventory and Accounts Receivable) provides a decrease in the Total Assets producing, *ceteris paribus*, a superior Return on Assets (Garcia-Teruel and Martinez-

Solano, 2007: 166). In contrast, ALShubiri suggests that an conservative strategy “yields a lower expected profitability resulting in a lower risk” given that a “company’s finance is going to be relatively high cost”, meaning that this kind of strategies can signify an increase in funding costs as a way to increase the Current Assets. An increase in the Inventory levels and a more comfortable trade credit policy may generate a boost in sales which will cause a higher Net Income. So basically an augment of these two variables can generate an increase in Return on Assets (ROA), therefore shareholders’ will have a better return on their investment with a higher level of liquidity (ALShubiri, 2011: 41).

When Working Capital Management is being evaluated, it must be taken into account the specifics of each company and each industry sector³⁷. The strategies described earlier should also be followed depending on the needs and difficulties faced in each sector. As previously mentioned, working capital is in constant change. This change results not only from the working capital but also from external factors. As indicated by Darun, “while external macro-factors are affecting all companies, regardless of the industry, only companies within a particular industry are affected from external micro-factors”, hence, there are specificities that may affect a particular sector more than others, thereby generating different reactions by financial managers (Darun, 2008: 7). The facts referred to are also described by Filbeck and Krueger, that in their study state that “significant

differences exist between industries in working capital measures across time” and that “measures for working capital change significantly within industries across time”, pointing to the presence of specific factors that influence different policies associated with the working capital management. Filbeck and Krueger also note that “industry factors may impact firm credit policy, inventory management and (...) some firms may be better suited to minimize receivables and inventory, while others maximize payables”, which implies that each firm will tend to adopt different optimal policies at the level of the components of Working Capital depending on the market in which it operates (Filbeck and Krueger, 2005: 11).

Alternatively, it must also be considered the existence of differences involving the working capital management practices in large companies and in SMEs³⁸ given the impact that such policies may have in companies facing different obstacles. Garcia-Teruel and Martinez-Solano, in their study on the effects of working capital management practices in SMEs’, conclude that “working capital management is particularly important in the case of small and medium-sized companies”. They emphasize that the importance is due to the fact that “most of these companies assets are in the form of current assets” and that “current liabilities are one of their main sources of financing”, *i.e.* it appears that this type of companies have the possibility of running working capital management more efficiently (Garcia-Teruel and Martinez-Solano, 2007: 175). Howort

³⁷ Recent studies on working capital in different industries include: Lind *et al.* (2012) for the automotive industry; Qauayyum (2012) for manufacturing industries; Rausher and Wheeler (2012) for hospitals; and Bieniasz and Golas (2012) for the food industry.

³⁸ It is considered an Small and Medium-sized Enterprise a company that has less than 250 workers and a turnover of at least of 50 million euro or a Balance Sheet total of at least 43 million euro (European Commission definition of SME).

and Westhead in a similar study conclude that “small firms are not a homogenous group with regard to working capital management routines”, which implies that the scale factor can be associated with a certain level of development and specialization of working capital management between companies (Howort and Westhead, 2003: 108).

There are several studies that have addressed the issue of working capital management and its relationship with profitability³⁹. These have tried to answer different questions, addressing different issues that have impact on the daily management of enterprises. Several authors have sought to establish whether this relationship is more strong when different current management policies are undertaken, or if it is more strong depending on the company size, or ultimately, if it really depends on the sector on which the company is allocated.

Nazir and Afza (2009) addressed the relationship between working capital management policies and profitability by analyzing a sample of 204 non-financial Pakistani firms with complete data for the period 1998-2005. The authors conclude that there is no creation of value to the shareholders through the adoption of aggressive working capital management policies. In spite of this conclusion, the authors realize that investors give more value to firms that adopt this kind of policies; hence aggressive working capital management policies add value “through increased market performance” (Nazir and Afza, 2009: 27).

ALShuribi (2011) also investigates the relationship between aggressive/conservative working capital management policies and profitability, adding to his study the risk component. The analysis is made over a sample of 59 industrial firms and 14 banks for the period of 2004-2008. The author concludes that, as Nazir and Afza did, firms yield negative returns if they follow an aggressive working capital management policy. Furthermore, he concludes that there is no significant relationship between the different policies of firms and their operational and financial risk.

By analyzing a sample of 1.009 “large Belgian non-financial firms”, Deloof (2003) concluded that it is possible to create value for the shareholders by reducing the number of days accounts receivable and inventories, and that companies with lower profitability take more time to pay their bills (Deloof, 2003: 9). On the other hand, Garcia-Teruel and Martinez-Solano (2007), based on an 8.872 Spanish SMEs’ sample, conclude that a decrease in the Cash Conversion Cycle to a reasonable minimum enhances the profitability in the SMEs’. In their study, the authors address the issue of the company scale factor in the ability of companies to generate value, even concluding that “large size firms seem to favor the generation of profitability” (Garcia-Teruel and Martinez-Solano, 2007: 174).

Padachi (2006) also addresses the issue of company size, through his study on Small and Medium-Sized Enterprises. However, in his study he gives a strong focus on the characteristics of the sectors where his 58

³⁹ Recent studies on working capital in different countries and for firms of different sizes include: Abuzayed (2012) and Kaddumi and Ramadan (2012) for Jordan; Akinlo (2012) for

Nigeria; Baños-caballero *et al.* (2012) for Spanish SMEs; Palombini and Nakamura (2012) for Brazil; Pouraghajan and Emamgholipourachi (2012) for Iran; Afeef (2011) for SMEs in Pakistan; and Bellouma (2011) for Tunisia.

companies sample are divided, indicating that there are significant differences between sectors that may constitute an index of best practices among companies in the same sector. Filbeck and Krueger (2005) seek as well, through their study is based on data from the CFO Magazine, differences between the working capital efficiency measures used by the CFO Magazine, and whether these differences change over time from industry to industry. The authors conclude that there is a consistency in how industries gather against each other over time and that there are significant movements across the sample over time, which can be explained by the impact that macroeconomic conditions may have in working capital management.

RESEARCH DATA AND METHODOLOGY

In this section we provide a full description of the sample and the main variables that are used to perform the empirical study, and also describe the methodology followed.

Sample

The initial sample includes 432 listed companies classified by Reuters as Integrated Telecom Operators, with a total market capitalization of 1.42 trillion dollars. The sample period ranges from 1998 to 2009. We adjust the sample to include only the largest firms with a market capitalization above 2 billion dollars and with available financial information for each year. Observations regarding companies with erroneous data or with extreme values in the considered variables were also excluded. The final sample includes 48 companies with 488 firm-

year observations. These firms account for about 73% of the total market capitalization.

The data was obtained from the Reuters 3000 Xtra® database and includes Revenues, Operating Costs, Earnings Before Interest and Taxes (EBIT), Receivables, Inventories, Payables, Total Assets and Total Liabilities. Following Garcia-Teruel and Martinez-Solano (2007) and Nazir and Afza (2009), it was also introduced in the sample the World's Gross Domestic Product annual growth rate in order to bring in the effects of economic cycles on the investment in working capital. The information on the GDP annual growth rate was obtained from the World Bank.

