



**10th Annual Conference of the
EuroMed Academy of Business**

**Global and national business theories and practice:
bridging the past with the future**

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Global and national business theories and practice: bridging the past with the future

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FOREWORD

The Annual Conference of the EuroMed Academy of Business aims to provide a unique international forum to facilitate the exchange of cutting-edge information through multidisciplinary presentations on examining and building new theory and business models for success through management innovation.

It is acknowledged that the conference has established itself as one of the major conferences of its kind in the EuroMed region, in terms of size, quality of content, and standing of attendees. Many of the papers presented contribute significantly to the business knowledge base.

The conference attracts hundreds of leading scholars from leading universities and principal executives and politicians from all over the world with the participation or intervention of Presidents, Prime Ministers, Ministers, Company CEOs, Presidents of Chambers, and other leading figures.

This year the conference attracted over 270 people from over 50 different countries. Academics, practitioners, researchers and Doctoral students throughout the world submitted original papers for conference presentation and for publication in this Book. All papers and abstracts were double blind reviewed. The result of these efforts produced empirical, conceptual and methodological papers and abstracts involving all functional areas of business.

ACKNOWLEDGEMENT

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It is acknowledged that a successful conference could not be possible without the special co-operation and care of the Track Chairs and Reviewers for reviewing the many papers that were submitted to this conference. Special thanks to the Session Chairs and Paper Discussants for taking the extra time to make this conference a real success.

The last but not the least important acknowledgment goes to all those who submitted and presented their work at the conference. Their valuable research has highly contributed to the continuous success of the conference.

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BOOK OF CONFERENCE PROCEEDINGS

A SUGGESTED NEW METHOD OF INNOVATION: INTRODUCING THE INTEGRATED QUALITY FUNCTION DEPLOYMENT FOR PRODUCTS & SERVICES

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ABSTRACT

The main purpose of the paper is to present a new method of innovation to help organizations to become more competitive in their markets by better capturing the voice of customers and better implementing it to create new products or improve existing ones. The new method is called integrated QFD which is an integration between the quality function deployment method and the compositional preference measurement method of conjuncture compensated self-explicated method. The paper explains each method and the way they are combined and used.

The method is first introduced in Abu-Assab (2012) under the category of research methods for the particular group of elderly people, and here it is extended to be used as a tool for innovation and to suit consumers in general. The method is a modification of previous methods from Pullman et al. (2002) and from Baier (1998).

Keywords: Quality function deployment, innovation, Self-explicated method, House of quality, Integrated QFD, Conjuncture-compensatory self-explicated method, competitiveness, preference measurement, voice of customers.

INTRODUCTION

The economy of the 21st century is based mainly on information, knowledge and innovation. Lots of competitors and similar products which makes no choice for the companies but to invest in their employees and always seek to be innovative and differentiable.

For example, it is emphasized that in order for organizations to have competitive advantage, they have to effective management for today and simultaneously working on future innovation.

So to innovate, organizations need tools and methods to implement to stay ahead in their domain. In this article, the author suggested a method of innovation for organizations to help them create new products or/and improve on the existing products they have.

The suggested method “Integrated QFD” is based on the integration of the conjuncture-compensatory self-explicated CC-SE method into the quality function deployment (QFD) (see Abu-Assab, 2012). In the coming sections, the two methods are explained and then the suggested method is presented.

QUALITY FUNCTION DEPLOYMENT (QFD)

For the suggested new innovation method, the quality function deployment is the main method used, therefore, the method will be described in this section to help readers in understanding it. The method was first suggested by the author for complex products to help organizations capture the needs of the elderly people in particular, and thus enhance the organizations in producing more adequate products that fits to the real demand of elderly people. The method was first introduced in 2012 as a market research method for organizations and in order to improve their ability to capture the voice of their elderly customers. In this research, the author introduce the method as an innovation method to help companies become more competitive and customer oriented, in general.

Introduction and Definition

QFD focuses on the voice of the customer (VOC) and translates it into engineering quality or engineering characteristics. QFD is shaped from the combination, integration, and development of many concepts, starting with the quality assurance items (Oshiumi, 1966), the quality deployment (Akao 1972) and continuing with the quality chart (Takayanagi, 1972), value engineering which defines a function of a product, to the narrowly defined QFD, and to the quality charts (Akao and Mazur, 2003).

Quality function Deployment is the translation of the Japanese words “hinshitsu kino tenkai”. In its literal sense, it means deploying the attributes/features of a product/service accepted by customers throughout the relevant department of a company (Akao and Mazur, 2003)

One of the key definitions of QFD by Akao (1990) “A method for developing a design quality aimed at satisfying the consumer and then translating the consumer’s demand into design targets and major quality assurance points to be used throughout the production phase.”(also refer to Abu-Assab, 2012; see also Abu-Assab, 2011; Abu-Assab et al., 2010).

QFD enables the companies to focus on the customer and brings better communication between different departments in the company to achieve the optimum customer satisfaction. Additionally, it enables the companies to make the necessary trade-offs between the customer requirements and their abilities and capacities to produce the optimum product (Bouchereau and Rowlands, 2000). As a result, the organization can increase its competitiveness abilities.

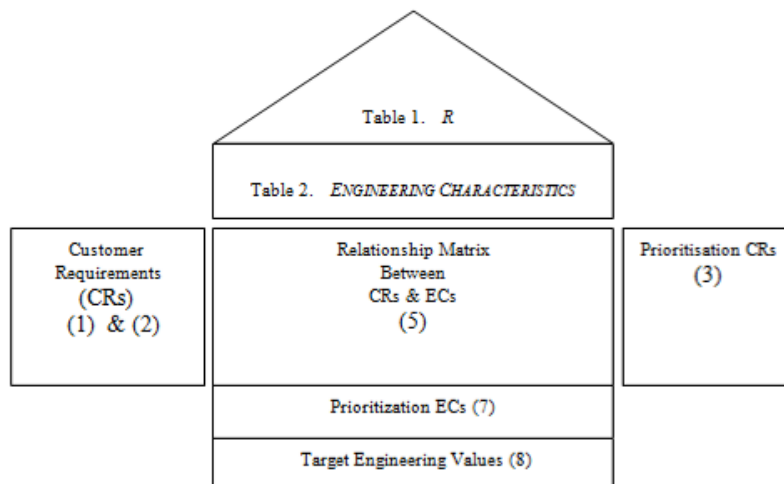


Figure 1: HoQ (Source Abu-Assab, 2012; see also Abu-Assab and Baier, 2010)

The House of Quality

According to Akao (1997), the House of Quality (HoQ) was given this name because of its “triangular top shape” which looks like a roof (Akao and Mazur, 2003). The main purpose of the HoQ is to transform the “Customer Requirements” (CRs) into “Engineering Characteristics” (ECs) and assign target values for the product (van de Poel, 2007). Clausing (1994) described the HoQ as a matrix that provides a conceptual map for the product design process. In this sense, it is a construct for gathering and understanding the CRs as well as finding and prioritizing the ECs. The cooperation among the marketing, the engineering, and the manufacturing departments of a company is necessary for building the HoQ. This cooperation leads to a greater new or improved product success and more profits for the company (Griffin and Hauser, 1993).

The main steps of the house of quality are according to Griffin and Hauser (1993), (1) Collecting the CRs, (2) rating the importances of the CRs, (3) the customer rating of competitive products, (4) determining the ECs, (5) rating of the relationship matrix, (6) rating of the correlation matrix, (7) calculating the importances/priorities of the ECs, and (8) determining the target engineering as seen in Figure 1.

Values for ECs.

Step 1 in the HoQ begins with the collection of the CRs. CRs are listed in the left side of the matrix (see Figure 1). Those CRs are the description of customers’ needs, wishes, and expectations in their own words (refer to Terninko 1997). Typically, the customer needs are also called “customer attributes” and “customer requirements” and they are usually structured in a hierarchy of primary, secondary, and tertiary demands. CRs are usually gathered in focus groups, face-to-face interviews, customer surveys

and trials (Saatweber 2007), analyzing competitors, and listening to customers. However, a major problem related to the CR issue is the correct translation of the words and inferences of customers by the cross-functional expert team (Hauser and Clausing 1988)

In step 2, rating the importance of the CRs, the expert team members rate the CRs based on their direct experience or, e.g., through questionnaires. This step is very critical in the HoQ, because of the various interpretation or calculations of the importance of the CRs which can lead to different results. Many methods are used in the literature to rate the CRs: some researchers use statistical techniques while others use revealed preference techniques. In the former technique, the customers state their preferences for existing and hypothetical products whereas for the latter, customers are judged by both their actions and their words (Cohen, 1995).

Further in step 3, competitive products are rated by customers. In order for companies to match or exceed their competitors, they have to know where they stand in relation to them first (Hauser and Clausing, 1988). The part dealing with benchmarking is located on the right side of the CRs which gathered the customers' evaluations and assessments of the "company's product" and the "competitors' products". This step helps the company identify areas of strengths and weaknesses. It should be seen as an essential step for the company to improve itself against its competitors.

In step 4, determining the engineering characteristics, an interdisciplinary expert team from various departments of the company is formed, usually from the marketing, sales, R&D, engineering, and production departments, to translate the VOC into ECs. It should be noted that any EC may affect more than one CR. Another important issue is that it is expected that the ECs describe the CRs in measurable terms and thus affect the customer perceptions (refer to Hauser and Clausing, 1988; Abu-Assab, 2012).

Afterwards, in step 5, rating the relationship matrix, the interactions or dependences between CRs and ECs are estimated by the cross-functional expert team. According to Franceschini and Rossetto (1995) a consensus is required here. Symbols or measuring systems are often used to rate the strength of the relationship between the CRs and ECs. The two most known measuring systems used in this step are the 1-3-9 and the 1-3-5 ordinal scales (for a description of scales refer to Franceschini and Rossetto, 1995).

Subsequently, in step 6, rating the correlation matrix (roof of the house), the dependency within the ECs is assessed. The expert team assesses the effect of each EC on the other ECs (refer to Saatweber, 2007). Sometimes, the expert team has to take the right decisions between possible conflicts within ECs. This happens when the increase of an EC affects at least one other EC negatively. This results in a conflict concerning the product's design. Objective measures and comparisons (e.g. with the competitors) as well as cost-benefit comparisons help engineers, marketers, and managers of the expert team to decide about the correlations of the ECs process.

In step 7, the importance of the ECs and relative importance of ECs are calculated according to the equations shown in Table 1.

Absolute importance of EC	Relative importance of EC
$AI_j = \sum_{i=1}^m w_i * f_{ij}$	$RI_j = AI_j / \sum_{k=1}^n AI_k$
AI_j Absolute importance of EC_j ($j=1, \dots, n$)	RI_j Relative importance of EC_j
w_i Relative importance of CR_i ($i=1, \dots, m$)	AI_j Absolute importance of EC_j
f_{ij} Relationship coefficient between EC_j and CR_i	

Table 1: The absolute and relative importance of ECs in the HoQ (adapted from Kim et al. 2003; see also Abu-Assab, 2012).

Mathematically expressed, in the relationship matrix (Table 1) a cell (i, j), where the i^{th} defines the row and the j^{th} defines a column is, given a value according to the scale used corresponding to the strength of the relationship between the CR_i and EC_j which is called the relationship coefficient and designates a weak, medium, or strong relationship f_{ij} .

In the last step, step 8, to determine the target values for the ECs, it is essential for the multi-disciplinary team to consider the customer satisfaction values and to be careful not to emphasize tolerances (Hauser and Clausing, 1988). The setting of target EC levels is accomplished in a subjective, ad hoc manner, e.g., by expert team consensus (Kim et al., 2003).

The house is as a common place for the various functional teams of a company, which enables them to communicate together and understand the priorities and goals of one another (Hauser and Clausing, 1988). In short, The house of quality aggregates a lot of information in one table.

In the next section, the second used method in the new suggested method is introduced namely the self-explicated method.

METHOD OF PREFERENCE MEASUREMENT: THE SELF-EXPLICATED METHOD

In this section, the self-explicated method is introduced. The self-explicated method is a known method of preference measurement together with the conjoint analysis method.

Definition of The Self-Explicated Method

The compositional *self-explicated* (SE) method is one of the three main approaches used in marketing to measure the preference structures of respondents (Green and Srinivasan, 1990). Its main underlying idea is to ask respondents directly about their preferences of a product and is based on an additive model (Hensel-Börner, 2000).

Two-Stage Self-Explicated Method

The two-stage SE method consists of a conjunctive and a compensatory stage (Srinivasan 1988; Green et al. 1988). The SE method is differently implemented by various researchers (Green and Srinivasan, 1990). In this section, the conjunctive-compensatory SE approach suggested by Srinivasan (1988) is described and adapted in this research.

Srinivasan (1988) suggested an SE approach called “Conjunctive-Compensatory SE” (CC-SE) that incorporates conjunctive and compensatory stages. The idea in the conjunctive stage is to ask respondents to identify one or two (if any) “totally unacceptable levels” of each attribute. And idea in the compensatory stage is to rate the attributes and levels on a 0-100 or 0-10 scale with the least preferred yet acceptable level assigned 0 and the most preferred level assigned 100 or 10, respectively (Bucklin and Srinivasan, 1991). In doing so, the respondents are explicitly asked to rate the attributes and their levels to elicit the part-worths of the levels and subsequently to obtain the overall utility for the choice alternatives based on the multi-attribute preference model, in which a product is considered as a bundle of attributes (Wilkie and Pessemier, 1973). The model is shown in Table 1 (see Baier and Bruschi, 2009a):

$$y_j = \mu + \sum_{k=1}^K \sum_{l=1}^{L_j} \beta_{kl} \cdot x_{jkl}$$

Such that:

y_j = overall utility of alternative j

μ = average preference value of all alternative

β_{kl} = utility of level l of attribute k

x_{jkl} = 1 When the level l of attribute k in the choice alternative
=0 otherwise

Table 2: Model of (adapted from Kim et al. 2003; see also Abu-Assab, 2012).

This formula represents an additive utility model originating from the compositional model identified by Wilkie and Pessemier (1973) based on the main assumption that the total utility value of an attribute is the sum of the utility value of each of its levels (Hensel-Börner, 2000). Figure 2 presents the main steps of the procedure of the CC-SE method (Srinivasan, 1988).

Two concepts should be explained to understand the steps of the SE method. In step 1, the respondents should understand that when a product has a “totally unacceptable” level that means that this product will be rejected regardless of the other levels. Moreover, in step 3, a critical attribute is the most valuable attribute to the respondent, which is used as an anchor to estimate the importance ratings of the other attributes (see discussion in Srinivasan, 1988).

The main step of the SE methods are:

1. Inform respondents about all attributes and their levels and identify “*totally unacceptable*” levels
2. Determine the “most preferred” and the “least preferred” level for each attribute, excluding the “*totally unacceptable*” levels
3. Identify the “*critical attribute*” and set its importance to 100 and elicit the importance ratings (0-100) for other attributes using the critical attribute as an anchor
4. Rate the *desirability ratings* of the different acceptable levels within the attribute and for each attribute on the scale with the least preferred (but acceptable level) = 0 and most preferred level = 100
5. Calculate the part-worths for acceptable attribute levels
6. Set the part-worths to fall in the range from 0-100 (To make the part-worths more comparable and readable)

Additionally, in step 5, the part-worths of the levels are calculated as follows (Dorsch and Teas,1992):

$$PW_{kl} = \frac{\alpha_{kl}x_{kl}}{100}$$

Such that:

PW_{kl} Part-worth of level l of attribute k

α_{kl} = Self-explicated desirability rating of level l of attribute k

x_{kl} = Self-explicated importance rating of attribute k

The new suggested method is introduced in the coming section.

A New suggested Method of Innovation: Integrated QFD

In this section, the new suggested method of innovation “Integrated QFD” is introduced and explained. This new method was already suggested by the researcher in her work (Abu-Assab, 2012). However, the method was suggested as a new research method for complex products and particularly for elderly people. In this work, the researcher reintroduce the method as a method of innovation and for customers of all ages. The method serves like any other innovation method in enhancing the ability of

the organizations to create and produce new products that particularly comply with the customers' needs and demands from the very first stage of idea creation.

The new method is a modification of the Pullman's et al. (2002) method and Baier's conjointQFD method (Baier, 1998). The two methods are described in details in the previous work of Abu-Assab (2012).

The new method is a combination of the two previously introduced methods in this paper: The two-stages conjuncture-compensatory self-explicated (CC-SE) method proposed by Srinivasan (1988) is suggested to be used to the QFD house of Quality mainly to make the method easier and lower the cognitive burden on respondents in comparison to the other combined methods.

The use of CC-SE method conforms to the consumer behaviour research that empirically recognises the heterogeneity in the choice process across individuals (see Srinivasan, 1988). The approach models the customer choices in two stages: conjunctive and compensatory. Individuals can purely choose in a conjunctive way in which they eliminate all the levels that are totally unacceptable, thus excluding them from further processing or they choose to different degrees in a compensatory way in which they trades off the remaining levels and attributes; Against this background, the author assumes that the CC-SE method would be more suitable to elicit the preferences of the customers of all ages as well as elderly especially for products with many attributes.

The major three phases conducted in the integrated QFD innovative method are:

Selection and Evaluation of CRs

The respondents (customers) and the expert team is built from experts including a number of customers who are considered expert in the selected product of study. In this phase, first the CRs are identified by conducting face-to-face interviews with customers (e.g. 17-20 face-to-face interviews can be a sufficient number to collect the CRs according to Griffin and Hauser 1993). The identification process of the CRs is conducted in the same way as described by Pullman's conjointQFD. That is to say, three members of the expert team separately identify primary and secondary CRs and then conclude their work with a final list of primary and secondary CRs (see Pullman et al., 2002). Then a number of respondents are asked to evaluate the primary and secondary CRs by a one-phase SE method in which the respondents are directly asked to rate their preferences of the CRs on a 1-10 Likert scale. The CRs are then rescaled so that the sum of secondary needs is equal to their corresponding primary CR in the same manner as done in Pullman et al.'s (2002). Additionally, a check is done to make sure that the importance or preferences of CRs ranking correspond to the evaluation given by respondents, otherwise they are then corrected according to their evaluation. Afterwards, respondents are asked to

evaluate a number of competitive products of the selected product on a 1-10 Likert scale for the benchmarking part in the HoQ.

Selection and Assessment of ECs

In this phase, the expert team determine for each CR one or more ECs. Then for each ECs, two or three levels are assigned “convenient option”, “inconvenient option”, and “between option”. Additionally, the influences of ECs on each CR are determined as in the traditional HoQ. Afterwards, the relationship matrix is evaluated using the CC-SE method. For each CR, which is assigned more than one EC, a CC-SE questionnaire is made. The questionnaire is done by elderly respondents. By using the CC-SE method the relationship matrix is quantitatively assessed thus overcoming this problematic issue of the HoQ.

Estimation of the Importance of the ECs

From the CC-SE method, three HoQ can be constructed, namely a HoQ for (1) the conjuncture stage on the aggregated level, (2) the compensatory stage on the aggregated level, (3) the compensatory stage on the individual level

For the aggregated level, the importance of the ECs are calculated in the conventional way, each EC importance is calculated by summing its influences over the CRs multiplied by the weight of each corresponding CR. On the individual level, the importance of the ECs are calculated for each respondent in the conventional way and then the average of the importance of ECs are presented in the HoQ for of all respondents is presented in the HoQ on the individual level.

An additional CC-SE interview is conducted to test the validity in which all the ECs are included in the interview to investigate the respondents’ preferences for the ECs. The “within approach” convergent validity is calculated on each of the three results.

The new method was implemented on the product of smart homes for the target group elderly people and was proven valid (refer to Abu-Assab, 2012; see also Abu-Assab and Szuppa, 2005).

In this paper, the concept is introduced of the new innovation method. Further, the author will be using this method on different industries and different target groups of customers.

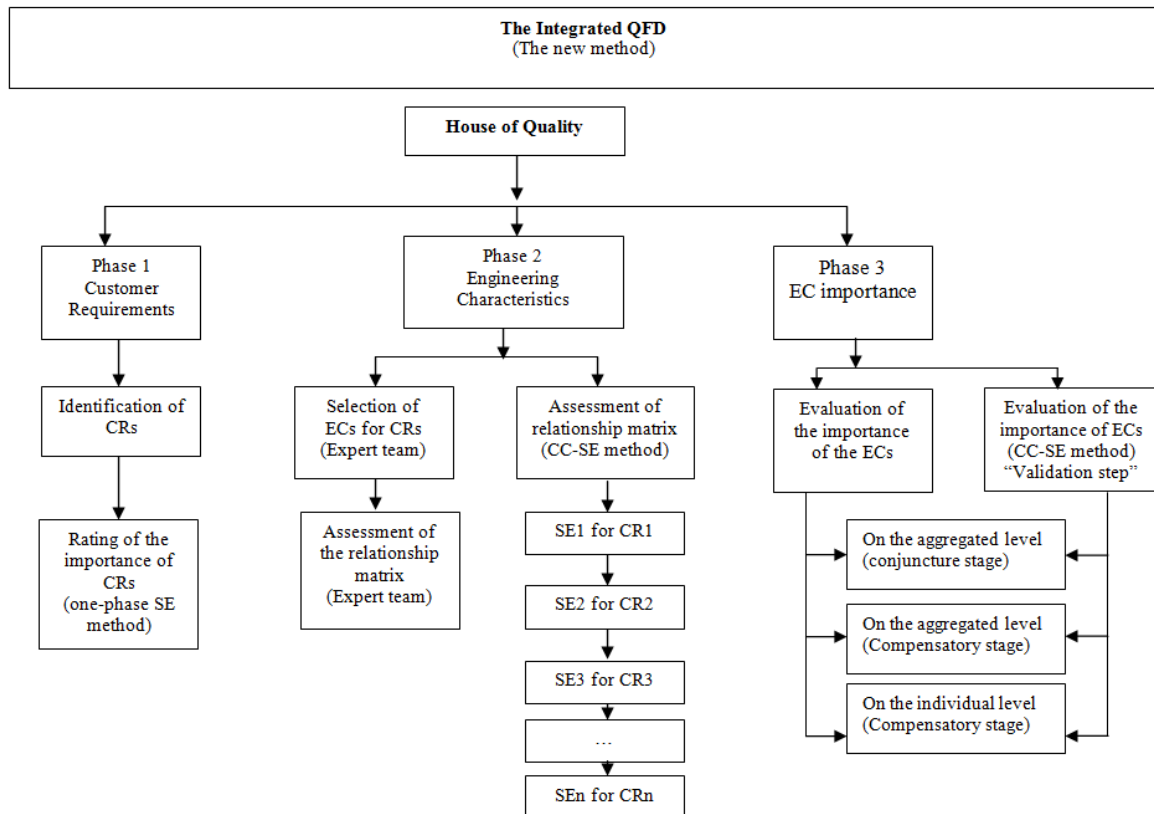
CONCLUSION

In this conceptual paper, a new innovation method was suggested for new and improved product development for different types of customers which is based on the new research method that was suggested in Abu-Assab (2012). The method was implemented on the smart home product and proved

to give good results. Here, the author extends the use of method on products and different categories of customers.