Variables

As suggested by Garcia-Teruel and Martinez-Solano (2007) and Nazir and Afza (2009), the impact of the working capital management efficiency on the firms profitability is analyzed through the Return on Assets (ROA). Therefore, this accounting measure of profitability is considered the dependent variable, and is defined as the ratio between Earnings Before Interest and Taxes (EBIT) and Total Assets.

The profitability determinants regarding the working capital management can be measured using three major components (as explained previously). The computation of these components depends on the efficiency measure that is being used.

If we consider the components that are used to calculate the Cash Conversion Cycle (CCC), the main explanatory variables are the number of days of accounts receivable (DAR), number of days of inventories (DINV) and number of days of accounts payable (DAP). When the Net Trade Cycle (NTC) is considered, the main explanatory variables become the number of day sales of

accounts receivable (*DSAR*), number of day sales of inventories (*DSINV*) and number of day sales of accounts payable. These explanatory variables are calculated using (1), (2) and (3) for the *CCC* components, as

suggested by Deloof (2003) and Garcia-Teruel and Martinez-Solano (2007), and using (4), (5) and (6) for the *NTC* components, as suggested by Shin and Soenen (1998):

$$\text{Number of Days of Accounts Receivable (DAR)} = \frac{\text{Accounts Receivable}}{\text{Revenues}} \times 365 \quad (1)$$

$$\text{Number of Days of Inventories (DINV)} = \frac{\text{Inventories}}{\text{Operating Costs}} \times 365 \quad (2)$$

$$\text{Number of Days of Accounts Payable (DAP)} = \frac{\text{Accounts Payable}}{\text{Operating Costs}} \times 365 \quad (3)$$

$$\text{Number Day Sales Accounts Receivable (DSAR)} = \frac{\text{Accounts Receivable}}{\text{Revenues}} \times 365 \quad (4)$$

$$\text{Number Day Sales of Inventories (DSINV)} = \frac{\text{Inventories}}{\text{Revenues}} \times 365 \quad (5)$$

$$\text{Number Day Sales of Accounts Payable (DSAP)} = \frac{\text{Accounts Payable}}{\text{Revenues}} \times 365 \quad (6)$$

DAR measures the average time that the company takes to collect payments from its customers. The higher the value, the higher the investment the company needs to have in accounts receivable. *DINV* measures the average time that the company takes between the acquisitions/production of goods and the selling of these to customers. Similarly to what happens with the accounts receivable, the higher the value, the higher is the investment needed in inventories. The average time firms take to pay their suppliers is measure by *DAP*. The higher the value, the longer firms take to settle the accounts with their suppliers.

The interpretation suggested for each variable mentioned above can be used to understand the variables associated to the Net Trade Cycle (*NTC*) – the number of day sales of accounts receivable (*DSAR*), the number of day sales of inventories (*DSINV*), and the number of days sales of accounts payable

(*DSAP*). However, one should consider in these cases that *DSAR* corresponds to the number of days needed to finance accounts receivable in order to generate one euro of revenues, that the *DSINV* represents the number of days of investment in inventories that are necessary to generate one euro of revenues, and that the *DSAP* represents the number of days of financing obtained from suppliers that generate one euro of revenues.

As previously mentioned, *CCC* is considered one measure of working capital management efficiency (Deloof, 2003; Padachi, 2006; Garcia-Teruel and Martinez-Solano, 2007). It expresses the time lag between cash outflows and cash inflows. An extended *CCC* implies that a higher investment in working capital is needed. This explanatory variable can be calculated using (7).

$$\text{Cash Conversion Cycle (CCC)} = (\text{DAR} + \text{DINV} - \text{DAP}) \quad (7)$$

In their study, Shin and Soenen (1998) use *NTC* as a measure of working capital

$$\text{Net Trade Cycle (NTC)} = \text{DSAR} + \text{DSINV} - \text{DSAP} \quad (8)$$

Many authors suggest the introduction of control variables, like a proxy for the size of the firms, the sales growth rate and the GDP annual growth (Garcia-Teruel and Martinez-Solano, 2007; Nazir and Afza, 2009). The size (*SIZE*) is measured as the logarithm of Total Assets; the sales growth rate (*SGR*) is measured as the ratio of sales of year *t* and sales of year *t-1*, minus one. The Gross Domestic Product (*GDP*) variable is the worldwide GDP annual growth rate and reflects changes in the global economic conditions. A decline in the rate represents a recession, while a positive change in the rate is a sign of economic expansion.

Methodology

We begin the empirical study determining the most important descriptive statistics for all variables and for the entire sample. Next, we analyze the Pearson Correlation Coefficients for the whole sample and variables with the purpose of understanding the possible relationships that can be established between these. Finally, to obtain a better insight on which of the working capital management efficiency measures is more valuable to explain the profitability of firms and understand the performance of the different working capital components, we perform

management efficiency. The shorter *NTC* is, the lower the company needs to finance externally its operations. The *NTC* variable can be computed using (8).

multivariate analyses. All regressions include robust standard errors.

In the multivariate analyses we use panel data methodology. There are several advantages pointed in the available literature on using this methodology. For example, the existence of multiple observations for the same variables allows us to control for unobserved characteristics⁴⁰. This means that all the individuals, firms, states or countries are heterogeneous, hence there is no risk of having unbiased results. By using panel data it is also possible to monitor the lags in behavior or the results of different policies (Baltagi, 2005; Wooldridge, 2009). We estimate the models represented on Equation 9-16.

In order to analyze panel data sets, there are some regression models that can be applied, like the Pooled Ordinary Least of Squares (OLS) Regression, the Fixed Effects Regression (FER) or the Random Effects Regression (RER). In order to find which of the regression models is considered most fit, we perform the Breusch-Pagan (1980) test and the Hausman (1978) test⁴¹ (Eq. 17).

The Breusch-Pagan (1980) Lagrangian Multiplier test is applied to find evidence of the inclusion or exclusion of the Random Effects Regression (RER). In the case of (18),

⁴⁰ According to Wooldridge (2009), the unobserved factors are all the time constant factors that affect the dependent variable.

⁴¹ We use Stata 11 software package to perform all statistical and econometric analyses.

in order to reject the null hypothesis, the probability associated to the χ^2 must be below the significance level considered by default.

As suggested by Baltagi (2005), the Hausman (1978) test presented in (18) can be applied to test the consistency of the Random

Effects estimators. The rejection of the null hypothesis, which means that the Random Effects estimators are not consistent, occurs when the probability associated to the χ^2 is below the significance level.

$$ROA_{it} = \beta_0 + \beta_1 DAR_{it} + \beta_2 GDP_{it} + \beta_3 SIZE_{it} + \beta_3 SGR_{it} + a_i + u_{it} \quad (9)$$

$$ROA_{it} = \beta_0 + \beta_1 DINV_{it} + \beta_2 GDP_{it} + \beta_3 SIZE_{it} + \beta_3 SGR_{it} + a_i + u_{it} \quad (10)$$

$$ROA_{it} = \beta_0 + \beta_1 DAP_{it} + \beta_2 GDP_{it} + \beta_3 SIZE_{it} + \beta_3 SGR_{it} + a_i + u_{it} \quad (11)$$

$$ROA_{it} = \beta_0 + \beta_1 CCC_{it} + \beta_2 GDP_{it} + \beta_3 SIZE_{it} + \beta_3 SGR_{it} + a_i + u_{it} \quad (12)$$

$$ROA_{it} = \beta_0 + \beta_1 DSAR_{it} + \beta_2 GDP_{it} + \beta_3 SIZE_{it} + \beta_3 SGR_{it} + a_i + u_{it} \quad (13)$$

$$ROA_{it} = \beta_0 + \beta_1 DSINV_{it} + \beta_2 GDP_{it} + \beta_3 SIZE_{it} + \beta_3 SGR_{it} + a_i + u_{it} \quad (14)$$

$$ROA_{it} = \beta_0 + \beta_1 DSAP_{it} + \beta_2 GDP_{it} + \beta_3 SIZE_{it} + \beta_3 SGR_{it} + a_i + u_{it} \quad (15)$$

$$ROA_{it} = \beta_0 + \beta_1 NTC_{it} + \beta_2 GDP_{it} + \beta_3 SIZE_{it} + \beta_3 SGR_{it} + a_i + u_{it} \quad (16)$$

$$\text{Breusch-Pagan test: } \begin{cases} H_0: \text{Pooled Regression} \\ H_1: \text{Random Effects Regression} \end{cases} \quad (17)$$

$$\text{Hausman test: } \begin{cases} H_0: \text{Random Effects Regression} \\ H_1: \text{Fixed Effects Regression} \end{cases} \quad (18)$$

In untabulated results both the null hypotheses of the Breusch-Pagan test and the Hausman test were rejected at a 1% significance level. Since the pooled regression and the random effects regression were rejected, we estimate all our models using fixed effects regression.

EMPIRICAL RESULTS

In order to understand if firm-specific and country-specific variables have impact in the firms' debt maturity, we conduct an empirical work that is divided in two major areas. First,

the main descriptive statistics and the Pearson Correlation coefficients to understand if there are signs indicative of a trend in the debt maturity evolution and find the relationships that can be established between variables. Second, a dynamic panel data analysis, using a GMM – SYS regression, in order to understand which variables are more valuable in explaining debt maturity.

Descriptive Statistics Analysis

Table 1 reports the main descriptive statistics. The *ROA* is about 8.5%, which means that on average the telecommunication operators generate an EBIT that corresponds to 8.5% of the Total Assets book-value. The

dispersion of the return is high with extreme values of a negative return of about 50% and a positive of about 33%.

Regarding the working capital management components, it is possible to conclude that the telecommunication operators collect receivables from their customers, on average, in 80 days, have stocks for about 9 days and pay to their suppliers (both CAPEX and OPEX related) on an average of 198 days. Hence, there is an indication that the companies in this sector rely on their suppliers to finance their current operations. On the other hand, the increase in the number of subscribers that was mentioned earlier explains an increase in Revenues, and also an increase in the Accounts Receivable. Increases in these two items on different proportions can lead to higher average collection periods, or superior number of days of accounts receivable.

When observing the values of the DSAR, DSINV and DSAP variables, it is possible to state that there are some similarities with the results obtained for the CCC components. However, there is a substantial difference between the results for *DAP* and for the number of days sales of accounts payables. By the *DSAP* point of view, on average the telecommunication companies obtain financing from their suppliers for 168 days. Considering the *CCC* and the *NTC*, the negative values are in line with what was reported for the *DAR*, *DINV*, *DAP* and *DSAR*, *DSINV* and *DSAP* variables, and are consistent with the possibility that the telecommunication operators are financing their activities by maximizing their accounts payable management.

The global economy, measured by the *GDP*, developed at an average rate of 5.88%, meaning that in the period from 1998 to 2009 there was a global economic expansion.

However, it should be noted that during this period there was some economic downturns (like the 2001 *dot-com* bubble and the 2008 financial crisis) which made the global economy decline 5.23%, which is the minimum value of the world's *GDP*.

The telecommunication operators in the sample have seen their sales grow at an average rate of 10.39% in the period under review. As previously mentioned, this fact is by far explained by the growth of the number of subscribers and of the revenues between 1998 and 2009.

From Table 1 it is also possible to make a brief analysis on the type of working capital policy that the telecommunication services companies follow. Taking into account that an aggressive working capital management strategy is focused on minimizing the Current Assets and maximizing the Current Liabilities by using more short-term financing, it is possible to assume that the telecoms are following this type of strategy. This can be explained by the low ratio of Current Assets to Total Assets (*CA/TA*) – where the Current Assets correspond on average to 11.86% of the Total Assets – and the considerably high ratio Current Liabilities to Total Liabilities (*CL/TL*) – where the Current Liabilities represent on average 40.99% of the Total Liabilities.

The ratio between Current and Total Assets can be explained by the amount that is invested by these type of companies in fixed assets (such as network infrastructures), which means that the value of these assets correspond to the major amount of the Total Assets. As for the ratio between Current and Total Liabilities, as mentioned earlier, the number of days of accounts payable is probably a first indicator that the telecoms rely on their suppliers to finance their activity and investments, which can explain the value.

The investments in CAPEX can also explain the amount allocated to the suppliers.

The table presents the descriptive statistics of firm-specific and macroeconomic variables for the whole 1998-2009 sample of telecommunication companies considered by Reuters® as Integrated Telecommunication Operators. *ROA* is defined as the ratio of Net Income to Total Assets. The *DAR* is measured as the ratio of Accounts Receivable and Revenues times the number of days of one year. *DINV* is measured as the ratio of Inventories and Operating Costs times the number of days of one year. *DAP* corresponds to the ratio of Accounts Payable and Operating Costs times the number of days of one year. The *CCC* is obtained by sum *DAR* to *DINV*, less the *DAP*. *DSAR*

formula is equal to *DAR*. The *DSINV* is measured as Inventories divided by Revenues times the number of days of one year. *DSAP* corresponds to the ratio of Accounts Payable and Revenues, times the number of days of one year. The *NTC* can be obtained by the sum of *DSAR* and *DSINV* less the *DSAP*. *GDP* is annual Gross Domestic Product growth rate obtained in the World Banks' databases. *SIZE* is measured as the logarithm of the Total Assets. *SGR* corresponds to Sales of time t-1 less the Sales of time t, divided by Sales of t-1. The *CA/TA* is measured as Accounts Receivable plus Inventories, divided by Total Assets. The *CL/TL* is obtained by Payables divided by Total Liabilities. Computations are made considering that one year has 365 days

Table 1. Descriptive Statistics for firm-specific and macroeconomic variables for the full sample

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>ROA</i>	488	0,0847	0,0759	-0,4959	0,3299
<i>DAR</i>	488	79,83	35,06	19,63	234,23
<i>DINV</i>	488	8,61	6,82	0,55	74,02
<i>DAP</i>	488	197,64	65,02	70,03	365,15
<i>CCC</i>	488	-109,20	58,66	-298,80	77,99
<i>DSAR</i>	488	79,83	35,06	19,63	234,23
<i>DSINV</i>	488	7,41	6,76	0,53	87,00
<i>DSAP</i>	488	168,80	62,70	58,91	523,82
<i>NTC</i>	488	-81,55	52,98	-483,10	30,46
<i>GDP</i>	488	0,0588	0,0574	-0,0523	0,1291
<i>SIZE</i>	488	23,07	1,43	17,46	26,05
<i>SGR</i>	488	0,1039	0,4206	-0,6824	4,9719
<i>CA/TA</i>	488	0,1186	0,0530	0,0283	0,4448
<i>CL/TL</i>	488	0,4099	0,1624	0,0833	0,9324

Correlation Analysis

In order to examine the existent linear relationship between the different variables we begin by using the Pearson Correlation Matrix. In Table 2 and Table 3 is possible to observe the Correlation Coefficients and the significance levels. The approach used, which separates the components of the Cash Conversion Cycle and the components of the Net Trade Cycle, was made with to facilitate the interpretation of the values, since we consider that the correlation between those variables adds no value to the analysis. Even though the coefficient values can be used as indicators for the linear relationship among the variables, they do not allow for conclusion regarding cause and effect.