The method should positively contribute to the field of new product development and/or improved products which in return should promote the competitiveness of the organizations and its capabilities to innovate successful products wanted and needed by buyers.

In further research, the author will be implementing the method on different products from different industries and for various targeted groups to test the method.



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PERCEIVED VALUE OF BRANDS: THE EFFECTS OF BRAND ATTRACTIVENESS AND BRAND TRUSTWORTHINESS

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ABSTRACT

The aim of this study is to explore the relationship among brand attractiveness, brand trustworthiness, and perceived value. Data were collected from 458 respondents via face-to-face interview. And the hypothesis tested via Structural Equation Modeling (SEM). As a result, it was found that brand attractiveness affects all four of the perceived value dimensions, and trustworthiness affects only three of them-functional, emotional and monetary value- but it has no influence on the social value.

Keywords: Brand attractiveness, brand trustworthiness, perceived value, SEM

INTRODUCTION

Business in about creating value. In today's business environment, companies are focusing on creating and delivering superior value to customers in order to drive their satisfaction, loyalty, and profitability (Kumar and Reinartz, 2016). The value perception of consumers is a key element in marketing (Morar, 2013), and the marketing literature extensively investigates the perceived value (Sánchez-Fernández and Iniesta-Bonillo, 2007).

Previous research conceptualized value as a trade-off between "get" and "give" elements (Kumar and Reinartz, 2016; Zeithaml, 1988). In other words, consumers' value assessment is based on perceived attributes and costs. Perceived attributes are benefits that the consumers can get buy having those brands, and costs may be monetary- such as price-, or nonmonetary- such as time, effort, and perceived risks. The extant literature defines "*perceived quality*" as the main benefit, and "*price*" as the main cost, on that ground, perceived value is interpreted as "value-for- money" (Sweeney and Soutar, 2001). However, defining value as *value-for-money* is a uni-dimensional approach and there were attempts to redefine value as a multi-dimensional concept (Sheth et al. 1991; Sweeney and Soutar, 2001).

But, what affects the value perception of consumers? One of the main indicators is perceived quality- since it is a base for "get" elements- it affects value positively (Sweeney, 1997). In addition to quality perceived risk also has an impact on consumers evaluations, because it represents a cost as a sacrifice

(Sweeney et al. 1999). Price also found as influencing the perception of value inversely (Doods and Monroe, 1985). Moreover, several extrinsic cues (i.e., price, brand name, and store name, country-of-origin) also stated as affecting value perception (Teas and Agarwal, 2000). This relationship between extrinsic cues and perceived value is mediated by perceived quality and sacrifice.

Other than that, while extant literature enhances the understanding of the components of perceived value, there is no research, to the best of the knowledge of the author, which investigates the effects of brand attractiveness and brand trustworthiness on perceived value as a ground for cognitive-affective approach. Therefore, taking into consideration the lack of research on that issue, this study aims to analyze the relationship among brand attractiveness, brand trustworthiness and perceived value in an emerging country settlement.

Perceived value

Creating and delivering value is a crucial factor for companies to succeed. It is also main activity of marketing, since the marketing is defined as “*the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large*” (AMA, 2013).

There are mainly two approaches to conceptualize perceived value, *uni-dimensional approach* and *multi-dimensional approach* (Sánchez-Fernández and Iniesta-Bonillo, 2007). From a uni-dimensional point of view, perceived value is conceptualized as a single overall concept that can be measured on the basis of quality-price relationship. One of the earliest attempts to conceptualize perceived value defines it as a function of acquisition utility and transaction utility (Thaler, 1985). Acquisition utility “is based primarily on non-monetary costs involved in a purchase and encompasses the subjective benefits derived from a purchase” (Jayanti and Ghosh, 1996, p. 8). However, transaction utility depends on the “perceived merits of the deal” (Thaler, 1985, p. 205). In this model, Thaler (1985) replaced the utility function in economics with the value function in prospect theory (Monroe and Chapman, 1987). However, it is not that simple to measure value perception (Zeithaml, 1988). First, value perception is subjective and has different meanings for consumers. Second, consumers do not carefully calculate the give and get components as opposed to the assumptions of utility models. On that ground perceived value is “the consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given” (Zeithaml, 1988 p. 14). Monroe and Chapman (1987) conceptualized perceived value as a function of perceived quality constituting the numerator while the price as a sacrifice constituting the denominator ($PV = PQ/P$).

From a multi-dimensional point of view, perceived value has an affective dimension as well as a functional dimension (Morar, 2013). Holbrook (1994) developed a complementary view on value and postulated that consumption experiences most likely involve more than one type of value

simultaneously. Because people do not desire products but they want to satisfy experiences, then customer value simply is an “interactive relativistic preference experience” Holbrook (1994 p.27). In other words, customer value involves an interaction between an object (e.g., a product) and a subject (e.g., a consumer). “This object–subject interaction is relativistic in at least three senses (comparative, personal, situational) –“first, involving a comparison among objects; second, varying from one person to another; and, third, depending on the situation in which the evaluation occurs” (Holbrook, 2006 p.715).

Sheth et al (1991) define multiple value dimensions for different choice and decision levels such as buy level, product level, and brand level. They suggested five value dimensions (social, emotional, functional, epistemic, and conditional) in relation to the perceived utility of those levels. Sweeney and Soutar (2001) developed a four-dimensional perceived value model (price/value for money, performance/utility, functional and emotional value).

(1) *Functional value (price/value for money)* is the utility derived from a product due to the reduction of its perceived short-term and longer-term costs (in this study, this dimension is called monetary value).

(2) *Functional value (performance/quality)* is the utility derived from the perceived quality and expected performance of a product.

(3) *Emotional value* is the utility derived from the feelings or effective states that a product generates.

(4) *Social value* is the utility derived from a product’s ability to enhance social self-concept.

In this research perceived value is defined as a multi-dimensional construct formed by functional value, monetary value, social value and emotional value.

Brand Attractiveness

Brand attractiveness is the “ extent to which a brand is attractive, favorable, and distinctive” (Sophonsiri and Polyorat, 2009 p.54). It is the sum of the positive evaluations of the brand’s associations and attributions (Elbedweihy et al. 2016). Brand attractiveness is important for brand success (Kim et al., 2001) since it affects market share positively (Gonzalez-Benito et al., 2008). Also, perceived brand attractiveness influence the relationship between consumers and brands. The quality of the relationship between consumers and brands appears to be dependent on the brand's perceived attractiveness (Hayes et al., 2006). On that ground, it has a direct, positive influence on consumer-company identification (Curra’s-Pe’rez et al. 2009).

Consumers evaluate a product category on the basis of the factors that go beyond the brand level. Boyd and Mason (1999) name those factors as “*extrabrand attributes*” (EBAs), such as the number of

competing firms, firm reputation, the existence of uniform standards of technology, the availability of local product support and repair services, and the actual users. Those EBAs constitute the assessment of brand attractiveness, which turns into the focal point whether to adopt or not. Therefore, attractiveness has an important influence on consumer attitudes and intentions (Boyd and Mason 1999). Brand attractiveness is not merely a function of attributes, but when the brand associations match the consumer's sense of self, a brand is perceived as attractive (Bhattacharya and Sen, 2003). Moreover, value congruence is positively related to brand attractiveness (Elbedweihy et al. 2016). For example, a consumer who cares about animal rights will be drawn more to a brand that have respect for animal rights in their manufacturing and operation process (Bhattacharya and Sen, 2003). In addition, customer-to-customer similarity is positively related to brand attractiveness (Elbedweihy et al. 2016). In that sense, a brand is attractive when customers perceived other users to be similar to themselves.

Brand attractiveness is important in evaluating the attributes of a brand. It, even, uniforms an association related to the brand or the product category, and perceived value is the assessment of brand related attributes and costs, hereby it is hypothesized that:

H1: Brand attractiveness positively affects (a) functional value, (b) emotional value, (c) monetary value, and (d) social value.

Brand Trustworthiness

Brand trust is an important antecedent of brand loyalty (Chaudhuri and Holbrook, 2001; Delgado-Ballester and Munuera-Alema'n, 1999), and a leading indicator of brand equity (Ambler, 1997). The long-term relationship between consumers and brands is based on trust (Morgan and Hunt, 1994). The relationship between trust and volume sales is not a linear, symmetric relationship. Trust builds slowly with sales when consumers are fully satisfied, since it is an affective form of memory (Ambler, 1997).

Trust is possible only after a satisfactory degree of trustworthiness is achieved (Lee and Turban, 2001; McKnight et al., 2002b). Trustworthiness can be defined as beliefs of ability, integrity, and benevolence (Gefen 2002). In order trust to be developed, consumers determine if a business is trustworthy (McKnight et al., 2002). Trustworthiness and trust are not the same concept, but they are related as trustworthiness precedes trust (Serva et al., 1990). In other words, "trust is an act of a trustor, whereas trustworthiness is a characteristic of someone or something that is the object of trust" (Corritore et al. 2003 p. 741). Since trustworthiness leads to overall trust, which is assessed as a determinant of brand equity and perceived quality, it is hypothesized that;

H1: Brand trustworthiness positively affects (a) functional value, (b) emotional value, (c) monetary value, and (d) social value.

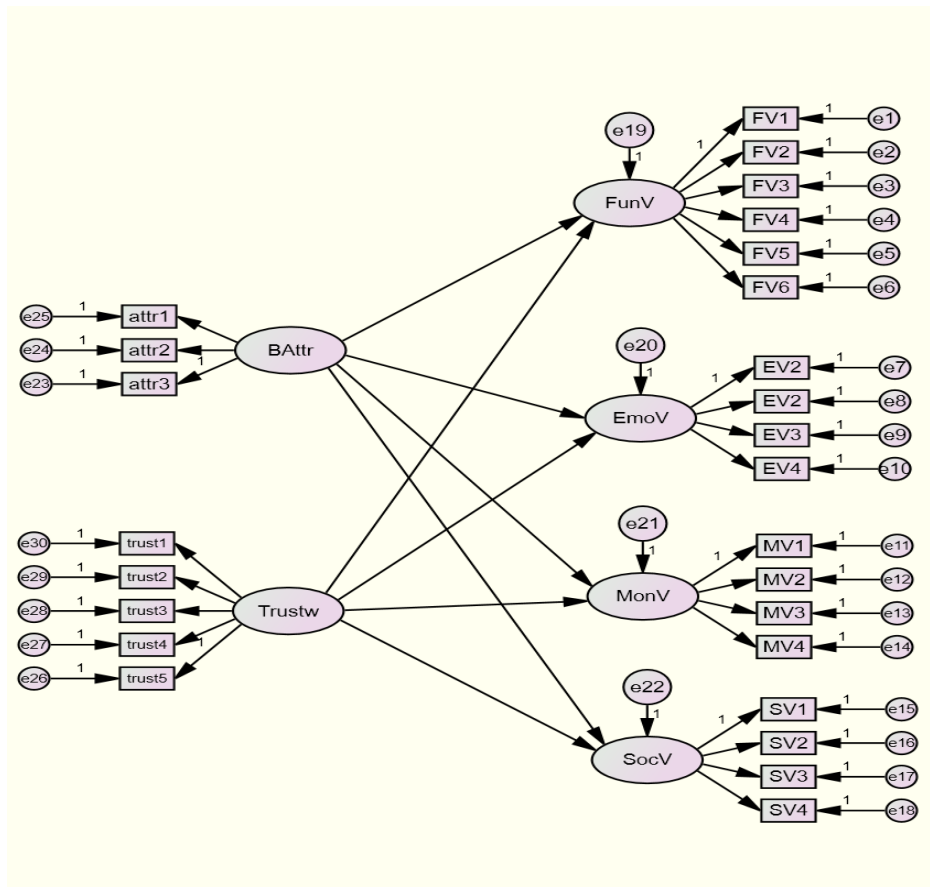


Figure- 1: Model of Hypothesized Relationships

RESEARCH METHODOLOGY

Measurement and Sampling

Data were collected via survey method from the university students. And the product category was chosen as sneakers, which is suitable with the sample. A total of 458 valid and complete responses were included in the final analysis. The socio-demographics of the sample is as follows: Gender (53.3 % female, 46.7 % male), Age group 21-23 (64,4 %), Income level: 1500 Euro (34.9 %). Because it is a student sample, sneakers were chosen as a subject to study.

In order to measure the variables, established scales were used. Perceived value was adopted from Sweeney and Soutar (2001), brand attractiveness was adopted from Wang and Yang (2010), and trustworthiness was adopted from Erdem and Swait (2004). Scales were translated and back-translated to ensure the consistency.

RESEARCH FINDINGS

The Reliability Analysis

Prior to test the hypothesis, the reliability of the scales was evaluated via Cronbach's Alpha coefficient and the exploratory factor analysis was run to check the validity. Table 1 summarizes the Cronbach's Alpha values and the explained variance of the constructs.

Table 1: The Results of Validity and Reliability Analyses

Constructs	# of items	Cronbach's Alpha	Variance Explained (%)
Brand attractiveness	3	.829	59,567
Brand Trustworthiness	5	.790	70,552
Functional value	6	.754	66,704
Emotional value	4	.893	75,727
Monetary value	4	.863	71,122
Social value	4	.883	74,137
Overall value	18		66,900

As given in Table 1, all the constructs are reliable, and explain at least 59.5 % of variance. Then, the research hypothesis tested via SEM.

Structural Model Testing

The overall fit measures of the structural model indicate an adequate fit of the model to the data (Chi-square/df=3,382; CFI=.891; TLI=.877; IFI=.892; GFI=.861; RMSEA=.072). The results provide strong support for the conceptual model displayed in Figure 1, and Table 2 presents a summary of the hypotheses tests. As a result, all the hypotheses were supported except H2d, which is testing the relationship between trustworthiness and social value.

Table 2: Regression Weights

			Estimate	S.E.	C.R.	Sign.	Reg. Weights	Std.
Func.V.	<---	Br.Attr.	,341	,042	8,057	***	,467	H1a supported
Emo.V.	<---	Br.Attr.	,670	,064	10,465	***	,668	H1b supported
Mon.V.	<---	Br.Attr.	,338	,051	6,581	***	,375	H1c supported
Soc. V.	<---	Br.Attr.	,449	,061	7,321	***	,438	H1d supported
Func.V.	<---	trustw	,616	,060	10,238	***	,631	H2a supported
Emo.V.	<---	trustw	,532	,065	8,208	***	,397	H2b supported
Mon.V.	<---	trustw	,484	,066	7,300	***	,402	H2c supported
Soc. V.	<---	trustw	,093	,069	1,342	,180	,068	H2d not supported

Functional value $R^2 = .616$, Emotional value $R^2 = .603$, Monetary value $R^2 = .302$, Social value $R^2 = .196$

R² values represent the explanatory power of the dependent variables and the overall adequacy of the model. It displays the explained percentage of endogenous latent construct by exogenous latent variables (Sirohi *et al.*, 1998). For functional value R² value is .616, for emotional value it is .603, for monetary value it is .302 and, for social value it is .196. Brand attractiveness and trustworthiness explains nearly 60% variance of functional and emotional value. However, their exploratory power is low for monetary value, and social value.

CONCLUSION AND DISCUSSION

Extant marketing literature has investigated the concept of creating and delivering value to the customers. In order to drive satisfaction, loyalty and profitability, companies should focus on value creation (Kumar and Reinartz, 2016). This study seeks to find answers the affects of brand attractiveness and trustworthiness on perceived value.

Perceived value is the trade-off between the benefits that consumers expect or experience, and the undesired consequences (Gutman, 1982). The central aspect is that, consumers choose actions that, *ceteris paribus*, maximize the desired consequences and minimize concurrent undesired consequences (Kumar and Reinartz, 2016). Benefits are derived from the attributes of the offerings, while undesired consequences are the sacrifices or costs- either monetary or nonmonetary, such as price, time, effort and risk. Consumers are not able to perceive the entire objective attributes clearly (Kumar and Reinartz, 2016), but form a composite perception. Brand attractiveness and brand trustworthiness can also be assessed as brand attributes. Therefore, it was hypothesized that brand attractiveness and trustworthiness positively affects perceived value.

As a result, it was found that brand attractiveness affects all of the perceived value dimensions- functional, emotional, monetary and social value. And when the standardized regression coefficients checked, it is seen that brand attractiveness dominantly affects emotional value (.668). In addition to brand attractiveness, trustworthiness also affects three of the perceived value dimensions- functional value, emotional value, and monetary value, but it has no influence on social value. And trustworthiness has a major impact on functional value (.631).

The study contributes to the literature by defining the brand attractiveness and trustworthiness as determinants of perceived value. When consumers perceive the brand is elegant, beautiful and attractive, they perceive it is well made, has a consistent quality, offers value for money, give them pleasure, make them feel good, and help them to feel acceptable. Moreover, when they think that the brand delivers what it promises and has believable claims, they perceive the brand generates functional, emotional and monetary value.

As is the case with any research, the study has several limitations that may generate further research avenues. The findings may be limited to the sample and the brand investigated in this research. Because a student sample was used, the findings should be verified for other samples. Besides, one product category and one brand were investigated in the study. Therefore, other product categories should be tested for generalizability.

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**ADVANCING THE PRIVATE HEALTHCARE MANAGEMENT SYSTEM
IN LEBANON AND THE MIDDLE EAST - INTRODUCING NEW
MEDICAL BENEFITS BY THIRD PARTY ADMINISTRATORS**

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ABSTRACT

The definition of healthcare in the Middle East has recently been changing in accordance with the international healthcare advancements by incorporating new medical benefits and assessing the cost-benefit of these added services. Most of those added services were used to be viewed as being too expensive to be covered, irrelevant to core medical practices or simply secondary medical services that can be ignored. Changes in approaches to health issues such as mental disorders and sexually transmitted diseases and in particular the decrease in the taboo surrounding HIV infection, infertility and obesity has allowed the Ministry of Public Health (MOPH) with the support of Third Party Administrators (TPA) to tackle those issues in the Middle East. TPAs have played a crucial role in this aspect by highlighting the fact that those mentioned medical conditions do not have a high financial burden and covering them would in fact greatly help patients in need. In order to elaborate this point, this paper will look at certain healthcare trends and medical benefits newly added by TPAs in the region.

Keywords: Healthcare Management, Health Benefits, Middle East, Lebanon, Ministry of Public Health (MOPH), GlobeMed, Insurance Policies, National Social Security Fund (NSSF), Insurance Regulatory and Development Authority (IRDA)

INTRODUCTION

Large increases in health-care costs can make it difficult to balance a budget, but at the same time, health-care benefits are pivotal in maintaining an up-to-date healthcare level. Governments in the Middle East with the help of Third Party Administrators (TPAs) need to closely monitor health-care costs and choose approaches that make use of the jurisdictions, purchasing power, shared costs, and ultimately health promotion.

This paper will be based on analyzing the added benefits newly covered by a major Third Party Administrator in Lebanon and the Middle East - GlobeMed Lebanon (formerly known as MedNet Liban till September 2012).

Policies determine what is covered, what is excluded and what is subject to financial limitations.

Over the years, the policies have been revised several times in order to add new benefits as the healthcare needs arise. Major updates have been implemented in several medical fields ranging from congenital disorders, to infertility and organ transplantation. In fact, while all the healthcare industry is covering "sickness treatment", some Third Party Administrators are shifting their interest to "sickness prevention", promoting prevention and wellness-education and even extending the scope of coverage to encapsulate palliative care.

In this paper, we visit the newly added benefits and assess the impact they had on the beneficiaries especially since they were previously exclusions that were recently transferred to covered conditions or procedures.

As previously stated, the policy is constantly changing to accommodate emerging needs; many benefits were added to various programs, but we will limit our review to subjects that we consider resulted in major changes and healthcare impact.

The benefits that will be visited are listed below; these were added gradually as of year 2012.

1. Transplantation, added in May 2012
2. Psychiatric and mental disorders, added in May 2012
3. Infertility, added in May 2012
4. Pet scan and VCT 64, added in May 2012
5. Morbid Obesity Surgery, added in October 2014
6. HIV and other Sexually Transmitted Diseases, added in May 2015

Other added benefits of importance also include video capsule endoscopy, OCT (Optical coherence tomography), non-post-traumatic prosthesis, and many others.

The general aim of this paper is to augment the Lebanese Healthcare Management Association's goals that revolve around assessing and advancing healthcare solutions through the widening of the scope of healthcare services that need to be covered by Third Party Administrators. These services would be proven in this paper to have bearable financial costs while at the same time immensely advancing the healthcare level in Lebanon and the Middle East.

The objectives of this paper would therefore be:

1. To shed light on several healthcare services that have been newly introduced into the general healthcare practices in the Middle East but which needed the support of private Third Party Administrators in order to include them in the applied policies.

2. To highlight the impact of covering HIV and other sexually transmitted diseases that were once thought to be completely out of the scope of health coverage schemes. The same applies to organ transplantation, psychiatric disorders, infertility, Pet-Scans and bariatric surgeries.
3. To delve into each of the six most significant healthcare services and elucidate the cost-benefit and advantages of including those services into the common mainstream healthcare system.
4. To present an example which can serve future healthcare assessment projects in being able to persuade healthcare Third Party Administrators to adopt and cover potential healthcare services.

LITERATURE REVIEW

When trying to understand the different types of healthcare coverage programs and policies, it is important to know the definition of policy exclusions and restrictions which were the subject of criticism in several papers. By this token, healthcare plans should be assessed from different perspectives. Even though we are tackling the newly covered benefits in this paper, it is important to note that policy exclusions and restrictions are important as well. Exclusions arise when one is not covered at all for certain services. Restrictions however arise when one agrees to receive only limited benefits for certain services. This might have the benefit of paying a lower premium in return. In her paper, 'What Does That Mean? Understanding Health Insurance Coverage', Mila Araujo has defined what a lifetime maximum, out-of-pocket expenses and limitations on pre-existing conditions are. "A pre-existing condition is a medical condition that the insured had before the insurance policy began. Some plans will cover pre-existing conditions while others may completely exclude them. Pre-existing conditions may sometimes be subject to a waiting period before they are covered, other times they are excluded completely" (Araujo, 2016). This would constitute a win-win situation in certain instances when certain pre-existing conditions might not pose a health threat for the policy holders and excluding them might save those holders money by paying lower premiums and removing or lowering the financial limitation on other diseases that might otherwise pose a higher threat. Moreover, experimental and investigational therapies are still not covered by most coverage schemes in the Middle East because of the mere fact that they are still unproven therapies that might be detrimental to one's health. However, in several instances, rising premiums have been paired with increasing exclusions. This is the case with some healthcare coverage programs in Australia. "With insurance premiums rising faster than inflation ... policies are being stripped of cover deemed unnecessary, or laden with fees and charges that members pay only when treated. Former health official Shaun Gath is warning that this trend will force insurers to increase the price of entry-level products, potentially deterring customers. The Australian Competition and Consumer Commission

(ACCC) has also raised concerns over the increasing number of policies, changes to benefits and the rise of exclusions, restrictions, excess and co-payments. 'This complexity makes it harder for consumers to understand and respond effectively when insurers change their benefits, and makes consideration of reforms to improve benefit change notifications in this industry even more important,' the ACCC states in its latest report to the Senate" (Parnell, 2017).

When the civil war ended in 1992, the health sector in Lebanon faced several problems: the weakened Ministry of Public Health (MOPH), rapid cost escalation in health expenditure, particularly MOPH expenditures, unrestricted growth of the private sector and a weakened primary health care system. In response to these problems, the government adopted a health sector strategy in 1993. Important elements of this strategy included strengthening the role of the MOPH and containing the rapid growth in health expenditure. While the long-term objective of the health sector strategy is to improve the allocation and use of resources in the public and private sectors, the short-to-medium term objectives have focused on improving the managerial and administrative functions of the MOPH, including a comprehensive package of curative and preventive services at all primary health care facilities, strengthening of hospital management and implementing service delivery capability and alternative health financing options (Kronfol, 2006). Moreover, a recent endeavor in 2016 was the collaboration between the MOPH and three TPAs in Lebanon whereby those TPAs would be helping the MOPH in both managing and auditing health claims.

With the growth of private voluntary insurance in the unregulated healthcare market, costs of healthcare are likely to go up. Managed care organizations in many developed countries play important role in containing costs. The Insurance Regulatory and Development Authority (IRDA) has paved the way for insurance intermediaries such as third party administrators (TPAs) which are going to play a pivotal role in setting up managed care systems. TPAs have been set-up with the objective of ensuring better services to policyholders and mitigating some of the negative consequences of private health insurance. However, given the demand and supply side complexities of private health insurance and health care markets, insurance intermediaries face challenging tasks to achieve these objectives. Right in the early stages of its development, the IRDA has defined the role of TPAs to manage claims and reimbursements. Their role in controlling costs of health care and ensuring appropriate quality of care remains less defined. In order to mitigate the risks of working capital, insurance companies may be required to keep cash balances with TPAs to meet the reimbursement pressure (Bhat, 2004).

GAP(S)

Mustafa Younis who is a member of the Executive Committee of the International Society for Research of Healthcare Financial Management states that an emergent issue in the Middle East is the long-term policy to deal with access to healthcare and health for the growing aging population. In his speech to Laura Dormer, the commissioning editor of Future Medicine, he states that the government and other healthcare organizations are increasing their focus on preventive healthcare as a means of cost containment and outcomes improvement. They have used the media and other educational outreach to promote immunizations and other forms of prevention. However, they continue to face the major obstacles of low literacy rates and political instability in the region, which can limit the success of these efforts (Younis, 2013).

The Middle East is further challenged by high health care costs on a per capita basis, significant variation in the quality of care provided across sectors, and large gaps in services. Boston Consultancy Group was asked to assess and benchmark performance, develop recommendations, and create a roadmap for change and their recommendations included increasing preventive care and integrating the public and private healthcare sector. "Creating value for patients is both the ultimate goal and an increasingly critical competitive advantage for health care payers and providers worldwide. Payer organizations are being challenged to manage funding gaps and improve the care of members within a changing regulatory environment. Health care providers must transform their business models to deliver cost-competitive services that improve patient outcomes and deliver sustainable growth for the organization" (Farber, 2017).

In the United States, the new healthcare reform law (the Patient Protection and Affordable Care Act or "PPACA") required healthcare payers and insurance companies to cover additional preventive care services and eliminate member cost-sharing (copayments, deductibles, or coinsurance) for certain in-network preventive care services (Laxmaiah). The question that arises here is why the Middle East is still lagging behind on this front? It is clear that healthcare reform needs to kick in. This reform can only be done through collaborations between Third Party Administrators and the Ministry of Health and by extending the horizons of the existing healthcare benefits. Although many benefits have been introduced, still much reform is needed to be done.

METHODOLOGY

This paper is based on the statistics, real-life medical examples and assessments – hence, it is a quantitative research using a deductive approach - conducted on data from a leading private healthcare Third Party Administrator in the Middle East, GlobeMed Lebanon. The ontology is that of

a positivist and the epistemology is positivism; this leads to a positivist paradigm. In essence, we will focus on the Lebanese market and numbers pertaining to the Lebanese adherents – which is the sample of study. As for the methods to be used, this research will utilize the IBM Cognos Analytics software which is a business intelligence and performance management tool in order to personally extract and analyze all the needed data. Besides Cognos Analytics, we will take advantage of a healthcare platform, 'i-care 2', which is utilized by GlobeMed Lebanon and which has access to all the medical records including adherents' profiles, electronic medical records and healthcare provider data. In this manner, all the needed quantitative data relevant to our study are extracted and linked to other financial and medical data in order to draw conclusions.

HYPOTHESES TESTED

H1: The addition and implementation of new healthcare benefits by TPAs is cost-efficient.

H2: The addition and implementation of new healthcare benefits by TPAs would lead to a win-win scenario between the guarantors and adherents.

DATA GATHERING AND ANALYSIS

1. Transplantation:

While transplantation is described for kidney, liver, heart, pancreas, lung, cornea, skin, and bone marrow, our review will be limited to bone-marrow and kidney transplants because of the scarcity of cases.

In the following section, we will study 8 bone marrow and 7 kidney transplantations.

1.1 Bone-Marrow Transplantation (BMT):

Bone marrow transplantation, or stem cell transplantation, is the process of taking healthy stem cells from the blood or bone marrow and transferring them later on into a malfunctioning bone-marrow.

In the experience of GlobeMed Lebanon, since it started covering bone-marrow transplantation in May 2012 for its Perpetual and Mutually Upgraded Plus programs, only 8 patients needed this newly introduced benefit out of the 30 identified patients in the whole population including the groups that have policies that are the same as NSSF benefits.

The only two providers where bone-marrow transplantation (BMT) was done for GlobeMed Lebanon patients' were the American University of Beirut Medical Center and the Makassed General Hospital.

The outcome is not as impressive as in the kidney transplantation (presented later) , but the number of cases reviewed is minimal and does not permit to make conclusions .

Only one woman who was 65 years old died during the same hospitalization of the bone-marrow transplantation. She had T-cell lymphoma diagnosed in February 2014, underwent the autologous bone-marrow transplantation in May 2016, and died of sepsis around one month later while still in hospital.

Another woman who was 65 years old, first diagnosed with Multiple Myeloma in September 2015, had 24 sessions of chemotherapy, followed by successful autologous bone-marrow transplantation. However, she died one year later of aspergillosis pneumonia.

The six remaining patients are still alive but with variable outcomes: stroke, relapse and chemotherapy four years later but with no direct complications. By reviewing the expenses related to this new benefit, the average cost of the procedure was 35,000 USD. The total cost incurred for the 8 patients related to their diseases was 809,640 USD; but it is important to note that regular chemotherapy cycles before the BMT are not included in the financial limitation.

It is worth noting that in the Lebanese market, transplantation is not yet included in most of the policies. But since its introduction under GlobeMed Lebanon's policies in 2012, the experience is considered encouraging, and out of the 94 cases with diagnosis listed in the indications of BMT, eight could benefit from it under their insurance coverage in Lebanon.

Although the network covered under GlobeMed Lebanon includes the MENA region and France, there are no reimbursement claims from abroad and all the cases were done in Lebanon.

1.2 Kidney Transplantation:

It is well known that end-stage renal disease may lead to death; only dialysis and kidney transplantation are available to treat this condition.

In Lebanon, there are 2 major payers: the public sector and the private sector.

Regarding the public sector, the NSSF and MOPH are paying directly the fees of the surgery to the hospital. They do cover also the cost of immunosuppressive drugs needed to maintain the life of the transplanted kidney.

In the private sector, most of the policies are still excluding kidney transplantation. GlobeMed Lebanon added the transplantation to its covered benefits in May 2012, subject to a life-time financial limitation.

Between 2012 and June 2015, GlobeMed Lebanon covered 7 cases of kidney transplantations. While the total financial limitation for the 7 cases was 780,000 USD, the cost of the procedures was only 180,260 USD, and the real spent amount was 107,586 USD since some patients had co-insurance.

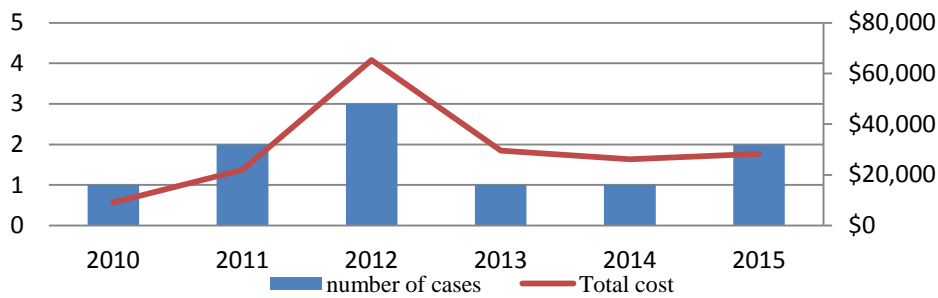


Figure 1: Kidney Transplantation

While the number of cases is not the most significant factor under study here, it should be noted that the average cost over the years strongly depends on the admission class of the patients. The good news is that 100% of the kidney transplantations procedures covered by GML were successful.

2. *Psychiatric and Mental Disorders*

While reviewing the number of patients who benefited from this newly added benefit, we found 21 patients from 2012 through 2015, 17 of them being female and 4 being male.

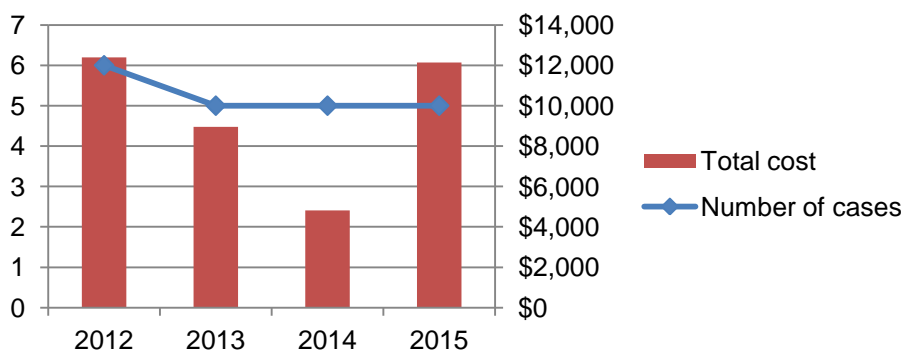


Figure 2: Psychiatric cases covered as of 2012

As can be seen in the figure above, the total cost incurred is not major and the maximum length of stay was 11 days for a case of major depressive disorder. The ages of hospitalized patient ranged between 21 and 88 years.

3. *Infertility*

GlobeMed Lebanon has extended its coverage of infertility in 2012 for the following coverage plans: Mutual Upgraded Plus, Perpetual Program, Perpetual SP Limited Network. This coverage for infertility covers laparoscopy and hysteroscopy procedures for females whereas for males it covers varicocele repair procedures. However, the newly added infertility benefit does not cover in-vitro fertilization or intra-uterine insemination procedures.

3.1 *Males: Varicolectomy*

Varicoceles are enlarged varicose veins that occur in the scrotum. Between 2012 and end 2015, GlobeMed Lebanon covered 337 varicocele surgeries, out of which 57 fall under the newly added

benefits. The age of the beneficiaries ranged between 12 and 51 years. Most of them had one surgical intervention with no further complications. All the hospitals can provide this type of surgery, so claims occurred in 67 hospitals within the GML Network.

Going back to 2010 and 2011, we noted that GML was rejecting around 80 requests of varicocele repairs per year. GlobeMed Lebanon’s male population counts for around 105,000 adherents, around 60,000 of them being between 12 and 51 years of age. Since coverage of infertility is not yet comprehensive, no one can estimate, from the number of varicocele cases covered, the rate of infertility in the subject male population.

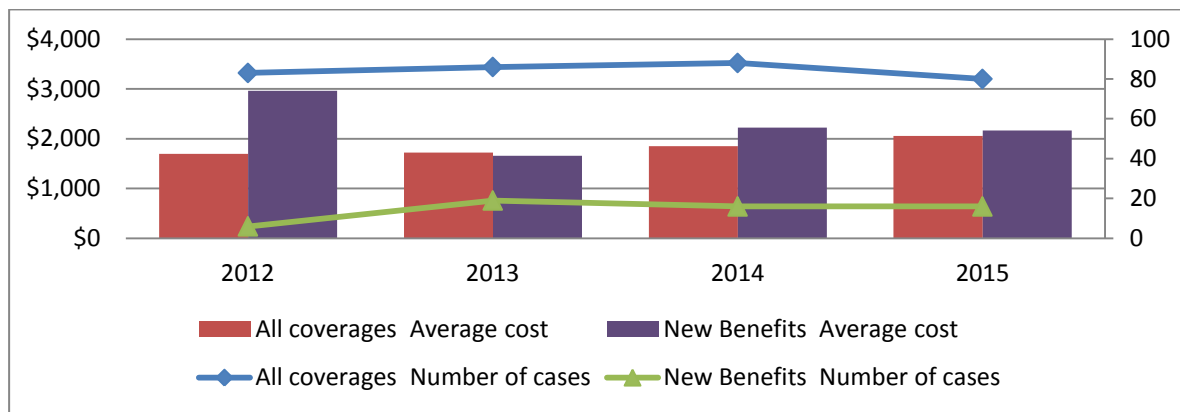


Figure 3: Varicocele in GML population

3.2 Females: Laparoscopy and Hysteroscopy

The most common procedures associated with infertility in women are laparoscopy and hysteroscopy. Both procedures can be performed for several medical conditions other than infertility and are inherently covered, such as pelvic pain, hemorrhage, etc...

If we limit our review to the cases with a final diagnosis of infertility, we have 10 cases between 2012 and the end of 2015, with a mean age of 36 years and an average cost of 1,401 USD.

Most of the laparoscopies done for infertility of tubal origin have an average cost of 2,522 USD while most of the hysteroscopies are done for endometrial hyperplasia with an average cost of 603 USD.

If we take into consideration all cases of hysteroscopies and laparoscopies in those years, for all ages including post-menopausal women, the below table will describe the situation. As can be seen, the numbers are quiet more than if infertility is taken alone which means that such procedures done for infertility alone are cheaper possibly due to lower expenses in accompanying costs.

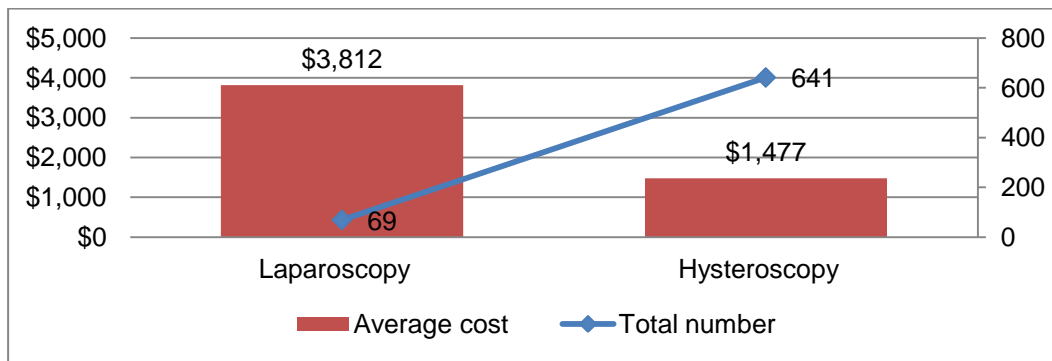


Figure 4: Laparoscopy and Hysteroscopy, all causes (not only infertility)

Our data shows that the number of claims for such procedures is gradually increasing over the years. Moreover, the age range of women undergoing the aforementioned procedures is mostly between ages 32 – 44 years and the total cost of those procedures over the years (2012 – 2015) for the newly covered plans sum up to nearly \$298,180 in those 4 years. However, the average cost per claim is relatively stable and the increase in total cost is mainly related to the increase of accepted claims over the years.

Year	Number of Accepted Claims	Total Cost (USD)	Average Cost/Claim(USD)
2012	85	\$51,734.73	\$608.64
2013	110	\$63,830.13	\$580.27
2014	130	\$79,106.94	\$608.51
2015	168	\$103,508.30	\$616.12
Total	493	\$298,180.10	Average \$603.4

Table 1: Average cost per claim

Now, let’s look at the rejected cases of infertility before the year 2012 (before implementing the novel coverage) as compared to that rejection as of year 2012 onwards:

Our data shows that there were 36 rejected cases of infertility during the years 2010 till 2011, 15 of which were in 2010 and 16 being in 2011. So, 15.5 claims per year were rejected in those two years and this average rate of rejection decreased to 9 claims per year as of year 2012 onwards. Based on the fact that the average cost per claim was around 603 USD, then around 5,500 USD per year were related to rejected claims of infertility as of year 2012 onwards and around \$9,400 per year is related to rejected claims before that. Therefore, the rate of approval of infertility cases increased by more than 72%.

4. PET-Scan and VCT-64

4.1 PET-Scan:

A minimally invasive diagnostic imaging procedure, PET uses a radioactive tracer to evaluate glucose metabolism in tumors and in normal tissue. TPAs in Lebanon have started covering PET-Scans for oncology cases only. Studying the covered PET-Scans up until 2015, GlobeMed Lebanon covered them

on out-patient basis, and the average cost of the test varied between 1,000 USD and 1,088 USD.

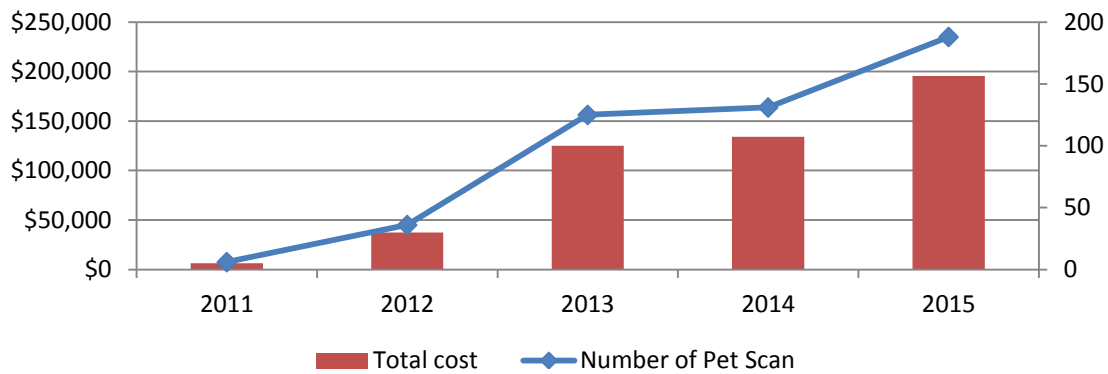


Figure 5: Number and Total cost of Pet Scan from 2011 to 2015

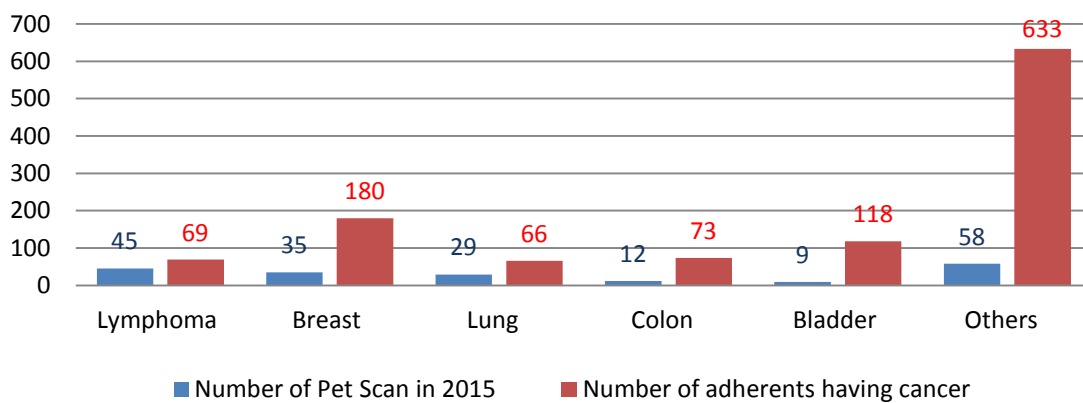


Figure 6: Number of Pet-Scans vs. number of cancer patients in 2015

GlobeMed Lebanon had 1,139 adherents in 2015 diagnosed with cancer and covered 189 PET-Scans, sometimes twice and more for the same patient during the same year. Although GML is sure the PET-Scanning is providing better cancer staging and follow-up, it does not have enough data to evaluate the impact of introducing PET-Scan to its policies.

4.2 VCT-64 (Coro-Scan):

The heart is known to be a “noble organ”. Preserving it is a major concern to any human being. GlobeMed Lebanon decided to cover this test even though it is not yet recognized by the NSSF.

As can be seen in the table below, the average and total cost of VCT-64 has been increasing over the years and this is related to the increasing number of patients undergoing this imaging technique. This is based on 2 factors: the increase of awareness to the benefits of this imaging technique and an increase in the awareness in recognizing the availability of it.

	2012	2013	2014	2015	2016
Sum Cost	\$1,458.61	\$14,564.74	\$29,686.02	\$49,792.56	
Average Cost	\$540.65	\$502.23	\$645.35	\$655.17	\$688.53
Count	4	29	46	76	

Table 2: Average and total cost of VCT-64

However, it should be noted that the coroscan did not replace the traditional cardiac catheterization which is done on an in-hospital basis.