By analyzing Table 2, it is possible to see that there is a significant negative correlation between the profitability measure (*ROA*) and the number of days of accounts receivable. This result is consistent with the view that receiving earlier has a positive impact on the firm's profitability. However, and in contrast with Deloof's (2003), Padachi's (2006) and Garcia-Teruel and Martinez-Solano (2007) findings, there is no significant correlation between profitability and the number of days of inventory and the number of days of accounts payable, despite the same negative sign coefficients.

In Table 3 we observe that there is a significant negative correlation between *ROA* and the components of the Net Trade Cycle. Even though Deloof (2003), Padachi (2006) and Garcia-Teruel and Martinez-Solano (2007) apply the formulas related to the Cash Conversion Cycle, these established relations are in accordance with their findings regarding the correlation between each of these components and profitability.

It is also possible to observe in Table 2 and Table 3 that there is a significant positive correlation between the profitability measure (*ROA*) and one of the working capital management efficiency measures, the *NTC*. The result contradicts Shin and Soenen (1998) findings, where a significant negative relationship between *NTC* and the profitability measure was established. In contrast with the correlation between *ROA* and the *NTC*, there is a negative correlation between profitability and the *CCC*. This result is compatible with Deloof (2003), Padachi (2006) and Garcia-Teruel and Martinez-Solano (2007) findings, and is consistent with the view that lowering the time lag between receivables and payables, while having optimized stocks, increases profitability.

In Table 2 and Table 3 we find correlations near ± 1 , which are significant at a 1% significance level. There is a significant strong negative correlation between the *CCC* and *DAP*, between the *CCC* and *DSAP*, and a significant negative correlation between *NTC* and *DAP*, meaning that low number of days of accounts payable are associated with high values of *CCC* and *NTC*. There is also a strong positive correlation between the *CCC* and the *NTC*.

The table presents the Pearson correlation coefficients of firm-specific and macroeconomic variables for the 1998-2009 sample of telecommunication services companies considered by Reuters® as Integrated Telecommunication Operators. *ROA* is defined as the ratio of Net Income to Total Assets. The *DAR* is measured as the ratio of Accounts Receivable and Revenues times the number of days of one year. *DINV* is measured as the ratio of Inventories and Operating Costs times the number of days of one year. *DAP* corresponds to the ratio of

Accounts Payable and Operating Costs times the number of days of one year. The *CCC* is obtained by sum *DAR* to *DINV*, less the *DAP*. The *NTC* can be obtained by the sum of Accounts Receivable and Inventories less Accounts Payable, divided by Revenues, times the number of days of one year divided by Revenues. *GDP* is annual Gross Domestic Product growth rate obtained in the World Banks' databases. *SIZE* is measured as the logarithm of the Total Assets. *SGR* corresponds to Sales of time t-1 less the Sales of time t, divided by Sales of t-1. Computations are made considering that one year has 365 days

The table presents the Pearson correlation coefficients of firm-specific and macroeconomic variables for the 1998-2009 sample of telecommunication services companies considered by Reuters® as Integrated Telecommunication Operators.

ROA is defined as the ratio of Net Income to Total Assets. *DSAR* formula is Accounts Receivable divided by Revenues times the number of days of one year. The *DSINV* is measured as Inventories divided by Revenues times the number of days of one year. *DSAP* corresponds to the ratio of Accounts Payable and Revenues, times the number of days of one year. The *CCC* is obtained by the number of days accounts receivable plus the number of days of inventories minus the number of days of accounts payable. The *NTC* can be obtained by the sum of *DSAR* and *DSINV* less the *DSAP*. *GDP* is annual Gross Domestic Product growth rate obtained in the World Banks' databases. *SIZE* is measured as the logarithm of the Total Assets. *SGR* corresponds to Sales of time t-1 less the Sales of time t, divided by Sales of t-1. Computations are made considering that one year has 365 days.

Table 2. Correlation Matrix for firm-specific variables and macroeconomic variables for the full sample: Cash Conversion Cycle and its components

	<i>ROA</i>	<i>DAR</i>	<i>DINV</i>	<i>DAP</i>	<i>CCC</i>	<i>NTC</i>	<i>GDP</i>	<i>SIZE</i>	<i>SGR</i>
<i>ROA</i>	1								
<i>DAR</i>	-.2289***	1							
<i>DINV</i>	-.0378	.1979***	1						
<i>DAP</i>	-.0047	.4319***	.2167***	1					
<i>CCC</i>	-.1360***	.1429***	-.0058	-.8257***	1				
<i>NTC</i>	.3453***	.0733	.0170	-.6853***	.8054***	1			
<i>GDP</i>	.0904**	-.1499***	-.1397***	-.0914**	-.0045	.0378	1		
<i>SIZE</i>	-.0127	.1065**	-.2012***	.1992***	-.1806***	-.0745	-.0034	1	
<i>SGR</i>	.0209	.0565	.1203***	.0482	-.0056	.0050	-.1199***	-.0265	1

* Correlation is significant at the 10% level; ** Correlation is significant at the 5% level; *** Correlation is significant at the 1% level.

Table 3. Correlation Matrix for firm-specific variables and macroeconomic variables for the full sample: Net Trade Cycle and its components

	<i>ROA</i>	<i>DSAR</i>	<i>DSINV</i>	<i>DSAP</i>	<i>CCC</i>	<i>NTC</i>	<i>GDP</i>	<i>SIZE</i>	<i>SGR</i>
<i>ROA</i>	1								
<i>DSAR</i>	-.2289***	1							
<i>DSINV</i>	-.1777***	.2490***	1						
<i>DSAP</i>	-.4389***	.5240***	.2524***	1					
<i>CCC</i>	-.1360***	.1429***	.0756*	-.5924***	1				
<i>NTC</i>	.3453***	.0733	-.0065	-.8046***	.8054***	1			
<i>GDP</i>	.0904**	-.1499***	-.1288***	-.1296***	-.0045	.0378	1		
<i>SIZE</i>	-.0127	.1065**	-.2351***	.0972**	-.1806***	-.0745	-.0034	1	
<i>SGR</i>	.0209	.0565	.1062**	.0388	-.0056	.0050	-.1199***	-.0265	1

* Correlation is significant at the 10% level; ** Correlation is significant at the 5% level; *** Correlation is significant at the 1% level.