5. Morbid Obesity Surgery (Bariatric Surgery)

Obesity is a world-wide epidemic and is associated with multiple serious co-morbidities, both physical and psychological.

Body Mass Index (BMI) is a simple index of weight for height that is commonly used to classify overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of his height in meter.

For adults, WHO defines overweight and obesity as follows:

- Overweight is BMI greater than or equal to 25.
- Obesity is a BMI greater than or equal to 30.

Since starting covering bariatric surgeries for morbidly obese adherents in October 2014, GML has approved and covered nearly 220 cases of such surgeries.

Furthermore, the increase in medical expenses and hospitalization fees has rendered those surgeries more expensive. This can be clearly noted in the graph below which shows the increasing trend in the average cost of the procedure in Lebanon.

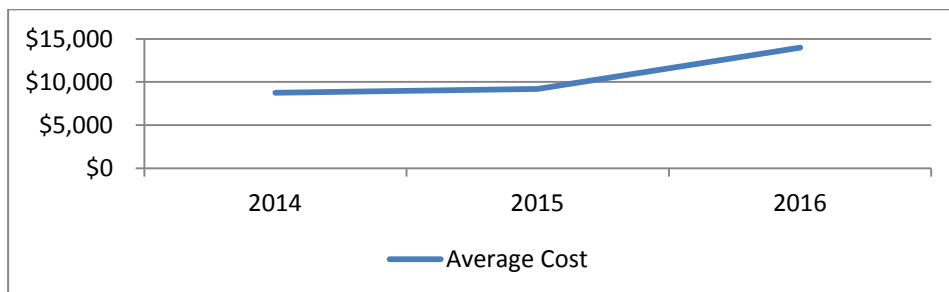


Figure 7: Average cost of morbid obesity surgery over the years in GML population

6. HIV Tests:

The number of patients undergoing HIV tests is not huge but nonetheless significant. Knowing that HIV screening and testing helps in early detection, treatment and consequently a decrease in the number of patients reaching the AIDS stage, covering this test can have a great positive impact on our patients' health status and on decreasing the outbreak of this global disease.

We have not detected a significant difference in ordering this test between males and females (394 for females versus 362 for males). Moreover, the total cost of doing this test over the past 6 years for our population of adherents amounts to 16,686 USD knowing that a single admission for any of our

patients can cost approximately this much if he/she presents with serious infections and immune-compromise.

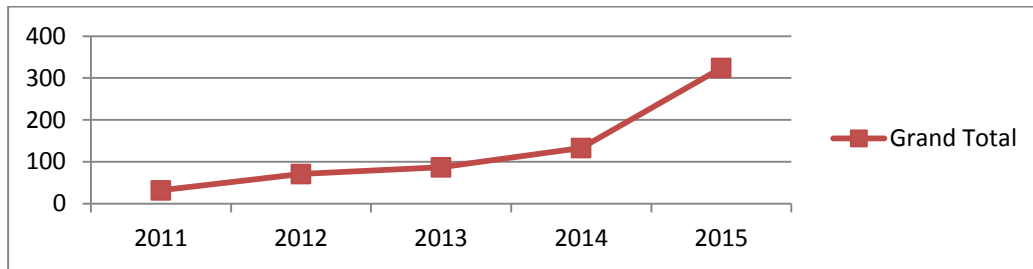


Figure 8: Trend of Total Number of Claims for HIV Tests over the years

As can be seen above the total number of claims dramatically increased in 2015 since GML started covering HIV testing in its policies as contrasted to the years before whereby coverage was just based on NSSF approval.

Because of the fact that antiretroviral treatment is given for free to infected patients and the fact that we are pushing forwards for early detection, the number of HIV infected patients who have an undetectable viral load is nearly 80% and the goal is to reach 90% according to Dr. Jaques Mokhbat, a prominent leading infectious disease physician who is striving for HIV advancement in Lebanon.

GML data shows that nearly 60% of the tests done for STD's other than HIV are mainly for anogenital (venereal) warts caused by human papillomavirus (HPV). However, the number of tests ordered is not very significant as it is small and not statistically important.

DISCUSSION

In USA, Medicare started covering kidney transplantation in 1972, with deductible and co pay, based on a study proving cost saving compared to maintaining patient on hemodialysis (Levinsky). In Lebanon, the rising coverage of organ transplantation has helped in improving the health status of some patients especially those with end-stage-renal disease. However, the figures are still shy due to the various financial, technological and medical hurdles that still need to be solved. This does not mean that there is no future for such surgeries/ on the contrary, the future is bright in Lebanon and the Middle East for such surgeries especially kidney and bone-marrow transplantations.

As most people know, mental health care services are not covered by health insurance packages and health plans to the same degree as are physical healthcare services. Not only such medical services are excluded, but even when covered they are often subject to higher co-pays and are capped at a maximum number of covered treatments in a lifetime. Less well known is the fact that those with severe mental illness (SMI) are less likely to have health insurance coverage of any kind (McLaughlin, 2004).

What emerges is a complex circle of correlation that suggests various paths of causation. Lower levels of employment, educational attainment, and income are positively correlated with both mental illness and the lack of health insurance coverage; lower levels of insurance coverage are negatively correlated with utilization of primary care; late detection and treatment of mental illness is positively correlated with psychiatric and physical co-morbidities; and so on (Levy and Meltzer 2004). The findings of the research done by Wang point out a serious problem in the health care system and underscore the belief of many that mental illness may be one of the more important areas in which the lack of insurance coverage leads to serious deleterious health consequences which impact both the individual and society (Wang et al. 2004). In Lebanon, NGOs like IDRAAC (Institute for Development, Research, Advocacy and Applied Care) is striving to spread more awareness about such psychiatric illnesses and the fact that TPAs have started covering them rendered the patients less afraid to disclose about such an illness and feel motivated about the mere fact that insurance companies are standing by their side.

Infertility is considered one of the main public health issues, as it affects about 15% of the couples of reproductive age (World Health Organization). The male factor is involved in 40% - 50% of infertility cases (Speroff L). The most common type of male infertility is idiopathic infertility, which is characterized by the presence of one or more abnormal semen parameters with no identifiable cause (Baker HW). Another common cause of male infertility is varicocele, which in a European study was found to affect 16.6% of men referred for infertility (Nieschlag E). The Lebanese public as well as third party administrators have seen no reason not to cover surgical and medical treatments for infertility. The previous idea was that health insurance companies should only cover medical case that cause debilitation or deteriorating health. However, as these companies have shifted their visions to encapsulate a more comprehensive medical approach that takes care of healthcare itself, the definition of what to cover has in turn changed. Managing infertility is started to be seen not as a 'luxury' treatment but a medical necessity.

Regarding infertility in females, studies have shown that surgical treatment of severe endometriosis does improve the chances for pregnancy as compared to no treatment (Richard Sherbahn). TPAs in Lebanon have started to cover cases of moderate and severe endometriosis which can help women in overcoming their infertility problem. The only way to be sure whether a woman has endometriosis is to perform a surgical procedure called laparoscopy that allows the physician to look inside the abdominal cavity with a narrow scope.

Endometrial polyps are localized hyperplastic overgrowths of endometrium that contain both endometrial glands and stroma. Up to 25% of women with unexplained infertility have endometrial polyps on hysteroscopy (Rackow). Since those polyps can bleed and in turn have serious

complications, visualizing them via hysteroscopy and treating them either by excision or laparoscopy have saved us from many other attributable hospital admissions for anemia, unexplained abdominal pain, adhesions and possible malignancies. The approach therefore is not only to cover the disease that is directly related to the symptoms but also to prevent the possibility of having future preventable diseases and unnecessary hospital admissions.

Regarding breast cancer, PET-Scanning has efficacy superior to that of conventional imaging for the detection of locoregional and metastatic spread in the appropriate patient population, and has better diagnostic performance for detection of skeletal metastasis compared to routine bone scanning (Osborne JR, Miyake KK, Jin S). Pet-Scan allows more accurate staging of the tumor in patients and consequently has resulted in a change of treatment in 10%–15% of them (Gallamini A). Clinicians can detect much earlier the effectiveness of a given antineoplastic treatment, as compared to the traditional radiological detection of tumor shrinkage, which usually takes time and occurs much later and by this Pet-Scan has increased the general survival rates in cancer patients by 25% (Pellegrini C). This is a main reason for the increasing utility of Pet-Scans in breast cancers. Therefore we should expect an increase in the demand on PET-Scan in breast cancer patients. The numbers in Lebanon have indeed shown that such exams are on the rise and therefore the need to cover them has become a necessity. Also under the umbrella of radiologic exams, we have seen that the use of 64-slice MDCT (multidetector computed tomography) results in excellent diagnostic accuracy and in an increased negative predictive value for detecting significant coronary stenoses in per-segment analysis. Patients with a high probability of coronary artery disease do not benefit from this type of non-invasive approach (Sirol). However, other patients with mild to moderate risk for cardiovascular diseases would surely benefit. In a study done by the Institute for Diagnostic and Interventional Radiology in Frankfurt, 218 patients with Coronary Artery Disease were studied (n = 218) and atherosclerotic plaques were found at transverse scanning with a sensitivity of 65.6% (143 of 218 plaques) (Vogl). This sensitivity increased in patients with an intermediate to moderate risk since this techniques works best for those patients and not for the ones who are known to have atherosclerotic heart disease or who are high-risk cardiac patients. By this token, third party administrators have realized that utilizing this exam to screen low to moderate-risk patients would in fact help those patients avoid that complications of the more invasive cardiac catheterization and would motivate more patients to perform this exam given the fact that it is patient-friendly, fast and safe.

On another front, covering bariatric (weight-decreasing) surgeries is on the rise in Lebanon and the Arab world. As per the American Society for Metabolic and Bariatric Surgery, based on data analyzed from 235 hospitals between 2005 and 2007, related to 66,339 bariatric surgeries performed, 83% of

patients were female with mean age 43 years. In GlobeMed Lebanon 57% of the patents were female, with an average age of 37 years.

Out of the 220 claims of bariatric surgery, we had a total of 19 complications (8.5%) that followed the surgery and occurred during the same hospital stay. The complication rate in Lebanon is lower than the international rate (13% for Sleeve and Banding and 21% for Bypass as shown by the various different research conducted by Blachar A, Carucci LR, Chang SH, Heneghan HM, Himpens J, Livingston EH, Masoomi H, Suter M, Topart P, Triantafyllidis G). These complications include post-operative haemorrhage and hematoma (5 cases), prolonged ileus (2 cases), hypotension and tachycardia (2 cases), ulcer and necrosis (1 case), vomiting and intestinal obstruction (4 cases), accidental puncture and laceration during procedure (1 case), fever (1 case), dysphagia (1 case), respiratory distress (2 cases), respiratory distress (2 cases).

Of the three most popular bariatric surgeries (Lap Band, sleeve gastrectomy, gastric bypass), gastric bypass is the most expensive. Duodenal switch surgery and some revision procedures are usually the most expensive of **all** bariatric procedures. The gastric banding used to be the most popular; however, currently, sleeve gastrectomy is the most common followed by gastric bypass. Due, to the prominence and popularity of those latter two procedures, the average cost of the bariatric surgery has increased over the years. Furthermore, the increase in medical expenses and hospitalization fees has rendered those surgeries more expensive.

Finally, over the past decade, antiretroviral therapy has become more potent, better tolerated, and less complex. According to an article published in Oxford Journal, today, most human immunodeficiency virus (HIV)-infected individuals receiving combination antiretroviral therapy achieve an undetectable plasma HIV-RNA level. Nevertheless, deficits in the spectrum of engagement in HIV care including late HIV diagnosis, suboptimal linkage to and retention in HIV care, insufficient use of antiretroviral therapy, and suboptimal adherence to therapy, pose significant barriers to achieving optimal treatment outcomes (Gardner EM, 2011). In Lebanon, the Ministry of Public Health is dispensing free medical treatment (antiretroviral medications) for hall HIV-positive patients. Several efforts are also being made in order to decrease the social stigma and stereotypes that surround those patients. Many social enterprises are also starting to devise new and innovative plans in the Middle East to help the communities get more aware of the dangers of HIV, prevention techniques as well as facilitating the delivery of medical management to all infected patients irrespective of sexual preferences or race. Therefore, third party administrators have found themselves in a critical position to cover those patients especially since helping them at an early stage would result in a win-win situation on the long-run, both for insurance companies and patients.

Financial Evaluation:

	Total Amount of Approved Costs for Year 2015
IN Claims	\$174,075,214
OUT Claims	\$36,420,203

Table 3: Financial Evaluation for year 2015

	Total Cost in Year 2015 (\$)	Relative Percentage (%)
Bone Marrow Transplant	175,000	0.040
Kidney Transplant	30,000	0.017
Psychiatry	12,000	0.007
Varicocele (Infertility)	160,000	0.092
Laparoscopy (Infertility)	59,000	0.034
Hysterectomy (infertility)	257,504	0.148
Pet-Scan	240,000	0.660
Coroscan (VCT-64)	50,000	0.140
Bariatric Surgeries	1,500,000	0.900
HIV	12,800	0.035

Table 4: Total cost in year 2015

(Note: relative percentages were calculated based whether each service is considered an in-patient or an out-patient claim).

The opportunity cost of not covering those services:

	Opportunity Cost Description (in case of not covering)
Bone Marrow Transplant	Aplastic anemia, Leukemia, Lymphoma, Multiple Myeloma, Thalassemia... can all be cured by this procedure and therefore the cost saving would be significant.
Kidney Transplant	Chronic Dialysis and most of the complications related to Chronic Renal Failure can be avoided.
Psychiatry	decrease the stigma related to this medical condition, mitigate discrimination, boost patient's credibility in the healthcare sector and avoid claims related to idiopathic claims that do not disclose psychiatric reasons as the underlying disease.
Varicocele (Infertility)	An untreated varicocele or uterine polyps/adhesions are not life-threatening,
Laparoscopy (Infertility)	however, they can lead to damage or complete atrophy of the testicles, ovaries
Hysterectomy (infertility)	and/or irreversible damage to the uterus and ultimately complete infertility. Covering such claims would render the healthcare services more immersive and comprehensive, decrease the stigma related to being infertile, boost the adherents trust in Third Party Administrators and help in avoiding unnecessary systematic complications.
Pet-Scan	There are tremendous benefits of having a combined PET/CT scan including earlier diagnosis, accurate staging and localization and precise treatment and

	monitoring. The cost-saving therefore is significant.
Coroscan (VCT-64)	Early detection of coronary artery diseases and avoiding strokes.
Bariatric Surgeries	Provide patients with long term weight-loss and help increase the quality of health. Help improve or resolve many obesity-related conditions, such as type 2 diabetes, high blood pressure, heart disease, and more.
HIV	Help patients in containing their infection and not reach the AIDS stage

Table 5: Opportunity Cost Description

The hypotheses tested that the addition and implementation of new healthcare benefits by TPAs is cost-efficient and would lead to a win-win scenario between the guarantors and adherents is therefore valid.

CONCLUSION

There has always been a question of whether extending a TPA's coverage would be increasing the burdens on its shoulders. It turns out that on the contrary, the adherents (patients) get to feel protected and taken care of by nondiscriminatory and well-thought-of actions which would enhance clients' loyalty while at the same time being viable for those Third Party Administrators. Many efforts are done to shift the TPA role into "sickness prevention", promoting prevention and wellness education and even extending the scope of coverage to palliative care. This is done by extrapolating the basic function of merely acting as an intermediary between the insurer and the insured by taking a further step to assess the feasibility and benefit of extending the coverage in a win-win situation whereby the adherents have better access and coverage to broader healthcare services which are deemed financially feasible.

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INTERLINKING EMOTIONAL INTELLIGENCE AND CUSTOMER RELATIONSHIP MARKETING IN THE LEBANESE RETAIL BANKING SECTOR

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ABSTRACT

Emotional intelligence has been a topic of controversy over the years pertaining to its level of significance in the business world as well as how it can be defined and understood as a concept. Through a number of researches done by pioneers in the field of emotional intelligence, it is shown that EI have shown a significant effect on the retail banking sector; hence, the aim of this research is to link emotional intelligence theory with frontline employee behavior in the context of customer relationship marketing; and to empirically test these on the Lebanese retail banking sector, drawing also practicable managerial implications through a combination of existing models, theoretical research and secondary data. A conceptual framework of emotional intelligence was developed. The value of this research stems from its contribution regarding shedding the light on the importance of EI, the interlinkage between EI and CRM and the creation of a customized conceptual framework that fit the LRBS; as well as setting of the foundation for future research that will refine, test and finalise this conceptual framework.

Keywords: Emotional intelligence (EI), Customer Relationship Marketing (CRM), Service Encounter, Lebanese Retail Banking Sector (LRBS), Lebanon.

1. INTRODUCTION

Studying the concept of emotional intelligence in the Lebanese culture is of great interest since emotional intelligence helps in enhancing customer relationship marketing of organizations that are in the service field such as banks (the industry, focus of this research). It is thus crucial for banks to understand their customers' communication needs and perceptions, and to utilise this knowledge in the emotional intelligence context towards more effective customer relationship marketing techniques.

This research is a continuation on the work of Al Khoury et al., 2016 and Al Khoury et al., 2017, to refine the past papers' model, to expand on it, to shape gaps and concepts better as well as to specify methodology better. A greater literature review is constructed through adding new concepts, such as:

CRM, Exhibited Behavioural Attributes of EI, Customer Evaluation and Service Recovery, to serve the creation of the new conceptual framework.

In the context above, the aim of the research is to link emotional intelligence theory with frontline employee behavior in the context of customer relationship marketing; and to empirically test these on the Lebanese retail banking sector, drawing also practicable managerial implications.

Towards this aim, seven objectives have been set:

1. To construct the theoretical foundation of the research and particularly in relationship to emotional intelligence, customer relationship marketing and service encounters.
2. To identify and evaluate emotional intelligence related employee behavioural attributes in the customer relationship marketing context, from the customer perspective.
3. To describe customer evaluation of exhibited emotional intelligence behavioural attributes.
4. To identify customer positive and negative actions in response to exhibited emotional intelligence behavioural attributes.
5. To prescribe how emotional intelligence can improve the service experience.
6. To interrelate bank employees' responses with exhibited emotional intelligence behavioural attributes.
7. To develop a framework that will practicably link emotional intelligence theory with frontline employee behavior in the context of Lebanese banking customer relationship marketing.

2. THEORETICAL FOUNDATION

2.1 Emotional Intelligence

Over the years, the concept and definition of emotional intelligence has evolved since the 19th century. Gabriel (2000) stated that in 1990, Peter Salovey and John Mayer discovered a universal pattern to study emotions. Their research findings showed that individuals are able to identify and recognize emotions through faces, certain designs and colours. The term "Emotional Intelligence" became more solid and structured in 1995 and 1998, where people became aware of this terminology when Daniel Goleman wrote in "Emotional Intelligence: why it can matter more than IQ". Theorists such as Thorndike, Wechsler and Gardner were the first to generate awareness of the concept of EI and facilitated the emergence of the current well known pioneers in the field of EI such as Peter Salovey and John Mayer, Daniel Goleman and Reuven Bar-On.

Emotional intelligence, simply, is the individual's ability to monitor, recognize and understand his/her own emotions and feelings as well as others and the skill to use this ability in managing one's behavior and relationships.

According to Mayer and Salovey (1997), the major areas of skills are: perception and expression of emotion, assimilating emotion in thought, understanding and analyzing emotion, and reflective regulation of emotion. Bar-On (1997) stated the following major of skills: intrapersonal skills, interpersonal skills, adaptability scales, stress-management scales, and general mood. The third most known and commonly used EI model is that of Goleman (1995a) where he listed the following skills: knowing one's emotions, management emotions, motivating oneself, recognizing emotions in others, and handling relationships.

Intelligence quotient (IQ) and emotional intelligence (EI) are two completely different concepts and are independent of each other. It is possible for an individual of high level of IQ to have a low level of EI or vice versa. People assume that IQ is highly correlated with the achievements; to our surprise, it is not. Whereas EI is considered to be of high importance and highly correlated with success, experts stress that IQ contributes only about 20% of one's success and achievements. A study examining Harvard graduates showed that the entrance exam grade, which is highly linked to IQ, had a poor and even a negative correlation with one's success in his/her career life. It is well known that in order to run successful businesses it is not enough to use just the smarts. It is crucial to have a personal and a long-term relationship based on trust and technical know-how with the clients/customers especially in the services sector which includes banking. In business it is crucial to have self-awareness and self-confidence, and emotional intelligence is the key building block of these two components. Emotional intelligence is made up of five competencies as Goleman states: 1. Self-awareness: knowing one's feelings, 2. Self-regulation: managing those feelings and emotions, 3. Motivation: stimulating oneself, 4. Empathy: identifying and knowing others', 5. Social skills: managing relationships.

The following skills cannot be studied, measured and analyzed from a customer's perspective rather than from the employees' perspective. As a result, there is a need to translate these skills into exhibited behavioural attributes. A further research was made to construct a transitional phase in the model, which is the exhibited behavioural attributes, that enables the future implementation of the model. The key of the transition of emotions into behavior is attitude. (McShane and Von Glinow, 2009, p.100)

2.2 Exhibited Behavioural Attributes of Emotional Intelligence

McShane and Von Glinow (2009) discussed the effect of emotions on the workplace and how emotions can be translated into attitude and then behavior. Since emotional intelligence is the study of

emotions, generally speaking, there is need for the knowledge on the different types of emotion based on the levels of activation and evaluation.

The “Circumplex Model of Emotions” is the building block for understanding emotions which will be translated into behavioural attributes as a result of more detailed and interrelated models.

Emotional intelligence, generally speaking, is a psychological intelligence that deals with ones’ emotions and feelings; hence, how is it possible to control, motivate, and express these emotions if the individual is not aware of the emotions and the outcomes, consequently. The model shows two extreme emotions: positive and negative; however, the level of activation is the variable that results in different outcomes. Showing negative emotions at the workplace will result in poor performance; as a result, managers try to ensure that their employees come with positive vibes to work to increase the profitability of the organization.

Having the knowledge at this level of the different emotions, level of activation and the outcomes, a new “Model of Emotions, Attitudes, and Behavior” is introduced to summarize the role of emotions, attitudes and behavior, through both cognitive and emotional processes. The stimulus-response (S-R) model represents the difference between attitudes and emotions; attitude is a set of judgments that includes logical reasoning, whereas emotions are experiences that operate without one’s awareness. This dual cognitive-emotional attitude model is made up of cognitive, logical reasoning part, which creates the attitude, which is made up of three interrelated factors: 1. Beliefs, 2. Feelings and 3. Behavioural intentions. The model also consists of an emotional process where we have emotional episodes. These episodes affect one’s feelings which will have an influence on the end result, the behavior. Some episodes will lead to different emotions, but even low-intensity emotions will result in some automatic facial expressions that will be noticed by the customers. Hence, organizations tend to expose their employees to emotional episodes leading to positive feelings in order to shape employees’ attitude and behavior. The MARS model is an elaborated and advanced continuation of the S-R model and is made up of four factors: motivation, ability, role perceptions, and situational factors. This model shows a noticeable link between emotional intelligence skills and the factors that affect one’s behavior.

The “MARS – Model of Individual Behavior and Results” model consists of four elements which are influenced by individual characteristics. 1. Motivation: affects *direction* (which path to choose), *intensity* (how much effort is the individual going to dedicate for each target) and *persistence* (how much time will the individual continue to put effort to reach that goal). 2. Ability: is made up of *aptitudes* (are the natural talents/skills which help employees to attain the needed tasks at work and hence perform better), and *learned capabilities* (are the physical and mental capabilities that individuals

currently have and might fade with time if not practiced). The mix of these two concepts is usually used in the business world under the umbrella of *competencies*. Competencies are commonly described as personal traits such as: “knowledge, skills, aptitudes, personality, self-concept, values” (McShane, Von Glinow, p.36). Having these competencies will result in a better performance. 3. Role perceptions: are crucial for employees to know clearly their job description. Knowing what is needed and expected from them will set the direction and coordination with other employees/suppliers/stakeholders to reach their goal. There is a need for knowledge regarding the specific tasks, prioritizing their tasks and perform as expected, and finally understand which is the most preferable procedure/behavior by the organization to choose to complete the tasks assigned. 4. Situational factors: are external, non-controllable factors that affect employee’s behavior and performance. However, some situational factors such as: “time, people, budget, and physical work facilities” (McShane, Von Glinow, p.37) can be controlled and leaders make sure to plan for such factors so that their employees are able to perform at their best.

By mixing emotional intelligence skills and both S-R and MARS models of behavior, the following exhibited behavioural attributes of emotional intelligence are suggested:

- Expression of Emotions: Translation of anger, frustration, stress, work-overload ect. by employees in their interaction.
- Managing Emotions: Control, regulation, or otherwise channelling negative emotions into positive outcome.
- Constructive Communication: Communicating, connecting, providing needed/relevant information (technical know-how), tackle problems, reach solutions, persuade and motivate customers to invest/take risks.
- Adaptation: Adapting to changing environments, sudden obstacles/errors, anger bursts and unusual needs/requests.

Retail bank employees who have the above suggested exhibited behavioural attributes of emotional intelligence will result in a positive outcome and hence will be able to implement the customer relationship marketing skills to succeed at the workplace.

2.3 Customer Relationship Marketing

Marketers in the new millennium are of two groups, those who practice customer relationship marketing (CRM) and those who do not, yet. However, those who do not practice CRM will not survive the new millennium and will not have enough profit to survive in the market. Generally speaking, marketing had gone through three waves, since world war two, before reaching CRM: 1.

Mass marketing, 2. Targeted marketing, and 3. Global marketing. All three waves share a core concept, which is the main focus/goal on maximizing sales. Since it is possible for sales to increase without increasing profits, marketers shifted their attention to the quality of share so that they ensure profitable growth. Marketers aim to increase both sales and profits, simultaneously, through creating and reinforcing the bonding with the customers and hence build customer relationships. CRM is the fourth significant post-war wave that came after global marketing (which is still used to date).

The four pillars of CRM, in short, are the ability to: 1. Identify, 2. Attract, 3. Defend and 4. Strengthen 'brand loyalty'; and if the heart of CRM is brand loyalty, then 'Value of a Customer' (VOAC) is its brain. CRM is all about creating relationships with customers, retaining them, and trying to move them up the loyalty ladder. CRM is not about the sales, rather than enduring profitable growth through focusing on the customers and creating a loyalty bond between the organization and its clients/customers. Selling, which was the end goal of traditional marketing, is the first stage of CRM to turn customers into loyalists. Only customer-relationship marketing can endure profitable growth.

2.4 Service Encounters

On the other hand, employees might face failure in performing/implementing the suggested behavioural attributes of emotional intelligence. The failure in service performance means that the customer's expectations were not met therefore customers will be dissatisfied leading to a negative outcome by having negative customer reactions/feedbacks. Data from TRAP Worldwide Inc. (2007) shows that: 1% to 5% complains to management or company headquarters, 45% complain to a frontline employee and 50% encounter a problem but do not complain. Zeithaml, Bitner and Gremler (2013) presented the "Customer Complaint Actions Following Service Failure" model in their book.

When failing to satisfy customer needs, negative emotions will emerge which will lead to either not complaining and choosing to either exit/switch or stay; or to act upon these negative emotions and file a complain to the provider, spread negative word-of-mouth using social media or other tools, which is extremely harmful for the organization due to the ease of access to social media without putting any financial effort and the time factor, where the complaint can be spread to the community in a matter of seconds. The customer might also consider a third-party action that would take action on his/her behalf which also harms the organization and cause propaganda. The end result will be either exiting or switch the organization or to stay, based on how the dissatisfaction was handled by the organization/employees. In order to minimize the loss of customers as a result of service failure, customers expect the organization to not only response, but also to show remorse for the inconvenience and disappointment of the service. The organization is expected to show that they

hold the responsibility and offer help as soon as failure occurs. The “Service Recovery Strategies” model presents the strategies that should be implemented once the organization faces a service failure.

Following the model of service failure which was discussed above, the model is adopted to ‘fix’ the dissatisfaction from the customer perspective as well as fixing the problem itself to ensure that it would happen again. Organizations and employees seek continuous improvement through learning from previous mistakes and planning for the future through trainings and gaining experience through time. The implementation of these service recovery strategies/techniques will result in the shift of the negative outcomes which lead to negative customer feedback/reaction into a positive outcome. As a result, the failure will be recovered and employees will be able to implement the relationship marketing skills to ensure and boost their success. The concept of consumer behavior is embedded in the process of having a positive and negative outcome as well as in the corrective actions using service marketing techniques since without having the knowledge of customers behavior, it will be impossible for employees to uncover the needs and wants of their customers to satisfy and fulfil their expectations.

2.5 Focusing on the Lebanese market

Jamali, Sidani and Abu-Zaki (2008) stated the following results after conducting their research using the Emotional Quotient Inventory (EQ-I) technique to measure emotional intelligence and a final sample of 225 individuals working in different sectors such as banks, publishing organizations, internet companies, auditing firms, universities, government organizations, and other sectors from Beirut, Lebanon. Results showed that the entire sample scored moderate levels of emotional intelligence and that males scored higher on self-regulation and self-motivation whereas females scored higher on self-awareness, empathy and social skills. There was no significant change in EI scores between genders except for self-regulation where males scored higher. Senior managers scored higher than staff or lower-level employees on self-awareness, self-regulation and self-motivation whereas middle managers scored lower than senior managers and staff on empathy. Differences in educational background, as there are three categories: high school, college and graduate degree, had no significance in emotional intelligence scores when testing for self-awareness, self-regulation, self-motivation, empathy and social skills. Moreover, difference in age had no significance in emotional intelligence score, except for self-motivation where the group ranging from 35 to 44 scored the highest and the group aging under 25 scored the lowest. Carrying emotional intelligence assessments at work can assist employees to detect their strengths and areas of development, and by implementing this technique in a safe and supportive environment, it can trigger and improve self-motivation.

Moreover, a research was conducted by Hejase, Al-Sayed, Haddad and Hamdar in 2012 to explore how emotional intelligence is applied in Lebanon. In the first part of their study, researchers

highlighted the importance of emotional intelligence in business through existing frameworks. In order to explore emotional intelligence applications in Lebanon, both industry and service sectors were targeted. The sample included employees and managers of different backgrounds and gender. The final sample size was 110 individuals, and ten managers divided evenly between the service and industry sector. Results showed no significant distribution difference between genders in both sectors. To summarize the awareness of emotional intelligence: 2/3 of the respondents in both sector are not fully aware of the concept of emotional intelligence and have no deep knowledge on this concept. When identifying the sources that exposed emotional intelligence to the respondents in both sectors, none stated that they learned about it from their work setting. The sources were either from their education, media, or other mixed sources. The majority in both sectors agreed that EI has positive effects on an organization's profit and disagreed with the statement that adopting EI principles incurs a lot of costs in such a way that there is no point in investing in it. They also agreed that EI programs result in favourable results in employees' retention and disagreed that employees are required to work individually and not in teams when practicing EI principles.

2.6 Research Gap

The link between the concept of emotional intelligence and other domains such as healthcare, banking and education has taken interest over the years. A research paper written by Tudor (2015) has studied the link between EI and these different domains. The researcher stated that banks can utilize the concept of emotional intelligence when it comes to customer-banker relationship and in the day-to-day interactions. Other recent research papers conducted by Danquah (2014) and Kappagoda (2013) have showed the importance of EI in the banking sector. Tudor (2015) has suggested to further research the link between EI and one of the domains that she has researched; one of these domains is the banking sector. Hence, it is stated that the link between emotional intelligence and customer-banker relationship should be researched and studied thoroughly.

Kearney et al. (2017) studied emotional intelligence in front-line/back-office employee relationships and stated: "The present study is premised on the assumption that employee emotional intelligence (at the front line and in the back office) positively affects customer attitudes and drives customer-related organisational outcomes. We did not demonstrate this link empirically though. Further studies might use dyadic data and thereby link emotional intelligence at the individual employee level to the customer level" (p. 193).

Researchers have already suggested a research gap in the term of lack of empirical research linking emotional intelligence, its exhibited behavioural attributes of employees and customer relationship marketing from the customer perspective; and some researchers, in fact, have explicitly or implicitly called for such work to be done (Tudor 2015; Danquah, 2014; Kappagoda (2013); Kearney et

al., 2017; Wisker and Poulis, 2015; Hejase et al., 2012; Jamali, Sidani and Abu-Zaki, 2008; Suliman and Al-Shaikh, 2007; El-Chaarani, 2013; Geha, 2015). Wisker and Poulis (2015) suggested having a further research to study the effect of EI on marketing/sales performance, and identifying which of EI constructs affect the workplace performance. They have also suggested including variables such as personal characteristics, firm structure and industry characteristics when linking emotional intelligence to marketing/sales performance. This paper has included the exhibited behavioral attributes which relies on personal characteristics.

From a specifically Lebanese perspective, Hejase et al. (2012) added that although EI is perceived to be effective in organizations and will help in creating better outcomes, the majority of people are not willing to engage emotions and emotional intelligence in the workplace since they believe that emotions in business will lead to irrationality and unexplained behaviours and decisions. In the same vein, studies conducted by Jamali, Sidani and Abu-Zaki (2008) and Suliman and Al-Shaikh (2007) within Middle Eastern countries, including Lebanon, suggest that even though emotions cannot be separated from a person when conducting business and is part of the individuals' personality whether the organization accepts that or not, many are still caught with the traditional saying of "leaving emotions at home before coming to the job".

El-Chaarani (2013) has also studied the concept of emotional intelligence in Lebanese family firms. Although the concept of EI was explored in a completely different field than the one researched in this paper, El-Chaarani suggested to consider exploring this topic qualitatively and from a different angle from that of the research (family firms) since it will positively contribute to the field of EI. El-Chaarani added that other elements/variables should be taken into consideration, such as demographic characteristics and analyze how culture and education (through EI) can influence the job performance. Hence, El-Chaarani highlights the link between culture, emotional intelligence and job performance, which is affected by the customer relationship marketing.

Hejase et al. (2012) suggested to study cross-multiple relationships between different concepts such as EI and other concepts – to marketing, such as customer relationship marketing – and/or to management for example to discover a possible theoretical link that businesses can benefit from as they implement EI in their organizations.

Geha (2015) has stated: "Emotional intelligence training may be one way to bring opposing elements together. This is especially important to the Lebanese community with its diverse backgrounds, religions, political groups and people. It is my opinion that emotional intelligence skills should be introduced at all levels and to all people within Lebanon." (p. 23)

3. CONCEPTUAL FRAMEWORK OF EMOTIONAL INTELLIGENCE

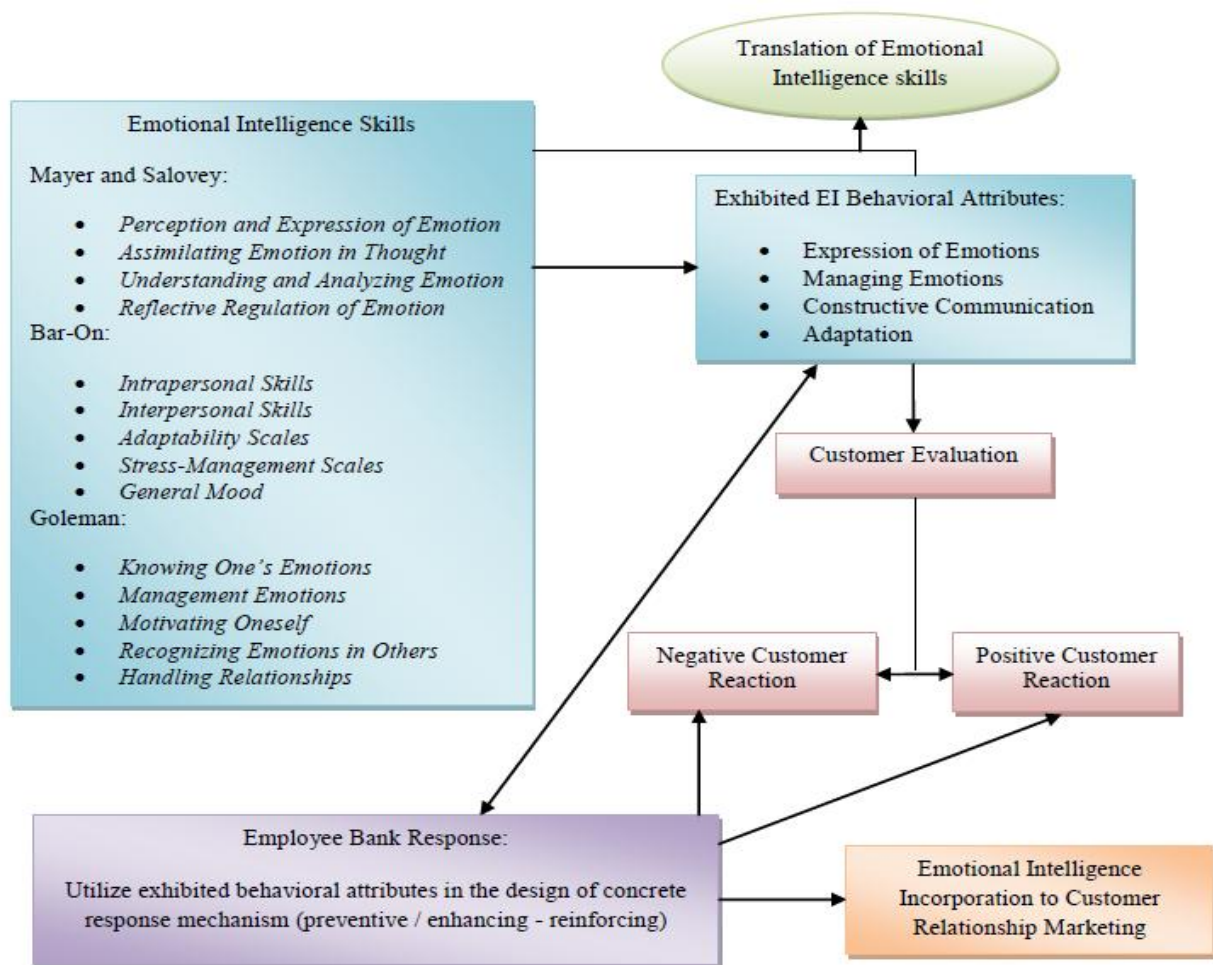


Figure 1: Framework of emotional intelligence for the Lebanese retail banking sector

Discussion of the Conceptual Framework

This framework links customer relationship marketing and emotional intelligence skills by adding a twist by translating emotional intelligence skills into exhibited behavioural attributes based on the stimulus-response and MARS model of individual behavior so that it is possible for the Lebanese retail bank customers to evaluate whether these skills are being implemented properly. Customers' evaluation of bank employees' exhibited emotional intelligence behavioural attributes will result in either a negative or positive customer reaction. Here comes the role of employee bank response, which consists of the design of concrete response mechanism which are: responding quickly, providing appropriate communication, treating customers fairly, cultivating relationships with customers, guarantying the service offering, encouraging and tracking complaints, learning from recovery experiences, learning from lost customers, and making the service fail-safe, and linking them with the exhibited emotional intelligence behavioural attributes. The following step will result in

preventing negative customers' reaction and enhance / reinforce positive customers' reaction. As a result, this process shows how emotional intelligence is incorporated in a successful customer relationship marketing in retail banks (which is the aim of this research paper). Being able to control and manage one's emotions and others will help in creating relationships with customers, which is the main goal of customer relationship marketing. In order to translate emotional intelligence skills into exhibited behavioural attributes, and in order to study customers' negative and positive feedbacks, the concept of organizational behavioural is indirectly used since employees and bank managers need to study, understand and analyze their customers so that they can act and react. Having no knowledge of their customers, will hinder their success by not knowing which strategy to implement and this case is crucial when facing negative outcomes.

This framework of emotional intelligence summarizes the link between emotional intelligence and customer relationship marketing which will serve as a base line model for the empirical work that will follow the proposed framework. This section answers and summarizes research questions one till eight.

4. RESEARCH PHILOSOPHY

The 'ontology' and 'epistemology' of the research will adapt the classical interpretive/constructivist ontology and the interpretivism/constructivism epistemology; since they are interrelated. The reason behind choosing the following ontology and epistemology is the nature of the subject researched. Since one of the major concepts discussed is 'emotional intelligence', which is a psychological subject, a researcher needs to implement techniques that will reveal deep and valuable data, usually through interviews, observations, focus groups ect. The researcher, in this case, will take part in the interviews and hence it will mark as a subjective research.

As for the paradigm, it is expected, based on the ontology and epistemology chosen, that the research will implement the 'interpretivist paradigm' as well as the 'constructivist paradigm'; the research paradigm, which is interpretivist/constructivist, is also labelled 'anti-positivist' (Hatch and Cunliffe, 2006) and 'post-positivist' (Blaikie, 1993). Another terminology used for an interpretivist phenomenology is Heideggers' 'hermeneutic (interpretivist) phenomenology'; which is originated from Husserls' 'descriptive phenomenology'. Saunders, Lewis and Thronhill (2007) stated that such a paradigm focuses on studying and analyzing 'social actors' and understand how they perceive the world. Hence, an interpretivist/constructivist paradigm is highly contextual and results cannot be generalized.

Research Methodology and Methods

Given that the phenomenological paradigm adapted is subjective in nature, it is best to use the qualitative approach to gather data. An exploratory case study is chosen to uncover significant variables and analyze the topic of study in the Lebanese context.

The researcher will implement two approaches, 1. Deductive – in order to extract the major emotional intelligence skills and exhibited behavioural attributes based on the literature review (secondary data); and 2. Inductive – to uncover the results of having positive and negative outcomes of implementing the suggested exhibited behavioural attributes from the consumer's perspective (primary data).

The concepts of 'reliability' and 'validity' are interrelated since validity relies on reliability. These concepts differ from a qualitative to a quantitative research. In a qualitative research reliability is measured by 'quality' of the study although the concept of reliability is commonly used in quantitative research. These concepts aim at differentiating a 'good' from a 'bad' research and should be judged based on the research paradigm adapted. Data gathered from Lebanese retail bank customers requires validity and reliability; which made it the main reason to conduct this study from the customers' perspective rather than the bank employees'.

Having in-depth, open-ended, semi-structural interviews helps in collecting more valuable data, understanding the situation realistically and maybe uncovering some hidden gaps that are not stated in existing research papers. This technique gives the interviewer the advantage of being able to remodel and restructure the questions when needed and also gives the interviewee the ability to better understand the aim of the study by familiarizing the latter with the concept of emotional intelligence.

However, before conducting interviews with Lebanese retail bank customers, a pilot test consisting of two to three questions will be implemented to make sure that the research is on the right path and hence the interviews will lead to valid and reliable results. Conducting a 'pilot study' before the main interviews is crucial to guarantee the success of the data gathering process. This study is considered a trial in preparation for the major study. A pilot study does not ensure the success of the research; however, it does increase the likelihood.

Interviews will be audio-recorded, transcribed and reviewed. At the end of each interview, critical incidents studies method will be implemented to uncover stories holding relatable variables that were not taken into consideration when studying the relationship between the customer and bank employees from the customer relations marketing perspective.

There will be, in total, 30 interviews. However, in case the research did not reach maturity after carrying out 30 interviews, additional interviews are a must till reaching maturity. The distribution of interviews process is based on the percentages of distributions of Lebanese retail banks, geographically.

A purposeful sampling will be used in order to gather reliable data for this research; hence, the *purposeful sample* in this research is the Lebanese retail banking customers who are in direct contact with customer service bank employees. Being into a service domain such as banking means relying heavily on personal interaction between bank employees and their clients which makes it easier for bank customers to evaluate the suggested behavioural attributes of emotional intelligence; hence, results gathered from interviews and critical incident studies are expected to be reliable.

Data gathered from interviews will be analyzed using the 'qualitative content analysis' which shares some steps with the traditional 'quantitative content analysis' procedure, in addition to the NVivo software - which is specialized in analyzing in-depth interviews through highlighting the most important messages/factors/findings after linking and relating/combining the gathered information and consequently the final framework will be constructed. As data is gathered and analyzed, it will uncover any possible effect of the Lebanese culture on emotional intelligence.

Throughout the research, the researcher might suggest that there is a need for additional implementation of qualitative research techniques such as focus groups. The following suggestion depends on the reliability, quality and completeness of the data gathered through the interviews.

5. CONCLUSIONS AND IMPLICATIONS

The importance of emotional intelligence in organizations lays in its significant overall performance improvement through generating more sales and profits as well as satisfying clients and customers. Existing EI models created by Goleman, Bar-On and Mayer & Salovey, were adapted to set the overall EI skills which were translated into exhibited behavioural attributes using a number of models. These behavioural attributes are to be tested and evaluated by Lebanese retail bank customers. Both negative and positive customer outcomes are treated using service encounter models: Customer Complaint Actions Following Service Failure and Service Recovery Strategies. The conceptual framework created aims incorporate EI skills with effective implementation of CRM skills; laying the groundwork for further refinement, testing and elaboration through research and analyses.