Regression Analysis

We estimate the models formalized by the equations (9) through (16) using fixed effects regression model. In accordance with Wooldridge (2009), there are some issues that may affect the fixed effects estimation, which are related to the assumptions that make the OLS analysis valid. The assumptions that stand out are the heteroskedasticity and the serial correlation of the errors u_{it} . To prevent such issues, the obtained estimators are robust to both correlation and heteroskedasticity.

After running the fixed effects regression robust for correlation and heteroskedasticity on the different equations on STATA, the statistical validity of each model is verified using the F-test. To assess whether the model is statistically valid, we used the test of hypotheses represented next. If the null is rejected, then we can conclude that the model is statistically valid.

$$\begin{cases} H_0: \beta_0 = \beta_1 = \beta_j = 0 \\ H_1: \beta_j \neq 0 \end{cases} \quad (19)$$

Where β_j is the coefficient that establishes the effect of each of the explanatory variables on the dependent variable.

In Table 4 and Table 5 it is possible to observe the estimators coefficients obtained by running the fixed effects regression on the different models for the entire 1998-2009 sample period. Regarding the overall statistical validity of each model, it is possible to conclude through the examination of the probability associated to the F-test, that the models (9), (13), (14), (15) and (16) are significant at a 5% significance level. Consequently we reject the null hypothesis, *i.e.* there is at least one statistically relevant explanatory variable that explains the

behavior of the dependent variable. It is possible to conclude the same for model (12), when considering a 10% significance level.

The comparison between the results of the CCC and the NTC on Table 4 and Table 5 provide an insight on which of the different working capital management efficiency measures is better suited in explaining the behavior of firm profitability. The results of the models (12) and (16) are used to proceed with this analysis. With regards to the predictive power of each model, we verify by analyzing the R^2 that model (12) is able to explain about 2.27% of the profitability measure variability, and model (16) is able to explain about 15.3%.

In terms of the statistical relevance of the coefficients of the explanatory variables considered in models (12) and (16), it is possible to conclude that the CCC variable in model (12) is not statistically significant, while the NTC is statistically significant at a 5% significance level. Overall, model (16), which includes the NTC as explanatory variable, seems to better explain the relationship between working capital management efficiency and profitability.

The findings presented in Table 5 regarding model (16) suggest that, *ceteris paribus*, an increase in one day in the Net Trade Cycle (NTC) is associated with a 0.047% raise in the profitability of the telecommunication companies. Despite of different efficiency measures, this result is different from Deloof (2003) and Garcia-Teruel and Martinez-Solano (2007) findings, where they proved an inverse relation between working capital management efficiency and profitability. The result specially contrasts with Shin and Soenen (1998) findings, where an inverse relation between NTC and ROA signifies that lowering the NTC increases profitability.

The other models presented in Table 5 show that there are highly significant interactions between the Return on Assets (ROA) and the different components of the NTC. By analyzing each model we can understand better which is the component of the NTC that affects more the profitability.

With regards to model (13), with the purpose of modeling the a relation between the number of days sales of accounts receivable (DSAR) and the Return on Assets (ROA), it is possible to observe that there is a negative interaction between DSAR and ROA, where the DSAR coefficient is considered statistically significant at a 1% significance level. The R^2 associated with model (13) shows that the model explains about 8.36% of the variation in profitability. The relationship established is in line with the negative significant correlation that was previously identified between this variable and profitability. The result is also consistent with Deloof (2003), Padachi (2006) and Garcia-Teruel and Martinez-Solano (2007) findings, where they conclude that lengthening the average collection period affects negatively the profitability, despite the size of the company.

Concerning model (13), the results suggests that, *ceteris paribus*, an increase by one day in the number of days sales accounts receivable (DSAR) is associated with a drop of 0.065% in the profitability of the telecommunication companies. The relevance of this impact at the profitability level must be considered when managing this working capital feature on the telecoms. For this reason, the companies in this sector may consider different kinds of policies that allow them to reduce the average collection period. More restrictive trade credit conditions, limitation of the voice and data traffic on both fixed and mobile services, expansion of the

offer of prepaid services and flat rate plans on the mobile services, implementation of credit scoring, and promotion of the direct debit payment systems are some examples that can help reduce the number of days of accounts receivable.

As previously mentioned, model (14) tries to establish the relation between inventories management, which is measured by the number of days sales of inventories, and the profitability of telecom companies. There is a negative relation between *DSINV* and *ROA*, where *DSINV* is statistically significant at a 5% level. It is possible to observe that the inventories management explains about 5.84% of the variation of profitability. While this is not a value considerably high, one should not neglect the fact that, *ceteris paribus*, an increase by one day in the number of days of investment in inventories is associated with a decrease of 0.231% in *ROA*.

With regards to the inverse relation between inventories management and profitability, Deloof (2003) suggests that this can result from a decrease in revenues, which leads to higher inventories and lower profits. However, we believe that this is not the case in the telecommunications services industry, since the revenues and the number of subscribers have been growing since 1997. In fact, there are some reasons, which correspond to particularities of the telecommunication services sector that can help explain such effect of the inventories management on profitability. For instance, the mobile telecommunication providers face difficulties on managing their inventories efficiently since there is a short life cycle of mobile phones. The evolution of the life cycle of products to shorter periods can harm in some way the profitability when considering that from some point the company stops

selling the older products. There can also exist issues regarding the relations with the equipment suppliers due to volume requirements or the existence of contractual requirements regarding the time lag between the acquisition of equipment.

On Table 5, model (15) appears to be the one that explains more of the variation of profitability. To be more precise, the model that set up the relationship between accounts payable management and profitability explains about 24.36% of the variation of profitability, which is the highest explanatory influence on profitability of the three components. The accounts payable management as an inverse impact on profitability. This means that an increase in one day in the number of days sales of accounts payable (*DSAP*) impacts on profitability by causing a decrease of 0.057%.

There are many reasons that can explain the inverse relation between the accounts payable measure and profitability. Authors like Deloof (2003), Padachi (2006) and Garcia-Teruel and Martinez-Solano (2007) mention in their studies that there is the possibility of less profitable firms taking longer periods to pay to their suppliers. However, this assumption may not fit to the telecommunication services companies. As mentioned earlier, the telecoms use a wide range of suppliers to keep the business running, and this is translated into the need for professional management at the accounts payable level. While financial management may not be done in the most efficient way in some companies, it has an impact at the level of the average payment period to suppliers and at the liquidity level of the company. Companies without defined policies regarding the accounts payable may have problems regarding their liquidity, thus with their profitability. Overall, one could state

that less profitable firms tend to invest less in their accounts payable management, *i.e.* invest little on the definition of strict accounts payable policies, which has an impact on liquidity and profitability.

When comparing the result of model (15) with the results of models (13) and (14), it is possible to infer that the accounts payable, measured by the variable *DSAP*, can be responsible for most of the Net Trade Cycle impact on profitability. By recalling the fact that, under *ceteris paribus* condition, an increase by one day in the *NTC* increases the profitability of a telecom company, it should be noted that this is in line with the result obtained for the *DSAP*, *i.e.* decreasing in one day the accounts payable increases profitability. As a consequence, a reduction of the *DSAP* causes an increase in *NTC*, which makes the accounts payable management an efficient way of enhancing the Net Trade Cycle.