Theoretical Implications

Creating a framework that studies emotional intelligence from the customer's perspective through the utilisation of suggested exhibited behavioural attributes and linking it to relationship marketing skills and service marketing in the Lebanese context was never done before. This research seeks to satisfy the aims and objectives that are set, and to study empirically the Lebanese market to create a preliminary framework of emotional intelligence that is customized for the Lebanese retail banks.

Managerial Implications

The theoretical understanding of the role of emotional intelligence in the sector has significant practical implications as well. The research, in fact, through its framework, shall prescribe actions at all organisational levels towards the utilisation of the knowledge gained for managerial implementation in the contexts of human resource management, customer relationship marketing and service design. Ultimately, the findings of the research shall contribute to the banks' improvement in the aforementioned contexts with direct and explicit benefits in terms of profitability and growth.

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SOCIAL ENTERPRISES AS DRIVERS OF LOCAL DEVELOPMENT: A FRAMEWORK

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ABSTRACT

The social enterprises (SE) are taking hold as key players in the processes of local development producing social, economic and environmental effects (Borzaga, Tortia, 2009; Borzaga, Galera, 2014; Eversole, 2013). Since SEs may assume a range of different organisational forms and despite the fact they are commonly spread across many countries, there is not any agreement on a unique and common definition yet (Doherty et al., 2014; Phillips et al., 2015; Picciotti, 2013). Certainly, SE's objective is to pursue a social goal, but they can also act as drivers of local development, supporting the local community growth and its economic development.

Empirical research shows that across Europe SEs not only increase the community wellbeing, providing product and services, fostering cohesion and collaboration among community members and institutions, but they also act as drivers of local and regional economic development (Birkhölzer; 2009; Eversole, 2013).

This paper aim is to provide an ideal-type model of SE which can help in drawing its boundaries; secondly, a new framework on how SEs produce local development through social, economic and environmental outputs is proposed.

Keywords: social enterprise, local development, social development, economic development, environmental development

INTRODUCTION

The expression 'social enterprise' (SE) was introduced in Italy during the late '80s to mean a new form of company run by volunteers; differently from the non-profit organization focused on the promotion of human rights, the aim of a SE was to provide social services to the local communities or promoting equality and opportunities. Subsequently, the concept of SE was developed during the '90s and spread across Europe and United States and, more recently, even across Asia and Latin America while gaining relevance among academics and practitioners. The growing interest in SEs depends on many factors; firstly, SEs operates not for profit, but for promoting social change and growth and posing new

priorities within the debate on the social and economic development; secondly, with government and local public institutions experiencing the decrease of financial resources to be dedicated to social services, the SEs address the people's needs, reorganising proactively the existing welfare systems. Thirdly, the SEs are a trigger to re-think the efficiency and efficacy of public sector and to urge companies to consider the social responsibility. Against the scientific growing interest (Doherty, Haugh, Lyon, 2014; Phillips, Lee, Ghobadian, O'Regan, James, 2015) there is still a lack of a unique and common definition of what the SE is; a variety organisations, institutions and firms with different legal and organisational forms seem to be included in the definition of SE; as such there is a compelling need to seek a consistent and shared definition which could encompass all the varieties of existing SEs. The following section 2 attempts to isolate the SEs' main features drawing an SE ideal-type; in section 3 a new framework on the relation among SE and local development is proposed.

SES: DEFINITION AND FEATURES

The SE has a hybrid structure as it combines a variety of elements featuring different types of companies; however, SE construct does not fit in any of the traditional existing corporate forms. At the heart of SE construct there is its 'social mission'. In the literature on social entrepreneurship two main approaches can be distinguished: the first emerged from the American studies and the second from the European researchers (Perrini, 2007; Defourny, Nyssens, 2010). The American works, which have been emphasizing the role of the social entrepreneurship since the middle of the 90s (Borzaga, Tortia, 2009), focus more on the nature and the characteristics of the 'social entrepreneur' than showing interest in deepening the understanding of the SE nature. In fact, within this stream, some works look into the capacity of the non-profit organisations (NPO) to acquire financial resources while other studies investigate the role of the social entrepreneur as a 'social innovator' and promoter of the social change. Hence, any organisation led by a social innovator and creating social value is a social enterprise (Picciotti, 2013). In this context, the SE can assume any organizational form among profit, not-for-profit or hybrid, the choice depends on the business model and the social aim to reach: the entrepreneur's ability to create the best hybrid structure boosts the organizational efficacy and efficiency. As a consequence, the SE become an innovation lab where new organizational behaviours, new cognitive and managerial models take place and guide the identification and satisfaction of the community's needs using a mix of public and private local financial resources (Bulsei, 2015).

On the other hand, due to the different cultural context and to the different economic situation in which the 'social cooperative' were born and largely developed, the European literature focused prevalently on the nature of SE.

The European approach is summarized by the Research Network “Emergence of Social Entrepreneurship in Europe (EMES)” (Borzaga and Defourny, 2008) while the GES model proposed here (Table 1) is derived from existing research (Galera and Borzaga, 2009; Galera and Borzaga 2012) on the SE and takes also in consideration the OCSE and EU’s definitions of SE. This model plots out the SE main features and helps in drawing its boundaries. The SE can be observed and evaluated through its governance, entrepreneurial and social dimensions (GES). The GES model depicts an ideal type, as such it does not represent an existing SE but stresses all the features common to the most. Each SE dimension can be evaluated not only by the presence or absence of the following characteristics, but even on their intensity.

Table 1 | *GES framework: defining the nature of SE*

Dimensions	Characteristics
Governance	Self-governance or high-autonomy Multi stakeholder Democracy Limitation to the distribution of profits
Entrepreneurial	Regular production and delivery of services and goods Totally or partially paid workforce Presence of economic risk Propensity to innovate
Social	Social aim Volunteers

THE SES AND LOCAL DEVELOPMENT

After the 2007 economic turmoil, the demand for social goods and services has grown while the offering from public institutions has decreased, due to the lack of financial resources; in this gap, there are unexploited opportunities for private investments. Several empirical studies suggest that SE can play a key role to cope with the challenges of the local development: they have been successful especially in those sectors in which were missing the support of public institutions. Actually the social entrepreneurship has been able to develop unconventional strategies to address the needs of underdeveloped areas; for example, Borzaga and Galera (2014) describe the significant role SEs had in Africa providing new micro-credit services, contributing to the construction of infrastructures through the deployment of local resources; even in Europe SE are an important engine for the economic development of local communities: the UE Third System and Employment reports there are 8.88 millions of employees in this sector, confirming that SEs are not a marginal phenomenon, but on the

contrary, is a well-established reality. According to Eversole (2013), the SE has an intrinsic natural tendency for the local development as these institutions naturally foster the community development.

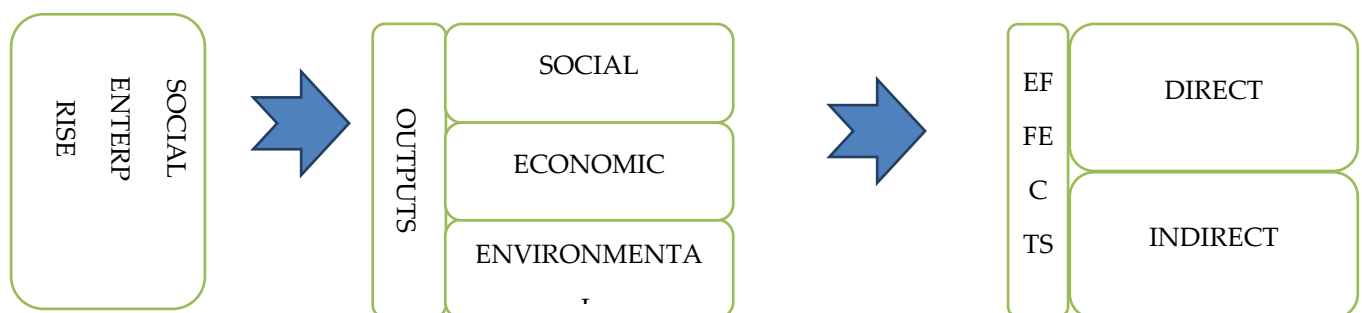
«The observation that social enterprises are hybrid organisations that blur sectoral boundaries is established in the literature. What is new is the observation that social enterprises are working in this way as an intentional strategy for achieving local development outcomes» (Eversole, 2013: 576).

According to the theory of the endogenous economic growth (Aghion and Howitt, 1998), the driving forces of the local development lie in internal local resources as human capital, culture and traditions, artisanal artefacts or networking capabilities of local institutions; hence, the SE represents a well-fitted gear of the system as its primary aim is not the exclusive production of goods or return on investments, but the development of social capital, human relationships, network and overall the community wellbeing; furthermore the set of resources used by SEs are prevalently those found in the local context; “In this sense, social enterprises can represent an important instrument for an endogenously driven process of development» (Borzaga and Tortia, 2009: 209).

Obviously, SEs cannot entirely drive by themselves the community full development; although, compared with the profit-oriented companies, the SE benefits from the community higher trust and support; its potential can be expressed only if reinforced by adequate policies such as dedicated financial funds, training programme for social entrepreneurs and managers, research on innovative governance and new business models.

Adopting the endogenous growth theory perspective, the links between SE and the local development can be represents as shown in Figure 1.

Figure 1. *SE and local growth*



The SE produces social, economic and environmental outputs; in turn, these outputs creates direct and indirect effects on the local development.

The direct and indirect benefits are:

- *job creation*: SEs do not replace existing job positions with new roles, but address unmet social needs creating additional jobs especially for those who normally are denied access to work;

- *poverty reduction*: SEs often offer jobs to the low-income population and deliver goods and services at more affordable prices, or for free;
- *community wellbeing*: SEs contribute to uplift the local population standard of living and, despite employees perceive lower salaries, this is compensated by higher personal satisfaction and wellbeing in the working environment;
- *social capital*: social entrepreneurial activities create social value and social capital building relationship based on trust among individuals and organisations, promoting a cooperation culture among institutions; these links facilitate the exchange of tacit knowledge and reducing the asymmetric information problems.
- *social cohesion*: through the social capital, the terms for individuals and groups to take part in society are improved, hence stronger ties, sense of belonging and inclusion of poor and marginalized people helps people in cooperating to set and achieve community goals.

LIMITATIONS AND FURTHER RESEARCH

SEs are a potential engine of the local development; they can play a key role in the most marginalized and poorest regions which are perceived as unprofitable markets by profit-oriented enterprises and cannot be supported by the governments and local authorities due to their lack of resources.

Basing on the previous literature, this work pinpointed the SE's main features depicting its ideal-type through the GES model. Subsequently, a new framework which points out the effects that SE has on local development was presented (section 3). The main limitations of the framework is in the fact that was drawn upon the existing qualitative research mainly consisting of case studies, while quantitative research on the topic is still scant. Hence the need for deepening the understanding of this phenomenon and the call for more quantitative research in the field of SE. In details, further evidence is needed on the followings:

- Are the SEs able to be financially self-sufficient on the long term, without dropping their social aim?
- Are SEs efficient and efficacious in the use of public financial and local resources?
- What are the contextual factors which foster the social entrepreneurship?
- What can be valid and reliable measurement of their social and environmental impact?
- Is the economic crisis or a profounder shift in the economy in determining the flourishing of SEs?

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THE IMPACT OF PUBLIC RESEARCH ON INDUSTRY INNOVATION: A TECHNOLOGY-LEVEL PERSPECTIVE IN THE GREEN ENERGY FIELD

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ABSTRACT

This paper examines the degree to which companies successfully build on technologies developed by public research organizations (PROs) by analysing the influence of their technology attributes. Specifically, four technology attributes have been considered as (i) the level of establishment, (ii) the scope of application, (iii) the scientific nature, and (iv) the technological breadth. We develop hypotheses, and the green energy field is in the focus of this study this phenomenon. Accordingly, 4,363 patents registered by PROs in the period 1976-2011 and classified into the technology fields “Alternative energy production” and “Energy conservation” were collected. Results of the Tobit regression reveal that the level of establishment has a positive influence on subsequent industry innovation efforts; only when the level of establishment becomes excessively high this effect turns negative. Furthermore, the scope of application and the technological breadth positively impact the spread of public environmental technologies among companies, whereas the scientific nature has a negative effect.

Highlights:

- The role of public research as a mean to boost industry innovation efforts is analysed
- Attributes of technologies developed by public research organizations are considered
- The attributes of public technologies impact subsequent industry innovation efforts

Keywords: Green energy technologies, Industry innovation, Public research, Technology attributes, R&D policy.

1. INTRODUCTION

Studies rooted in the neoclassical economic theory highlighted that private R&D efforts are subject to market failures, which are reflected in three main issues: increasing returns, knowledge leakage, and uncertainty of results (e.g., Arrow, 1962; Czarnitzki and Lopes-Bento, 2013). These issues make the private value of R&D lower than the social one. Thus, less incentive exist for firms to invest

in technology development, hence leading to a suboptimal level of industry innovation efforts (Arrow, 1962; Czarnitzki and Lopes-Bento, 2013).

Governments have attempted to correct for market failures by funding public research organizations (PROs) (e.g., universities, public research centres, governmental organizations) aimed at conducting the initial R&D efforts that may expand the pool of technological knowledge available to firms who can draw on this for subsequent innovation activities (Cohen et al., 2002; Martin and Tang, 2007). However, according to the evolutionary approach to the economics of publicly funded research, making available new technologies does not imply that outcomes of public research will boost further innovation efforts by the industry. Notably, firms are not always willing and/or able to build on public research because of its weaker connection to market needs or the lack of firms' absorptive capacity (Cohen and Levinthal, 1990; Salter and Martin, 2001). In fact, it has been argued that research outcomes of PROs fall short of the full impact they could have, so governments still seek to improve the effectiveness with which they invest public money to produce research externalities towards the industry sector (Beise and Stahl, 1999; Bornmann and Marx, 2014). This means that the question of when R&D efforts of PROs impact industry innovation activities by rendering outcomes as the basis for the innovation activities of many companies has not completely been answered (Alkemade et al., 2011; Coccia and Rolfo, 2008; Cohen et al., 2002). The present paper addresses this topic. Thus, differently from most of the prior research, we do not focus on the public incentives that may stimulate private R&D (R&D tax credits, R&D subsidies, etc.) (e.g., Czarnitzki and Lopes-Bento, 2013). Rather, we aim to assess when multiple companies build upon the technological knowledge underlying technologies created by PROs, hence stimulating industry innovation. Accordingly, to the best of our knowledge, this has remained an underdeveloped area of research.

In detail, since the evolutionary economic theory recognized that not all the technical solutions developed by the public sector automatically affect the industry sector, we attempt to understand which types of technology more likely set the basis for firms' innovation activities. Notably, technologies are not all equal, and, depending on their attributes, they may be more (or less) attractive to firms (Chen et al., 2011; Shane, 2001). According to the forgoing discussion, the main research question of this study is: do technology attributes explain the degree to which public research has an impact on industry innovation? We investigate this issue into the green energy field since it has been found that government technologies in this domain does not always have a stronger impact than non-government ones (Popp, 2006). Moreover, it is one of the most pollutant sectors, but with the highest chances of improvement (Hoppmann et al., 2013). As a consequence, the current political debate strongly relates to how public environmental research may further sustain the development and

implementation of green technologies by the industry, particularly referring to the energy sector (e.g., Hoppmann et al., 2013; OECD, 2012).

We develop hypotheses and, to test them, we relied on 4,363 patents registered by PROs during the period 1976-2011 and classified into the “Alternative energy production” and “Energy conservation” technology fields, according to the International Patent Classification (IPC) Green Inventory (Albino et al., 2014). After reviewing existing literature on technology attributes (e.g., Chen et al., 2011; Messeni Petruzzelli, Natalicchio, et al., 2015; Messeni Petruzzelli, Rotolo, et al., 2015; Nerkar and Shane, 2007; Shane, 2001; Sohn et al., 2013), four characteristics have been considered in this study, namely (i) the level of establishment (Ardito, Messeni Petruzzelli and Panniello, 2016), (ii) the scope of application (Novelli, 2015), (iii) the scientific nature (Narin et al., 1997), and (iv) the technological breadth (Messeni Petruzzelli, Rotolo, et al., 2015). Results of the Tobit regression reveal that the level of establishment of public environmental technologies has an inverted U-shaped effect of on the degree to which the industry sector builds on those solutions. Instead, the scope of application and technological breadth positively impact the spread of public environmental technologies among companies, whereas the scientific nature has a negative effect.

These results allow us to contribute to current debate on when publicly funded research can stimulate additional R&D efforts by industry (Coccia and Rolfo, 2008; OECD, 2006), with a specific focus on the outcomes of public environmental research, which is more and more important to promote economic growth and address environmental issues at the same time (Alkemade et al., 2011). Furthermore, we also provide an alternative perspective to evaluate the impact of public research to society, which is a difficult undertaking for governments, but it is needed to better design funding policies (Bornmann and Marx, 2014).

The remainder of the paper is structured as follows. Section 2 presents the theory and hypotheses. Section 3 explains the methodological approach. Section 4 shows the results. Finally, Section 5 provides discussion, implications, limitations, and future research directions.

2. THEORY AND HYPOTHESES

2.1. Public research in the green energy field

Nowadays, one of the most relevant objectives for many governments (e.g., European Union and the U.S.) is reducing human-induced climate change, while avoiding to shrink economic growth (EC/EACI, 2011; OECD, 2012). To achieve this win-win effect, the development of technical solutions that favour wealth creation and concurrently address environmental issues has become of foremost importance (Alkemade et al., 2011; Mowery et al., 2010; Rogge and Reichardt, 2016). Green energy technologies (i.e., alternative energy production and energy conservation solutions) are at the core of

this debate. Indeed, the energy sector contributes to the economic development, and it may provide extremely positive environmental benefits if innovative low-carbon energy technologies are created and diffused (Albino et al., 2014). However, as in the case of innovation in general, market failures often limit companies in the green energy sector to capture the full value of their environmental innovation activities (Mowery et al., 2010). Specifically, these are subject to the so-named double externality problem (Hoppmann et al., 2013). That is, those innovation efforts lead to two types of positive externalities as knowledge creation and environmental benefits; nonetheless, neither the former nor the latter is well captured by market prices (Rennings, 2000). As a result, private R&D efforts for developing green energy solutions are at a suboptimal level, and governments have to compensate for this misalignment (Foray et al., 2012). Accordingly, PROs spending on more eco-friendly energy technologies has drastically risen in the last years to correct for such problem (Albino et al., 2014; Hargadon, 2010). Yet, relevant improvements in the energy system have not been displayed since bringing green energy technologies to mainstream markets, hence realizing substantial changes in the energy system, requires additional innovation efforts by industry (Balachandra et al., 2010; Sagar and van der Zwaan, 2006). According to the foregoing discussion, we address our research question with a focus on the green energy field.

2.2. *Technology attributes*

Herein we argue that the attributes of the technologies created by PROs can predict when public research will set the basis for firms' innovation efforts, especially when they operate in technology-intensive industries such as the energy sector. Indeed, technology attributes reflect the opportunities and underlying knowledge base characterizing technical solutions (Shane, 2001). Hence, technology attributes may explain whether and to what extent firms are able and/or willing to rely upon certain types of technology since they come with some expectations for companies regarding the possibility to build on them to drive future innovation activities (Ardito et al., 2015; Nerkar and Shane, 2007; Shane, 2001). Relatedly, it has been proved that technology characteristics are relevant to explain the likelihood of firm formation (Shane, 2001), technology acquisition (Messeni Petruzzelli, Natalicchio, et al., 2015; Sohn et al., 2013), and the commercialization of university (Nerkar and Shane, 2007) and environmental technologies (Chen et al., 2011). Furthermore, some studies revealed that technology attributes affect the technological impact of patents (e.g., Fischer and Leidinger, 2014; Messeni Petruzzelli, Rotolo, et al., 2015; Nemet and Johnson, 2012; Sterzi, 2013) - i.e., the impact of a patent for developing novel patents (e.g., Ahuja and Lampert, 2001) - also in the case of green technologies (Nemet, 2012). In line with this reasoning, we analyse the role of technology attributes in elucidating the impact of public environmental research on industry innovation.

After reviewing extant literature, we identified four attributes that have been more extensively studied to examine innovation phenomena, namely (i) the level of establishment (Ardito, Messeni Petruzzelli and Panniello, 2016), (ii) the scope of application (Novelli, 2015), (iii) the scientific nature (Narin et al., 1997; Novelli, 2015), and (iv) the technological breadth (Messeni Petruzzelli, Rotolo, et al., 2015).

2.2.1. *The level of establishment*

Technologies are different with regard to the level of common understanding in the economy (i.e., the level of establishment). That is, certain technologies are more known and their underlying knowledge has been more exploited, which means that they can be considered more established as opposed to nascent (Ahuja and Lampert, 2001; Alnuaimi and George, 2016).

Prior research suggests that established technologies may positively impact subsequent innovation efforts since they provide advantages in terms of organizational learning, recombination opportunities, and market acceptance (Ardito, Messeni Petruzzelli and Panniello, 2016). Indeed, first, established technologies are more codified than novel ones, hence requiring an inferior level of absorptive capacity (Dosi and Nelson, 2010; Heeley and Jacobson, 2008). Thus, it is easier and more cost effective for firms that have not developed the inventions to build on them with fewer risks. Second, a better understanding of a given technology provides firms with more chances to come up with useful recombination opportunities, which then may act as a catalyst for future technological developments (Fleming, 2001; Savino et al., 2015). Third, customers are usually less reluctant towards a technology that they feel to be more familiar (Story et al., 2014). Thereby, the exploitation of established technologies is more legitimated by the operating market.

However, after a certain level of establishment (i.e. when technologies are widely known and adopted), established technologies become commodities and do not represent a valuable resource upon which companies may drive future innovative trajectories (James et al., 2013). Furthermore, a very-well established solution has probably been recombined many times, and the most profitable combinations have been exploited already, so that the costs of searching for new recombination opportunities surpass the benefits of finding additional valuable combinations (Ardito, Messeni Petruzzelli and Panniello, 2016). Finally, when the level of establishment starts to become too high the benefits deriving from market legitimization are outweighed by the impossibility to meet changing customers' demands and stimulate entrepreneurial possibilities (Alnuaimi and George, 2016).

The above arguments suggest that firms might be interested in established technologies, but only up to a certain level of establishment. Thereby, PROs that aim to provide research externalities toward the industry may have greater chances to attract many companies if they continue with the

initial improvement of a certain technology, hence making it more readily available, instead of only providing complete new solutions. This may be particularly relevant in the green energy sector since companies search for a compromise between avoiding radically new innovative activities, due to the double externality problem, and relying on solutions that cannot represent a source of competitive advantage (Hoppmann et al., 2013). Therefore, we expect that:

H1. The level of establishment of public technologies has a curvilinear (inverted U) effect on industry innovation.

2.2.2. *The scope of application*

The scope of application refers to the extent of different domains a technology relates to, which means that a higher scope reflects a broader set of potential applications (Gambardella et al., 2007; Lerner, 1994). Recent research revealed that non-innovating companies more likely build on technologies with a broad scope compared to innovating ones (Novelli, 2015). Indeed, innovating firms usually fail to protect and exploit broad inventions because they do not have the complementary assets and internal capabilities required to pursue developments across all potential domains in a timely manner (Gambardella and Giarratana, 2013; Rosenberg and Trajtenberg, 2004). Conversely, given the high visibility of broad technologies, many non-innovating companies may come across them during search processes and focus on the domain to which they are more expert or need a specific contribution to solve an ongoing issue (Lee and Lee, 2010; Messeni Petruzzelli, Natalicchio, et al., 2015), hence developing follow-up inventions that substitute the original ones. This implies that if PROs are able to develop technical solutions with a high scope of application, the likelihood that more companies will build on them grow because those solutions cross the search processes of many firms (Novelli, 2015). Moreover, to build on broad solutions, non-innovating firms usually do not have to compete with the innovating organization if it is a PRO and, since they will likely belong to diverse domains, they do not necessarily compete against each other as well, thus increasing the attractiveness of broad solutions. This phenomenon may be accentuated in the (green) energy sector because it relates to multiple domains (e.g., building, transportation, and energy production) (OECD, 2012). Thereby, a number of different companies exist that can come across a green energy solution with a broad scope of application. Thus:

H2. The scope of application of public technologies has positive effect on industry innovation.

2.2.3. *The scientific nature*

Technologies may differ with regard to the scientific knowledge that has been used for their development; the more the scientific knowledge used the stronger the scientific nature of the technologies (Fischer and Leidinger, 2014). Although the conventional wisdom states that PROs mainly develop more basic and science-based solutions, the changing orientation of PROs towards more applied research has made them not only reliant on basic science (Burhan et al.; Geuna and Rossi, 2011), so the level of scientific knowledge underlying their technologies may vary.

It has been argued that science is an enabler of innovation, in that it opens up novel and useful recombination opportunities that may lead to valuable technological discoveries (Fleming and Sorenson, 2004). This was a major justification for the need of public research (Mansfield, 1991). However, when the goal is to provide research externalities to the industry sector it should be mentioned that firms consider science-based technologies as extremely uncertain (Murray and Stern, 2007). Furthermore, solutions forged in basic science are not ready-made inputs for companies. Indeed, the comprehension of their underlying rationale is more complex than the understanding of solutions not grounded in a scientific knowledge base (Messeni Petruzzelli, Natalicchio, et al., 2015). This issue is further exacerbated by the fact that to understand the scientific logic used in technology development it is necessary to have a link with the scientific communities where more basic solutions are developed, but this link is often difficult to build between PROs and companies given their distance in terms of cognitive capabilities, research objectives, and modus operandi (Brooks, 1994; Bruneel et al., 2010; Gittelman, 2006). Building on these arguments, Gittelman (2016:1584) highlighted that the rise of basic science in medical research was a setback for drug discovery, hence revealing that “a moving frontier in scientific knowledge does not translate to a corresponding advance in technological innovation”. These arguments may also pertain to the green energy field. For instance, in the wind power domain, prior research revealed the failure of the “Big Science” approach over a less science based approach in both the U.S. and Europe (Hendry and Harborne, 2011). Therefore, we contend that:

H3. The scientific nature of public technologies has a negative effect on industry innovation.

2.2.4. *The technological breadth*

The technological breadth represents the degree to which the knowledge base of a technology is diversified, thus reflecting a wider search process during its development (Messeni Petruzzelli, Rotolo, et al., 2015). Inventions resulting from broad searches are more likely understood by companies operating in different industries (Banerjee and Cole, 2010). This implies that more companies may build on those solutions. Moreover, the diverse companies that attempt to build on

technologies with a high technological breadth may benefit from a large pool of potential links and associations between various knowledge domains, which leads to more opportunities for knowledge recombination (Maggitti et al., 2013) and, hence, more chances to contribute to technological progress (Fleming, 2001; Messeni Petruzzelli, Rotolo, et al., 2015). These recombination opportunities are particularly relevant to let firms build on green energy technologies. Indeed, Nemet (2012) and Benson and Magee (2014) found that green energy technologies based on multiple knowledge domains more likely set the basis for future technological developments; additionally, Ardito, Messeni Petruzzelli and Albino (2016) showed that those technologies also have a higher breadth of impact. Eventually, we may expect that PROs combining more knowledge domains during their R&D (environmental) processes will come up with inventions of a higher impact on industry innovation. Stated more formally:

H4. The technological breadth of public technologies has a positive effect on industry innovation.

3. DATA AND METHODOLOGY

3.1. *Industry setting*

As discussed in Section 2, the green energy field is in the focus of our study. Besides the fact that both public and private involvement is relevant (Alkemade et al., 2011; OECD, 2012), additional reasons make this setting as suitable to test the proposed hypotheses. First, despite PROs are usually set to provide scientific knowledge, in this context, their role as technology provider has gained increased importance (Albino et al., 2014; Oltra et al., 2012). Thereby, it is reasonable to adopt a technology perspective in this research. Second, the development of (green) energy technologies involves technological knowledge that spans a long time period and multiple technological areas; furthermore it may origin from both basic and applied research (Benson and Magee, 2014; Guan and Yan, 2016; Nemet, 2012). This provides us with further confidence about the relevance of the analysed technology attributes. Third, patents are widely used to identify and examine green energy technologies (Guan and Yan, 2016; Nemet, 2012; Veugelers, 2012). Moreover, with patent data, it is possible to identify several attributes of patented inventions and the degree to which they have had an impact on subsequent technological developments by means of citations (Kaplan and Vakili, 2015; Messeni Petruzzelli, Rotolo, et al., 2015; Nerkar and Shane, 2007). Finally, many governments have changed the intellectual property policy to increase incentives to patent public research (e.g., the Bayh-Dole Act). Consequently, the rate of PROs patenting has increased (Sterzi, 2013), especially in

the green energy field (Albino et al., 2014; Hargadon, 2010). Thereby, patents can be considered as a reliable information source to conduct our research.

3.2. *Data collection*

The first objective of the data collection process was to detect technologies developed by PROs in the green energy field. To this aim, patents registered at the USPTO were employed. Specifically, first, the IPC codes pertaining to the “Alternative energy production” and “Energy conservation” technology fields, as defined by the IPC Green Inventory¹, were identified (e.g., Albino et al., 2014; Ardito, Messeni Petruzzelli and Albino, 2016). Second, we queried the USPTO database in order to collect all the patents (and related bibliographic information) associated with the identified IPC codes. Third, we excluded all the patents that matched our search criteria but were not registered by a research organization or were applied for after 2011. This second choice was made since our dependent variable is based on a patent’s forward citations (see Section 3.3.1), so more recent patents may not have had enough time to be cited (e.g., Katila, 2002), thus leading to a biased measure. Finally, we investigated websites, reports, and other additional sources that may let us distinguish between patents registered by private and public research organizations. As a result, this procedure yielded a final sample of 4,363 patents developed only by PROs during the period 1976-2011. Our sample includes patents of PROs established in diverse countries such as the U.S. department of Energy, the French Commissariat à l’énergie atomique et aux énergies, the National Research Council of Canada, the Indian Council of Scientific and Industrial Research, and the Taiwanese National Tsing Hua University, which are also among the most patent intensive public organizations.

3.3. *Variables*

3.3.1. *Dependent variable*

Cited patents can be considered as the basis of subsequent innovation efforts. Indeed, these are inventions whose technological relevance has been recognized by innovating organizations, which then based part of their innovation activities on those solutions (Kaplan and Vakili, 2015; Messeni Petruzzelli, Rotolo, et al., 2015). Thus, forward citations have been widely considered as a proxy for the impact of patents on subsequent technological developments. In other words, “external citations indicate that other players have internalized part of the knowledge underlying the original invention and succeeded in building on it” (Novelli, 2015:494). In line with this reasoning, we analysed the citations received by the patents in our sample, specifically assessing whether they have been

¹ See <http://www.wipo.int/classifications/ipc/en/est/>.

referenced by patents developed by companies. With this procedure, we can analyse if PROs patents have had an impact on industry innovation efforts. More in detail, for each patent in our sample, we identified the citing patents and to whom they belong. Once identified the owners of the citing patents, we distinguished between those registered by companies and those registered by other types of assignee. Finally, after checking for company names, we measured our dependent variable (*IndustryImpact*) as follow:

$$IndustryImpact = 1 - \sum_F \left(\frac{C_{FP}}{C_P} \right)^2,$$

where C_{FP} indicates the number of times the firm F has cited the focal patent P, while C_P is the total number of citations to patent P coming from patents owned by firms. This is a Herfindahl-type index based on the generality index proposed by Trajtenberg et al. (1997). Differently, from the generality index, this measure does not account for the diverse technological classes of the citing patents; rather, it considers the diverse firms owing the citing patents. In other words, this index measures the degree of different firms possessing patents that cite a PRO patent. The rationale behind this index is that the greater the variety of firms owing citing patents, the higher the impact of the PRO patent on industry innovation efforts.

Of course, we may have computed this variable as the simple count of diverse firms that own, at least, one patent citing a PRO one. However, in this way, the actual degree to which the PRO patent affects the industry sector would be missed. For instance, suppose that an invention received 15 citations equally distributed among patents owned by companies A, B, and C, respectively. Moreover, suppose that a second invention still received 15 citations, but 13 of them are from patents owned by company A, one citation is from company B, and one citation is from company C. In this case, the first invention actually had a wider impact on the industry as opposed to the second one, which had an impact mainly on company A. However, if we adopted a count measure for *IndustryImpact*, its value would be the same for the two inventions (three). Differently, using the Herfindahl index, *IndustryImpact* would be 0.88 for the first invention and 0.24 for the second invention. This better reflects that the two inventions have impacted industry innovation efforts in a different way, with the first invention reflecting a wider impact.

Furthermore, since this study covers a long time period and there may be a bias towards older patents in terms of forward citations, we are confident that our measure is still reliable for the following reasons. First, the most recent patents in our sample were filed for in 2011, with forward citations collected through the end of 2016. Hence we captured all the citations received, at least, five years after patent application, which is considered the time span when patents gets most of their citations (e.g., Ardito, Messeni Petruzzelli and Albino, 2016; Griliches, 1987; Katila, 2002; Nooteboom

et al., 2007). Second, we included time period effects in our models to account for systematic intertemporal differences (Capaldo et al., 2017) (see Section 3.3.3).

3.3.2. Independent variables

The first independent variable measures the extent to which a technology is established (*Established*). It is computed as the natural logarithm of the number of a patent's backward citations. The logarithmic transformation was adopted to correct for skewness and kurtosis. The rationale behind this measure recalls previous studies arguing that the higher the citations made by a focal patent the higher the level of establishment (e.g. (Ahuja and Lampert, 2001; Ardito, Messeni Petruzzelli and Panniello, 2016; Nerkar and Shane, 2007; Ziedonis, 2007). Indeed, based on the fact that a technology is often the result of a cumulative process over a technological trajectory (Dosi, 1982; Dosi and Nelson, 2010), it can be assumed that patents referring to a high number of previous patents reflect inventions with a stronger link to a well-established technological paradigm (Dornbusch and Neuhäusler, 2015; Martinelli, 2012). Conversely, a small number of backward citations signal that the patent is disconnected from previous technical solutions, thus highlighting its novel nature (Ahuja and Lampert, 2001; Ziedonis, 2007). Second, following well-known research, we operationalized the scope of application (*Scope*) as the number of different three-digit U.S. classes assigned to each patent by the USPTO (Lerner, 1994; Novelli, 2015). Third, to account for the scientific nature of the knowledge underlying a patented invention (*Scientific*), as made by previous studies, we counted the number of patent references made to non-patent documents (Callaert et al., 2006; Narin et al., 1997). Since also this variable was skewed and kurtotic, logarithmic transformation was also used in this case. Finally, to assess the breath of the technological base upon which a patent is built (*TechBreadth*), we adopted the Trajtenberg et al. (1997)'s originality index. It is computed through a Herfindahl index measuring the diversity of technological classes assigned to the patents cited by a focal patent. Specifically,

$$Technological\ breadth = 1 - \sum S_{ij}^2,$$

where S_{ij} refers to the fraction of patents cited by patent i that belong to the three digit U.S. class j out of n technological categories assigned to the patents by the USPTO.

3.3.3. Control variables

Several control variables were considered to improve the reliability of our analyses. First, we controlled for the duration of the patent examination process (*Duration*), measured as the difference, in years, between the filing and issue date (Nemet, 2012). Second, a dummy variable assessing whether a

patent has been jointly developed by more organizations was included (value one) (*Joint*) (Messeni Petruzzelli, Rotolo, et al., 2015). Third, we controlled for the number of patent claims (*Claims*) (Novelli, 2015). Fourth, we accounted for the number of inventors that have been involved in the invention process (*TeamSize*) (Messeni Petruzzelli, Rotolo, et al., 2015). Fifth, a patent may attract companies' attention whether it has also been published in other patent offices and whether the innovating organization has been willing to pay renewal fees. Therefore, we took into account the number of patent offices (besides the USPTO) where the patent has been registered (*PatFamily*) and if the renewal fees of the patent have been paid at least once (*Renewal*) (Fischer and Leidinger, 2014). Sixth, we distinguished PROs between universities, governmental organizations (e.g., the U.S. Department of Energy), and other public research centres (e.g., national research councils), each of which resulted in a dummy variable. Thus, we included two dummies (*dummy PRO*) to control for the different types of PRO. Seventh, we also included dummy variables to control relevant time period effects (*dummy period*). Following Ardito, Messeni Petruzzelli and Albino (2016), four time periods related to the energy sector were considered: 1976-1987, 1988-1997, 1998-2002, 2003-2011. We omitted the dummy PRO "university" and the dummy period "2003-2011". Finally, we added a dummy variable assessing if the PRO owing a patent is U.S. based (value one) in order to control for a potential country bias (*dummy U.S.*).

3.4. Model specification

Since our focus is on the technology attributes of an invention, the unit of analysis of this study is the single patent. Regarding the econometric approach, we employ a Tobit regression. This type of regression is suitable when the dependent variable (DV) is limited between a range of values and is not normally distributed (Long, 1997). Indeed, other types of regression (e.g., OLS) cannot account for the nature of this type of DVs and will probably estimate incorrect parameters (Long, 1997; Wiersema and Bowen, 2009; Wooldridge, 2012). *IndustryBreadth* is operationalized through a Herfindahl index, which, by construction, is continuous but limited between zero and one. Thus, our dependent variable falls into the category of limited DVs and, according to previous studies (Ardito, Messeni Petruzzelli and Albino, 2016; Banerjee and Cole, 2010; Köhler et al., 2012), given the double bounded nature of this variable and its non-normal distribution, a Tobit regression is employed.

4. RESULTS

Table 1 and Table 2 show descriptive statistics and pairwise correlations, respectively. According to Table 2, correlations are well below the value of 0.70, hence limiting multicollinearity issues (Cohen et al., 2013).

Table 1. Descriptive statistics

	Min.	Max.	Mean	S.D.
IndustryImpact	0	0.97	0.29	0.35
Established	0	5.51	1.76	0.97
Scope	1	10	2.04	1.10
Scientific	0	6.98	1.43	1.38
TechBreadth	0	0.92	0.39	0.30
Duration	0	15	3.03	1.71
Joint	0	1	0.12	0.33
Claims	1	99	14.79	11.34
TeamSize	1	24	2.97	1.94
PatFamily	0	5	1.39	1.33
Renewal	0	1	0.68	0.47

n=4,363

Table 2. Pairwise correlations

	1	2	3	4	5	6	7	8	9	10	11
1-IndustryImpact	1										
2-Established	0.12*	1									
3-Scope	0.07*	-0.01	1								
4-Scientific	-0.24*	0.047*	0.15*	1							
5-TechBreadth	0.11*	0.67*	0.15*	-0.01	1						
6-Duration	-0.37*	0.01	0.03*	0.37*	-0.02	1					
7-Joint	-0.08*	-0.00	0.08*	0.21*	-0.02	0.16*	1				
8-Claims	0.07*	0.17*	0.13*	0.22*	0.14*	0.10*	0.02	1			
9-TeamSize	-0.16*	-0.02	-0.01	0.12*	-0.02	0.15*	0.21*	0.00	1		
10-PatFamily	-0.14*	-0.03*	0.13*	0.31*	-0.03*	0.30*	0.17*	0.16*	0.12*	1	
11-Renewal	0.13*	0.03	0.03	0.06*	0.01	-0.11*	0.01	0.12*	0.02	-0.01	1

n=4,363

*p<.05

Table 3 presents the results of the Tobit regression. Model 1 is the baseline model, hence including control variables only. Models 2-5 are the partial models, each of which includes one the four independent variables. Model 6 is the full model, where all the variables are present. Since the variance inflation factor (VIF) for this last model is above the limit of 10 (Kennedy, 2003), we discuss results using partial models (Capaldo et al., 2017). Model 1 reveals that PROs patents have a wider impact on the industry sector if the number of claims is high ($\beta=0.008$, $p<0.01$), and if they have been renewed at least once ($\beta=0.226$, $p<0.01$); the opposite effect can be ascribed to the duration of the examination process ($\beta=-.084$, $p<0.01$) and the team size ($\beta=-0.011$, $p<0.05$). Model 2 tests H1 and suggests that the level of establishment is curvilinearly (inverted U) related to *IndustryImpact*, as its linear term is positive and significant ($\beta=0.206$, $p<0.01$), while its squared term is negative and significant ($\beta=-0.026$, $p<0.01$). To corroborate this finding, using the coefficient estimates from Model 2, we depicted *Established* against the predicted level of *IndustryImpact* (Figure 1). According to Figure 1, the slope at the right side of the curve is not comparably steep to the slope at the left side. This may

hint that despite negative effects of very-well established solutions exist, these are slightly relevant as opposed to the positive ones (see Haans et al., 2016). In line with H2, Model 3 reveals that the scope of application has a positive impact on industry innovation efforts ($\beta=0.015$, $p<0.10$); similarly, Model 4 confirms H3 by revealing the negative influence of the scientific nature of a technology ($\beta=-0.069$, $p<0.01$). Finally, Model 5 supports H4 in that the coefficient of *TechBreadth* is positive and significant ($\beta=0.340$, $p<0.01$).

Table 3. Results of Tobit regression (with robust s.e. in parentheses)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Established		0.206*** (0.031)				0.129*** (0.035)
Established2		-0.026*** (0.008)				-0.008 (0.009)
Scope			0.015* (0.009)			0.015* (0.009)
Scientific				-0.069*** (0.009)		-0.066*** (0.009)
TechBreadth					0.340*** (0.031)	0.115*** (0.041)
Duration	-0.084*** (0.007)	-0.080*** (0.007)	-0.084*** (0.007)	-0.070*** (0.007)	-0.081*** (0.007)	-0.067*** (0.007)
Joint	0.004 (0.032)	0.003 (0.031)	0.000 (0.032)	0.034 (0.031)	0.003 (0.031)	0.026 (0.031)
Claims	0.008*** (0.001)	0.007*** (0.001)	0.008*** (0.001)	0.009*** (0.001)	0.007*** (0.001)	0.007*** (0.001)
TeamSize	-0.011** (0.005)	-0.010* (0.005)	-0.011* (0.005)	-0.009* (0.005)	-0.011* (0.005)	-0.008 (0.005)
Family	0.003 (0.008)	0.004 (0.007)	-0.001 (0.008)	0.013* (0.008)	0.003 (0.007)	0.015* (0.007)
Renewal	0.226*** (0.023)	0.206*** (0.022)	0.226*** (0.022)	0.237*** (0.022)	0.222*** (0.022)	0.220*** (0.022)
dummy PRO	Included	Included	Included	Included	Included	Included
dummy period	Included	Included	Included	Included	Included	Included
dummy U.S.	Included	Included	Included	Included	Included	Included
Constant	-0.393*** (0.043)	-0.663*** (0.052)	-0.417*** (0.045)	-0.408*** (.042)	-0.530*** (0.045)	-0.667*** (0.053)
Log-pseudolikelihood	-2647.94	-2566.64	-2646.26	-2616.84	-2589.93	-2531.81
R2	0.280	0.303	0.282	0.290	0.297	0.313
F	224.42***	210.16***	207.61***	212.79***	219.94***	178.99***

N = 4,363.

* $p < 0.10$.

** $p < 0.05$.

*** $p < 0.01$.

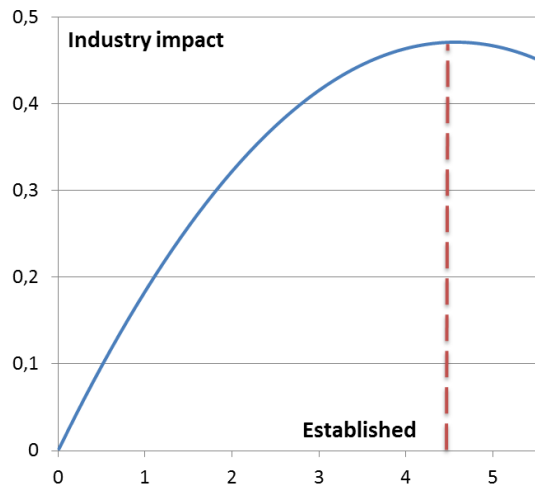


Figure 1. Curvilinear effect of *Established* on *IndustryImpact*.

5. DISCUSSION

The present paper aims to understand when the research outcomes of PROs influence industry innovation by analysing technology attributes of PROs developed technical solutions (i.e., the level of establishment, the scope of application, the scientific nature, and the technological breadth). Specifically, we conducted this research in the green energy field. Indeed, as per innovation in general, the role public research to correct for the market failures hampering private environmental R&D efforts is extremely important, yet PROs often fail to achieve this goal (Balachandra et al., 2010). Moreover, boosting the development of green energy solutions by the private sector is pivotal for policymakers in order to simultaneously improve economic growth and environmental benefits (Hoppmann et al., 2013; Rennings, 2000).