The table presents the Fixed Effects Regression results for firm-specific and macroeconomic variables for the 1998-2009 sample of telecommunication services companies considered by Reuters® as Integrated Telecommunication Operators. The sample has 48 firms with a total of 488 firm-year observations. Firms may enter or leave the panel during the sample period 1998-2009. The dependent variable is *ROA* and is defined as the ratio of Net Income to Total Assets. The *DAR* is measured as the ratio of Accounts Receivable and Revenues times the number of days of one year. *DINV* is measured as the ratio of Inventories and Operating Costs times the number of days of one year. *DAP* corresponds to the ratio of Accounts Payable and Operating Costs times the number of days of one year. The *CCC* is obtained by sum *DAR* to *DINV*, less the *DAP*.

GDP is annual Gross Domestic Product growth rate obtained in the World Banks' databases. *SIZE* is measured as the logarithm of the Total Assets. *SGR* corresponds to Sales of time t-1 less the Sales of time t, divided by Sales of t-1. Computations are made considering that one year has 365 days. T-test values are reported in parenthesis.

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DSAR formula is Accounts Receivable divided by Revenues times the number of days of one year. The *DSINV* is measured as Inventories divided by Revenues times the number of days of one year. *DSAP* corresponds to the ratio of Accounts Payable and Revenues, times the number of days of one year. The *CCC* is obtained by the number of days accounts receivable plus the number of days of inventories minus the number of days of accounts payable. The *NTC* can be obtained by the sum of *DSAR* and *DSINV* less the *DSAP*. *GDP* is annual Gross Domestic Product growth rate obtained in the World Banks' databases. *SIZE* is measured as the logarithm of the Total Assets. *SGR* corresponds to Sales of time t-1 less the Sales of time t, divided by Sales of t-1. Computations are made considering that one year has 365 days. T-test values are reported in parenthesis.

Table 4. Fixed Effects Regression results obtained to the determinants of corporate profitability for the full 1998-2009 sample: Cash Conversion Cycle and its components

<i>ROA</i>	(9)	(10)	(11)	(12)
<i>DAR</i>	-0,00065*** (-3,45)			
<i>DINV</i>		-0,00050 (-0,33)		
<i>DAP</i>			-0,00012 (-0,88)	
<i>CCC</i>				-0,00003 (-0,16)
<i>GDP</i>	0,03922 (0,74)	0,08657 (1,55)	0,08033* (1,89)	0,09464* (1,91)
<i>SIZE</i>	0,00660 (0,44)	0,00645 (0,35)	0,00890 (0,55)	0,00801 (0,47)
<i>SGR</i>	0,01506* (1,95)	0,01468* (1,97)	0,01384* (1,79)	0,01392* (1,82)
<i>C</i>	-0,01979 (-0,06)	-0,06648 (-0,15)	-0,10248 (-0,28)	-0,11015 (-0,29)
R-squared (within)	0,0836	0,0241	0,0321	0,0227
F-test	4,70***	1,36	1,40	1,97*

* Significant at the 10% level; ** Significant at the 5% level; *** Significant at the 1% level

Table 5. Fixed Effects Regression results obtained to the determinants of corporate profitability for the full 1998-2009 sample: Net Trade Cycle and its components

<i>ROA</i>	(13)	(14)	(15)	(16)
<i>DSAR</i>	-0,00065*** (-3,45)			
<i>DSINV</i>		-0,00231** (-2,34)		
<i>DSAP</i>			-0,00057*** (-3,48)	
<i>NTC</i>				0,00047** (2,16)
<i>GDP</i>	0,04 (0,74)	0,06309 (1,14)	0,0173 (0,44)	0,07679* (1,93)
<i>SIZE</i>	0,00660 (0,44)	-0,00182 (-0,11)	0,00718 (0,57)	0,01067 (0,70)
<i>SGR</i>	0,01506* (1,95)	0,01707** (2,29)	0,01164* (1,94)	0,01048 (1,66)
<i>C</i>	-0,01979 (-0,06)	0,13833 (0,36)	0,01255 (0,04)	-0,12887 (-0,37)
R-squared (within)	0,0836	0,0584	0,2436	0,1530
F-test	4,70***	6,22***	3,89***	2,43**

* Significant at the 10% level; ** Significant at the 5% level; *** Significant at the 1% level

CONCLUSIONS

In the empirical analysis made in the previous section we show how working capital management efficiency affects the profitability of the telecommunication services industry. The hypothesis of an efficient short-term financial management having an inverse relation with profitability was tested, and empirical evidence was found that this hypothesis is not satisfied for this specific industry.

Regarding the efficiency measures, the results suggest that the Net Trade Cycle (*NTC*) is a more accurate variable to study the relationship between working capital management efficiency and profitability. Other empirical studies, such as Deloof (2003), Padachi (2006) and Garcia-Teruel and Martinez-Solano (2007), established previously in their studies the Cash Conversion Cycle (*CCC*) as efficiency measure, without empirically testing the differences in results between the two measures (*NTC* and *CCC*).

Concerning the relation between short-term management efficiency and profitability, we conclude that an increase by one day in the Net Trade Cycle, under *ceteris paribus* condition, has a positive impact on Return on Assets. These means that the telecommunication companies need to invest more on their working capital, which will generate more profitability. Therefore, the hypothesis of the potentially positive effect of a reduction in working capital management on the profitability is not fulfilled, since increases in the Net Trade Cycle are associated with increases in profitability.

With regards to the components of working capital management, the empirical results suggest that the number of days sales of accounts payable explain an important share of the profitability variation, and that this variable has an inverse relation with profitability. Despite the fact that these results are consistent with the idea that less profitable firms wait longer to settle the commitments with their suppliers, as suggested by Deloof (2003) and Garcia-Teruel and Martinez-Solano (2007), we consider that this is not valid for the analysis of the telecommunication sector for some reasons, such as the idea that less profitable companies will invest lower amounts in their accounts payable management, having a negative impact on liquidity and profitability.

Even though accounts receivable and inventories management explain less variation of the profitability, these aspects must not be forgotten in order to pursue an efficient short-term management, since there must be synchronization between the three major components of working capital. The results related to the number of days sales of accounts payable suggest that this variable can be more efficient if telecommunication companies want to increase their Net Trade

Cycle, which will have an impact on profitability.

This analysis regarding working capital management efficiency for telecommunication services companies is a useful tool for the financial managers of the sector to analyze how their managing is being used to increase profitability and if useful results can be achieved from an efficient short-term management. In spite the fact that this study did not analyze year-of-year changes of working capital management efficiency results, managers have to consider that changes in policies over time can have an important impact on the medium-long terms, since short-term decisions also impact on liquidity and profitability. Further analysis regarding this issue should be pursued in order to complement the analysis for the telecommunication services industry.

This study is a contribution to the field of financial management as it allows a deeper understanding associated with the short-term management of businesses. Through an analysis focused on a single industry it is possible to better understand the specificities of that sector and how day to day operational decisions may impact on the firms' profitability and liquidity. However, this study is still a work in progress. To better understand the overall process of working capital management in the Telecom industry we still need to include other relevant variables (i.e. macroeconomic and market variables) and to pursue different methodologies. It should be useful to compare with other industries, with other time spans and yearly variations, and check if in this industry size matters, by including smaller companies in the sample.

REFERENCES

- Abuzayed, B. (2012): "Working capital management and firms' performance in emerging markets: the case of Jordan", *International Journal of Managerial Finance*, Vol. 8, Issue 2, pp.155 – 179.
- Afeef, M. (2011): "Analyzing The Impact Of Working Capital Management On The Profitability Of Sme's In Pakistan", *International Journal of Business and Social Science* 2, 22.
- ALShubiri, F. N. (2011): "The Effect of Working Capital Management Practices on Risk Management: Evidence From Jordan", *Global Journal of Business Research* 5(1), pp 39-54.
- Akinlo, O. (2012) "Determinants of Working Capital Requirements in Selected Quoted Companies in Nigeria", *Journal of African Business* 13, pp 1-40.
- Baltagi, B. H. (2005), *Econometric Analysis of Panel Data*. Chichester, United Kingdom, 3rd Edition: John Wiley & Sons.
- Baños-caballero, S., García-teruel, P. J., Martínez-solano, P. (2012) "How does working capital management affect the profitability of Spanish SMEs?", *Small Business Economics* 39, 2, pp 517-529.
- Bellouma, M. (2011): "The Impact of Working Capital Management on Profitability: The Case of Small and Medium-Sized Export Companies in Tunisia", *Management International* 15, Issue 3, pp 71-88.
- Breusch, T. S. and Pagan, A. R. (1980): "The Lagrange Multiplier Test and Its Applications to Model Specification in Econometrics", *Review of Economic Studies*, pp 53-239.
- Brealey, R. A., and S.C. Myers (2003): *Principles of Corporate Finance*. New York, United States of America, 7th Edition: McGraw-Hill International Book Company.
- CFO. (2010): "Working capital management in a post-recession environment: The view from the U.S.", a report prepared by CFO research services in collaboration with The Royal Bank of Scotland, Nov.
- Darun, M.R. (2008): "The Determinants of Working Capital Management Practices: a Malaysian Perspective", *Research Proposal, Commerce Degree with major in Accounting at Lincoln University*.
- Deloof, M. (2003): Does Working Capital Management Affect Profitability of Belgian Firms?, *Journal of Business, Finance and Accounting* 30, pp 573-587.
- Duffy, R. and F. Benlamlih (1997): "Telecoms: A Technology Guide – BPA Group Ltd. London, United Kingdom: FT Media & Telecoms – Pearson Professional Ltd.
- Filbeck, G. and T.M. Krueger (2005): "An Analysis of Working Capital Management Results Across Industries", *Mid-American Journal of Business* 20(2), pp 11-18.

- Garcia-Teruel, P.J. and P. Martinez-Solano (2007): "Effects of Working Capital Management on SME Profitability", *International Journal of Managerial Finance* 3(2), pp 164-177.
- Gitman, L. J. (2002): Principles of Managerial Finance. New York, United States of America, 10th Edition: Addison-Wesley.
- Hausman, J. A. (1978): "Specification Tests in Econometrics", *Econometrica* 46, Issue 6, pp 1251-1271.
- Howort, C. and P. Westhead (2003): "The Focus of Working Capital Management in UK Small Firms", *Management Accounting Research* 14, pp 94-111.
- Kaddumi, T. A. and Imad Z. Ramadan, (2012): "Profitability and Working Capital Management: The Jordanian Case", *International Journal of Economics and Finance* 4, pp 217-226.
- ITU - International Telecommunications Union (2010), Trends in Telecommunication Reform 2009: hands-on or hands-off? Stimulating Growth through effective ICT regulation, http://www.itu.int/dms_pub/itu-d/opb/reg/D-REG-TTR.11-2009-SUM-PDF-E.pdf.
- ITU - International Telecommunications Union (2009), Confronting the Crisis: Its Impact on the ICT Industry, http://www.itu.int/osg/csd/emerging_trends/crisis/report-low-res.pdf.
- Lind, L., Pirttilä, M., Viskari, S., Schupp, F., and Timo Kärri (2012): "Working capital management in the automotive industry: Financial value chain analysis", *Journal of Purchasing and Supply Management* 18, Issue 2, pp 92-100.
- Nazir, M.S. and T. Afza (2009): "Impact of Aggressive Working Capital Management Policy on Firm's Profitability", *The IUP Journal of Applied Finance* 15(8), pp 19-30.
- Organisation for Economic and Co-operation Development (2009): Information and Communications Technologies: OECD Communications Outlook 2009.
- Padachi, K. (2006): "Trends in Working Capital Management and its Impact on Firms' Performance: An Analysis of Mauritian Small Manufacturing Firms", *International Review of Business Research Papers* 2(2), pp 45-58.
- Palombini, N. V. N. and Wilson Toshiro Nakamura (2012): "Key Factors in Working Capital Management in the Brazilian Market", *Revista de Administração de Empresas* 52, pp 55-69.
- Pouraghajan, A. and Milad Emamgholipourarchi (2012): "Impact of Working Capital Management on Profitability and Market Evaluation: Evidence from Tehran Stock Exchange", *International Journal of Business and Social Science* 3. 10.

- Ross, S. A., R. Westerfield and B.D. Jordan (2002): Fundamentals of Corporate Finance. New York, United States of America, 6th Edition: McGraw-Hill International Book Company.
- Shin, H.H. and L. Soenen (1998): “Efficiency of Working Capital Management and Corporate Profitability”, *Financial Practice and Education*, pp 37-45.
- Weinraub, H. J. and S. Visscher (1998): “Industry Practice Relating to Aggressive Conservative Working Capital Policies”, *Journal of Financial and Strategic Decisions* 11(2), pp 11-18.
- Wooldridge, J. M. (2009): Introductory Econometrics – A Modern Approach. Mason, United States of America, 4th Edition: South-Western Cengage Learning.
- World Bank (2010): World Development Indicators and Global Development Finance, Gross Domestic Product – World and Countries, <http://databanksearch.worldbank.org/DataSearch/LoadReport.aspx?db=2&cntrycode=&sercode=NY.GDP.MKTP.CD&yr code=>

A TRANSACTION ANALYSIS OF THE SCOPE OF GLOBALIZATION

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ABSTRACT

This paper proposes an analysis of globalization in an organizational perspective, from the point of view of businesses and managers. It is done at a very general level, including all business sectors. The first part recalls some elements of the theory of production and of the theory of value in order to capture, first, the scope of the analysis and, secondly, the utility of theory in administration, given the distinct nature of management tasks, among other tasks in production. The second part recalls some limits of supply and demand analysis in business administration and then introduces the concepts of a simple transaction model, defines the creation of value in this context, and brings some precisions on the concept of firm. The third part starts with historical references to events leading to a perception of globalization turning the world into a big village and getting all things closer. In the next step of the analysis, the growing distance between resources and needs in a globalized world is underlined, along with growing agency and coordination costs; the benefits of globalization are then derived from a growing diversity of products.

Keywords: Globalization, transaction costs, firms, reservation prices, transaction prices, coordination, uncertainty, arbitrage.

ANTECEDENTS AND CONSEQUENCES OF PERCEIVED VALUE IN INSURANCE INDUSTRY

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ABSTRACT

Insurance industry increasingly needs to establish long-term relationships with their clients through the provision of high-value services. Hence, understanding how the provision of car insurance is viewed by recipients along with the means to reliably measure perceived value are both fundamental. The perceived value is the customer's overall appraisal of the net worth of the service, based on the customer's assessment of what is received (benefits provided by the service) and what is given (costs or sacrifice in acquiring and utilizing the service). In this paper we used a unidimensional approach of perceived value. The results of structural equations modeling show that service quality, distributive justice, expertise of personnel contact, reputation, and lost benefits costs have important influence on perceived value. In turn, perceived value has positive influence on loyalty and word of mouth. Service quality, reputation, lost benefits costs, and distributive justice have influence on loyalty and expertise, reputation, and lost benefits costs are influence on word of mouth. Finally, loyalty affects word of mouth.

ASSESSING HEDGE FUNDS PERFORMANCE USING SHORTAGE FUNCTION AND NON-PARAMETRIC QUANTILE ESTIMATES

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ABSTRACT

There is now a vast literature using non-parametric methods such as DEA to measure the performance of investment funds. The main advantage of these methods is that they can take into account several inputs and outputs. Rankings obtained from these non-parametric methods are nevertheless extremely sensitive to the choice of variables and the choice of direction for improvements: Minimizing inputs with the same level of outputs or maximizing output for the same level of inputs. This paper examines the performance of hedge funds using shortage function, which is more in line with investor preference, and non-parametric quantile estimates which is robust many of the known drawbacks of the DEA estimator (Wilson, 2008). The results compared with those obtained using the DEA, show greater temporal stability and greater consistency in the rankings for years 2006 to 2012.

BEHIND THE BOARDROOM'S DOOR: THE ROLE AND CONTRIBUTION OF CORPORATE BOARDS

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ABSTRACT

So far, academicians have not been able to empirically confirm that boardroom reforms will lead to more effective boards and ultimately positively affect corporate performance. As social actors we all have biased views, as do boardroom members, thus it is necessary to analyse directors' perceptions about their role in order to understand if they are aligned and acting accordingly. The research goal is then to understand what is, in fact, directors' role and contribution. Through a survey-based method board members from Portuguese listed firms were requested to rate the Chairman, the Board, the Senior Independent Director and the CEO performance, through their own perceptions. The survey draws three key conclusions: first, there are, generally, many inconsistencies around the board role boundaries between the chairman and the CEO and, particularly, around their strategic involvement. Second, tensions arise from the way this relationship evolves affecting both teams (the executive and non-executive directors) and third, there is an absence of a clear picture of the board's role regarding its strategic involvement. This study, whilst exploring and understanding directors and their interactions inside the boardroom in a non-Anglo-American context, contributes to opening the 'black-box' of board dynamics, thus 'dismantling the fortress' in boards studies.

ERP SYSTEMS IN THE HOSPITALITY INDUSTRY: VALUE CREATION AND CRITICAL SUCCESS FACTORS

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ABSTRACT

The purpose of this paper is to highlight factors that may be considered critical to successful use of ERP (Enterprise Resource Planning) systems in the hospitality industry, in particular those that seem to be limiting a broader usage of these systems in this industry. The paper also contributes to the understanding of how ERP systems may create value to these industry's businesses. This is done through a reference model, providing the framework to understand how the current vendor's offer fits into the business needs of this industry.

SERVICE QUALITY, SATISFACTION, AND PERCEIVED VALUE: A HOLISTIC PERSPECTIVE IN INSURANCE INDUSTRY

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ABSTRACT

The extent to which service quality is linked to value and satisfaction continues to be debated in the literature. This study develops and tests an integrative model between perceptions of quality, perceived value, and satisfaction of customers' car insurance. Other variables were included in this model. The car insurance industry was chosen as the industry for investigation since it is virtually a pure service with little tangibility and high credence properties.

The results of structural equations modeling indicate that service quality has a direct relationship with perceived value and satisfaction. In turn, expertise of personnel contact, reputation, lost benefits costs, and distributive justice also reveal a direct relationship with perceived value and satisfaction. Finally, perceived value has a direct relationship with satisfaction.

Keywords: Service quality, Perceived value; Satisfaction, Car insurance.

STRATEGIES FOR CREATING NEW BUSINESSES, A SOCIOCULTURAL AND INSTITUTIONAL APPROACH

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ABSTRACT

This paper aims to summarize the main theories from socio-cultural or institutional approach to encourage the creation of new businesses. Given this context, it raised the importance of theoretical study of the factors that influence decision making in the development of new businesses and how it affects the environment in which they operate the same business. The research method used is to review the existing literature by analyzing the major theories involved in the creation of companies emphasizing the socio-cultural approach. The analysis concludes the activity of entrepreneurship to encouraging the creation of companies, being an important factor in economic development.

Keywords: Entrepreneur, Company, Socio-cultural approach, Theories on the creation of companies

TEACHING COMPUTER ASSISTED AUDIT TOOLS AND TECHNIQUES' COURSES: LESSONS LEARNED

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ABSTRACT

Abstract. Individual contexts on information technology acceptance have been a relevant research topic in recent years. Understanding the motivations and identifying the expectations that have impact on information technology or information system individual acceptance has been a worldwide research field for Information systems' research groups. Performance and effort expectancy, social influence and facilitating conditions are the main determinants in individual information technology acceptance models. On facilitating conditions, formal courses attendance on computer assisted audit tools and techniques, CAATTs, can have a positive influence on intention to use/use an information system or technology. Then, 5 students groups, on an Auditing master course and for a period of 5 years, were asked to participate on this research bearing in mind a future and global pedagogical strategy to learn CAATTs which will be in line with the labour market needs on this core area. Indicators were measured and assessed, namely, the determinants on individual acceptance, students' individual assessment on the core competences of the course and their individual scores on the most relevant topics presented. Those indicators are stated and discussed bearing in mind a global pedagogical strategy based on students' individual opinions and assessment on the main aims of the course and lessons learned during this 5 years.

Keywords: Computer Assisted Audit Tools and Techniques, Individual model for information technology acceptance, Pedagogics

THE INFLUENCE OF THE CONSUMER PERCEIVED VALUE ON THE SATISFACTION WITH THE GROCERY RETAILER RELATIONSHIP: THE MEDIATING EFFECT OF THE RISK OF UNSUSTAINABLE CONSUMPTION

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ABSTRACT

This paper proposes a framework to analyse the influence of the different dimensions of the perceived value on consumer satisfaction with the grocery retailer relationship. The research propositions consider, as a mediating effect, the perceived unsustainable consumption risk associated to the purchase. Indeed, it is expectable that the perception, by consumers, of an existing risk of unsustainable consumption, will influence the subsequent perceived satisfaction with the benefits. The research propositions were supported by the literature review on sustainable consumption and consumer perceived value, according to the relationship marketing knowledge.

Keywords: sustainable consumption, customer perceived value, grocery retailer-customer relationship



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