On the basis of a sample of 4,363 patents registered by PROs during the period 1976-2011 and classified into the “Alternative energy production” and “Energy conservation” technology fields, results of the Tobit regression reveal that the level of establishment of PROs technologies has a positive influence on subsequent industry innovation efforts; only when the level of establishment becomes excessively high this effect turns negative. Furthermore, both the scope of application and the technological breadth manifest a positive influence on the degree to which many companies will build on PROs research outcomes. Finally, we found a negative relationship between the scientific nature of technologies and the breadth of impact that PROs technical solutions have on subsequent private innovation activities. Considering that “understanding the impact of public research on industrial R&D is central to understanding the innovation process itself” (Cohen et al., 2002:1), these results will provide relevant theoretical and policy implications.

5.1. *Theoretical implications*

From a theoretical perspective, first, this research investigates a novel and understudied set of antecedents that may explain when outcomes of public R&D efforts provide externalities towards the industry sector, i.e., the technology attributes. To the best of our knowledge, prior research has widely investigated the policy incentives fostering private R&D efforts (e.g., public subsidies) (e.g., Czarnitzki and Lopes-Bento, 2013; OECD, 2006) but negligible efforts have been devoted to examine when the results of public research themselves impact the industry sector. Furthermore, among the few studies examining the results of public research in promoting R&D initiatives related to the private sector (e.g., university-industry-government collaborations and Spin-offs creation) (e.g., Bruneel et al., 2010; Dornbusch and Neuhäusler, 2015), very few of them has narrowed the level of analysis to the technology level (e.g., Shane, 2001), which, instead, has been proved to be pivotal to understand innovation phenomena and the impact of developed technologies (e.g., Ardito et al., 2015; Chen et al., 2011; Nerkar and Shane, 2007). Likewise, studies examining public-private knowledge transfer have mainly focused on firm/university characteristics, modes of knowledge transfer, and proximity dimensions (e.g., geographic) (Agrawal, 2001; Azagra-Caro et al., 2017; Lindelöf and Löfsten, 2004). However, except for Bekkers and Bodas Freitas (2008), knowledge specific characteristics (e.g., codification) have been undervalued; moreover, whether these knowledge characteristics actually help firms to improve their innovation processes has remained unclear. Eventually, these arguments highlight the relevance of our contribution, which refines earlier works on the influence of public research on the industry sector by offering empirical evidence about the role of technology characteristics.

This first contribution goes hand-in-hand with our second contribution. Indeed, we reveal that investigating the role of technology attributes is relevant to assessing the impact of public environmental research on industry innovation efforts, particularly referring to the green energy field. Considering this specific setting is important because extant academic (e.g., Hoppmann et al., 2013) and political debates (OECD, 2012) have devoted particular attention to this sector. Moreover, the role of technology development in the green energy field is central to understand how to promote a shift towards low-carbon societies; thus, some recent studies have recognized factors at the technology level as pivotal to provide information about the development and impact of green energy technologies (Benson and Magee, 2014; Nemet, 2012). Notwithstanding, those studies have not provided insights about the potential influence of technology-level factors, as technology attributes, to explain if green energy technologies developed by PROs may have an impact on subsequent innovation activities by firms.

Third, this study also contributes to the discourse about “where” measuring the influence of a technology. Indeed, a technology may influence the technological landscape of succeeding innovation activities within or beyond a technological, geographic, or institutional domain (e.g., Messeni Petruzzelli, Rotolo, et al., 2015), and our results highlight the types of technology belonging to the public domain that have an impact on the industry domain, as represented by the degree of different companies that build on green energy technologies developed by PROs. In turn, these results may let us add to literature on research evaluation (e.g., Bornmann and Marx, 2014; Lyall et al., 2004). In particular, this literature claims that measuring the societal benefits of public research is still a complex task. However, we believe our approach, which involves the selection of PROs technologies and the adoption of a Herfindahl index measuring the degree of firms building on those solutions, may have provided further insights on how to measure the societal impact of public research.

5.2. *Policy implications*

From a policy perspective, we provide guidance on how governments may allocate public money for developing technologies that will be relevant for industry innovation efforts. Indeed, we advise policymakers that public technologies are not all equal with regard to the attractiveness they might have to companies. Thereby, when it is relevant to produce research externalities towards the industry sector, policymakers should design funding schemes directly devoted to develop certain types of technical solutions instead of others. In turn, it is important that PROs receive clear indications regarding the R&D outcomes they are expected to produce. Specifically, considering the analysed setting, where the objective is to achieve better environmental performance while maintaining high level of economic development and both private and public efforts are needed (Albino et al., 2014), we suggest that policymakers invest in strengthening their networks with corporate executives in order to better understand their technology needs. In this way, environmental and business requirements may be better matched; thus, there will be more chances that governments supply relevant green energy technologies to the industry sector, which will set the basis for their future innovation activities. More in detail, we found that green energy technologies that are more established will likely impact industry innovation efforts; conversely, those characterized by a high scientific nature has the opposite effect. Although it may appear that these results may recommend policymakers to disregard more basic research, we advocate that PROs should not be limited to basic research. In other words, PROs should not only devote R&D efforts on basic research, but also continue the technology development process till a level that may be understandable by companies without necessarily focusing on the basic scientific rationale of the developed technologies. This may also help to overcome the double externality problem facing private innovation activities by reducing

knowledge leakage and uncertainty. Furthermore, the scope of application and the technological breadth was revealed to be relevant attributes that make green energy technologies important to firms. This implies that technologies that can be readily applicable to diverse domains or are grounded on a knowledge base that enables many recombination opportunities will likely spread among multiple companies. Therefore, policymakers are advised that developing more pervasive solutions or solutions that may enable pervasive innovation activities (Ardito, Messeni Petruzzelli and Albino, 2016; Gambardella and Giarratana, 2013) should be developed for sustaining industry innovation efforts.

5.3. *Limitations*

As with all studies, this paper has some limitations that may point out avenues for future research. First, although the use of patents to capture technology development is very-well established, especially in the green energy field (Albino et al., 2014; Hoppmann et al., 2013; Popp, 2006), we may have missed some inventions because PROs may decide not to adopt a patenting strategy in certain cases and inventions are not always patentable. Thus, further confirmation or additional data may be attained through direct interviews with companies and policymakers. In this way, additional characteristics of technologies (e.g., operational complexity and originality) that cannot be captured with patent-based measures may be also scrutinized. Second, in this research we only focused on the role of technology attributes given the poor attention they have received for analysing the impact of public research. However, we acknowledge that organizational- and environmental-level factors might moderate the technology-level relationships between technology attributes of PROs technical solutions and industry innovation efforts, hence calling for multilevel analyses (e.g., Ardito et al., 2015; Hitt et al., 2007). Third, despite the energy sector is particularly relevant for this research and has some common features with high-tech sectors such as biotechnology and aerospace (Ardito, Messeni Petruzzelli and Panniello, 2016), other industries can be investigated to assure generalizability of results.

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**THE EFFECTS OF PAY DISPERSION BETWEEN EXECUTIVES AND
EMPLOYEES OF AN ORGANIZATION ON FIRM PERFORMANCE:
EVIDENCE FROM TURKEY**

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ABSTRACT

This study examines the performance consequences of pay dispersion in publicly-listed firms in Turkey for the period 2009 to 2013. Our study focuses on vertical pay dispersion, which reflects intra-firm and vertical differences between pay at two important hierarchical levels: top executive level and lower hierarchical level. We intend to present arguments based on equity theory and tournament theory, and will propose two contradictory hypotheses to test them within the context of an emerging market. Results provided in the present study confirm that pay dispersion between executives and employees has a positive impact on a firm's profitability in Turkey. Our study contributes current empirical evidence by examining vertical pay dispersion in an emerging country context, which may have a different cultural orientation and societal-wide assumptions concerning fairness, power and disparities, relative to its developed country counterparts.

Keywords: Pay dispersion, pay gap, executive pay, firm performance, emerging economy

INTRODUCTION

Top management compensation research focuses on CEO and executive pay level and structure. There is accumulated empirical knowledge on the antecedents and consequences of executive compensation (Devers et al., 2007; van Essen, Otten and Carberry, 2015; Finkelstein, Hambrick and Cannella, 2009). However, academic and popular interest in the pay gap between employees at the highest and lowest ranks of organizations, or "pay dispersion", is relatively new (Winter-Ebmer and Zweimuller, 1999; Heyman, 2005; Lee, Lev and Yeo, 2008). Existing studies only propose limited insight about the determinants and consequences of pay dispersion. For example, some research has shown that, since employees always compete with one another to

gain promotion to managerial positions, and consequently, higher pay levels, pay dispersion encourages greater efforts and performance on the part of employees (O'Reilly, Main and Crystal, 1988; Ehrenberg and Bognanno, 1990; Becker and Huselid, 1992; Main, O'Reilly and Wade, 1993; Conyon, Peck and Sandler, 2001). Other studies, however, have revealed negative relationships between organizational and individual level outcomes and pay dispersion (Becker and Huselid, 1992; Trevor and Wazeter, 2006; Shaw and Gupta, 2007; Bolino and Turnley, 2008; Dallas, 2011). This study examines the performance consequences of pay dispersion in publicly listed firms in Turkey for the period 2009 to 2013. Our study focuses on vertical pay dispersion, which reflects intra-firm and vertical differences between pay at two important hierarchical levels: the top executive level and lower hierarchical level (Gupta, Conroy and Delery, 2002). We intend to present arguments based on both equity theory and tournament theory, and to propose two contradictory hypotheses that will be tested within an emerging market context. Tournament theory's core assumption is that employees' motivation and performance increase alongside pay disparities between organizational levels. Executive pay level motivates all employees to perform well. Equity theory suggests the opposite; the main predictions underlying this theory advocate that since all employees considered pay level as a reference point for assessing the fairness of their pay and rewards, pay differences provoke feelings of inequity, injustice, and jealousy, which reduce employees' organizational commitment and job satisfaction levels.

The rest of this paper is structured as follow. First, we discuss the theoretical foundation of pay dispersion. Second, we develop our hypotheses. We then present our sample, research model and methods. Finally, we summarize our primary results and conclusions, and discuss the implications of these findings for scholars and professionals.

THEORETICAL DEVELOPMENT AND HYPOTHESIS

Theoretical perspectives for vertical pay dispersion and its implications for firm performance

Scholars have long recognized that the way in which executives, especially CEOs of organizations, are remunerated and rewarded in relation to their colleagues and their employees holds important implications for corporate performance (Cowherd and Levine, 1992; Tosi and Greckhamer, 2004; Connelly et al., 2013). Organizations may adopt a wide variety of compensation systems and practices, highlighting different levels of pay dispersion both among peers (horizontal dispersion) and between different ranks within the company (vertical dispersion). The current study focuses on the dispersion between executives' pay and workers' compensation, in other words, vertical dispersion, which has been the subject of academic research for several decades (Connelly et al., 2013). While researchers agree that this dispersion has risen dramatically the causes and in particular, the effects of this pay gap, are not entirely clear. The theoretical framework of this analysis regarding the impact of vertical compensation dispersion to firm performance has two distinct theoretical bases, which will be reflected in the two different hypotheses.

Tournament theory

Tournament theory (Lazear and Rosen, 1981), which is based on economic game theory, is one of the foundations of pay dispersion research (Henderson and Fredrickson, 2001; Connelly, Tihanyi, Crook and Gangloff, 2014). Tournament theory proposes that employees are in competition with one another for higher-ranking positions and salaries; consequently employees' efforts increase alongside pay imbalances and as a result of the differences between various organizational levels. Tournament theory accepts a higher level of executive pay as a means for motivating individuals at all organizational levels to exert more effort and to perform well

(Becker and Huselid, 1992), and to try and win promotion to a higher level within the firm. This is not only valid where it concerns the ultimate CEO level, but is also true for employees striving to reach any other managerial position (Cappelli and Cascio, 1991; Henderson and Fredrickson, 2001; Lambert, Larcker and Weigelt, 1993; DeVaro, 2006). Several research findings support these predictions and have disclosed that top executives and especially CEOs serve as significant reference points to employees; thus, vertical disparities in pay levels have substantial consequences for employee behavior (Wade, O'Reilly and Pollock, 2006). The pay disparity is also justified as a tool for attracting and retaining top competencies in the higher ranks of the company (Bloom and Michel, 2002).

Although a number of scholars have attempted to understand the implications of a widening pay gap between top managers and employees (Beaumont and Harris, 2003; Wade et al., 2006), their attempts have failed to reach a consensus regarding its implications. One opinion, which primarily relies on tournament theory arguments, advocates the benefits of a large vertical pay disparity and debates that this will provide encouragement for promotions, motivate higher efforts and competition, and increase performance (Baker, Jensen and Murphy, 1988; Ehrenberg and Bognanno, 1990; DeVaro, 2006). Several empirical findings support this view and have discovered a positive relationship between firm performance and pay dispersion (Main, O'Reilly and Wade, 1993; Lallemand, Plasman and Rycx, 2004; Heyman, 2005).

Equity Theory

A subsequent line of research based on equity theory suggests, however, the opposite argument for vertical pay dispersion. Equity theory states that people expect pay to be distributed according to their relative contributions, and that each employee constantly compares their own contribution to the organization and the rewards received from the organization, relative to their individual reference group. This reference group does not need to comprise only their peers (Kulik and Ambrose, 1992), but will also include those above and below them in the organizational hierarchy, as well as members of other organizations. Employees perceive their outcomes to be unfair when their ratio of input to outcomes falls out of line with

their reference points. Through this mechanism, the pay gap can generate a feeling of inequity within the organization. Employees may then attempt to correct this feeling of inequity (Cowherd and Levine, 1992). This view advocates that since employees observe pay level as an assessment of the fairness of their compensation system, large pay gaps will stimulate feelings of inequity, injustice, and jealousy, which will have a negative effect on their job satisfaction and organizational commitment level (Finkelstein, Hambrick and Cannella, 2009). Hence, scholars taking this perspective generally affirm that a large vertical pay disparity tends to diminish motivation, effort, and cooperation between peers (Cowherd and Levine, 1992). Vertical pay dispersion can similarly stimulate careless risk-taking, reduce employee safety (Becker and Huselid, 1992), and ultimately lead to a higher employee turnover (Bloom and Michel, 2002; Gupta, Conroy and Delery, 2002). Existing empirical evidence supports this perspective, representing a negative relationship between vertical pay dispersion and organizational outcomes (Bloom, 1999; Siegel and Hambrick, 2005; Grund and Westergaard-Nielsen, 2008; Fredrickson, Davis-Blake and Sanders, 2010).

Contrasting hypotheses

As the research findings presented above suggests, these two theoretical perspectives are often considered as contrasting each other. Both theoretical views provide explanations for describing and interpreting results that positively link pay dispersion to firm performance, or that justify the negative effects of a pay gap on organizational performance. When we compare the results previous studies, we observe that accumulated knowledge on the performance implications of pay dispersion had been derived from a developed country context, primarily from the US, where American stock market regulators mandate the disclosure of the gap between the pay of a company's CEO and its top executives, and the median income of its employees. However, a limited number of studies have been conducted outside the US that propose workers respond to vertical pay disparities differently in different countries, depending on the societal context in which they live and country level institutions (Greckhamer, 2016). The present study aims to examine the performance implications of vertical pay dispersion in an emerging country context, i.e., Turkey. Two contrasting hypotheses will be tested in Turkey, which has a specific and different governance and company system compared to its Anglo-

Saxon counterparts. The Turkish governance system incorporates characteristics of a family-based system, where financial and capital markets are weak and there is less liquidity for providing external control; ownership is generally highly concentrated, with pyramidal-type ownership structures. A small number of dominant shareholders control these companies, and there is a low level of legal protection available to minority shareholders (Nilsson, 2007; Oba, Tiğrel and Şener, 2012). The primary objectives are to observe whether empirical evidence supports the tournament theory assertion that vertical pay dispersion will be positively associated with firm performance, or the equity theory assumption that executive and employee pay dispersion will be largely decoupled from performance in Turkey.

Formally stated, the two contrasting hypotheses tested in this study are as follow:

H1: pay dispersion is positively associated with firm performance in Turkey (tournament theory prediction).

H2: pay dispersion is negatively associated with firm performance in Turkey (equity theory prediction).

METHOD

Sample and measures

Our sample comprises publicly trading companies on the Borsa Istanbul (BIST) in 2009. The data were manually collected for the period 2009 to 2013, for each year. Financial institutions (banks, investment trusts, insurance companies, leasing companies, funds, and factoring companies) were excluded from the sample, because they are regulated according to different accounting rules, and their registration systems are different and therefore, may provide misleading results for the calculation of financial variables. A total of 1278 company-year observations were examined and 117 were excluded from the sample. Since some of these companies delisted from BIST during the study period, or began being traded in the custody market, we could not obtain complete data about their financial figures, and our final sample therefore consisted of 1167 firms. Data were combined from a number of sources, while the majority of our secondary data were taken from KAP (Kamu Aydınlatma Platformu- Public disclosure platform of Turkey, www.kap.org.tr) and the Borsa Istanbul (Istanbul Stock Exchange) database. We supplemented these data with information from the annual financial reports of the included companies. However, if any important data were missing for a specific company, this company was not included into the study.

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Control variables. We aimed to control for several other factors that may also have impacted on our dependent variable. First, we controlled for *prior year performance* in the form of return on assets (ROA) one year prior to the focal year of analysis, as prior firm performance is often a strong indicator of future performance, and generally associates with firm resources and pay. *Firm size* was also included in the model. The natural log of assets was employed to operationalize this variable. We also controlled for two industry level factors: *market munificence* and *complexity*. We used Boyd's (1995) operationalization for these measures. Munificence can be defined as the capacity of an industry to support sustained growth. We calculated munificence as the regression of industry sales over time, divided by mean industry sale. Complexity, however, reflected competition level within the industry. We measured complexity using a Herfindahl index; we also included a set of *year* dummy variables to control for temporal effects. Finally, in testing our models, for the impact of pay dispersion on performance, we controlled for *family ownership concentration*, Turkey's unique corporate ownership structure, by including a percentage of the largest controlling family shareholdings. Table 1 shows the descriptive statistics for all the variables used in this study.

EMPIRICAL EVIDENCE

Analysis

We used an ordinary least squares regression model to test the performance implications of the vertical pay gap. A classical OLS model increases the likelihood of heteroskedasticity and autocorrelation. As our data are longitudinal in nature, with repeated measures for each firm across five years, panel data of this nature are frequently estimated using fixed effects or random effects

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Table 1 Descriptive Statistics

	Mean (s.d)	1	2	3	4	5	6	7	8
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8. Family Ownership	36.63 (33.08)	-.039	.028	-.005	-.022	.012	.043	.040	1

Note: $N = 1167$

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

We examined the impact of pay dispersion on firm performance one year after the focal year (Time $t+1$), while controlling for the prior year's performance (Time $t-1$). The results of the tests for hypotheses 1 and 2, which expects a higher pay dispersion to be positively or negatively related to firm profitability, is shown in Table 2. In model 1, we only included the control variables, and the only significant control variables were firm size and firm leverage, indicating a bigger firm size to be positively associated with performance, whereas firm leverage was negatively related with ROA.

The main effect of our independent variable, i.e., vertical pay dispersion, was tested in model 2. The addition of the main effect of the independent variable (i.e., pay dispersion) in model 2 significantly

increased the explanatory power of this regression model over model 1. Pay dispersion impact on performance was found to be positive and statistically significant. As hypothesis 1 predicted, pay dispersion had a positive and significant effect on a firm's profitability ($\beta = .018$, $p < .000$). This finding supports our hypothesis 1, which is based on tournament theory assumptions.

Table 2 Regression Analysis Results

Variables	Model 1	Model 2
Constant	-.649	-.640
Control Variables		
Prior year performance	.024	.027
Leverage	-.119***	-.132***
Munificence	.014	.015
Complexity	.008	.009
Firm size	.173***	.169***
Family ownership concentration	.016	.027
Year effect	Included	Included
Independent Variable		
Pay Dispersion		.018***
Adjusted R2	.207	.217
F	12.989***	10.106***

DISCUSSION

Based on tournament theory (Lazear and Rosen, 1981; Henderson and Fredrickson, 2001; Connelly et al. 2014;), the empirical evidence provided in the present study confirms that pay dispersion between executives and employees has a positive impact on an organization's profitability.

In the related literature, it has long been suggested that pay dispersion has important consequences for firm performance; however, a full understanding of its impact remains elusive. Some scholars suggest that pay dispersion positively influences effort and performance, while others, emphasizing equity concerns, draw attention to the potential negative performance implications of pay dispersion. In this study, we first developed and then tested these two theoretical explanations of the performance consequences of pay dispersion on manufacturing firms listed on the Istanbul Stock Exchange. Perhaps most important is our finding that intra-firm, inter-rank pay dispersion has significant and positive implications for a firm's profitability. Although the empirical findings of studies examining the effects of pay dispersion within organizations have been contradictory, a smaller number of

studies have specifically examined inter-rank pay dispersion between organizational levels, particularly between the highest and lowest levels. Relatively few studies have investigated vertical pay dispersion. Our study contributes current empirical evidence by examining vertical pay dispersion in an emerging country context, which may have a different cultural orientation and society-wide assumptions of fairness, power and disparities, relative to their developed country counterparts (McDaniel and Gibson, 2012).

Although there may be some exceptions, we assume that top executives are generally interested in increasing their salaries. However, although we found a positive relationship between pay dispersion and short-term performance, our study draws attention to the fact that increasing pay dispersion may have potential negative effects on long-term firm performance (Winter-Ebmer and Zweimuller, 1999; Heyman, 2005).

Academic studies are still working to understand the implications of pay dispersion. By attempting to integrate tournament and equity theory approaches to pay dispersion, we hope that our study brings clarity and academic insight to this discussion from an emerging market perspective. We believe that pay dispersion also has important consequences for human resource management functioning, in terms of affecting recruitment, selection, and the retention of both top managers and other employees. We suggest that developing a more complete understanding of how pay dispersion impacts on human resource policies and practices, TMT recruitment and retention, as well as on other stakeholders, will offer interesting and potentially fruitful research opportunities.

ACKNOWLEDGEMENT

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**THE EFFECTS OF PAY DISPERSION BETWEEN EXECUTIVES AND
EMPLOYEES OF AN ORGANIZATION ON FIRM PERFORMANCE:
EVIDENCE FROM TURKEY**

Aylin Ataay

Galatasaray University, Management Department, Istanbul, Turkey

ABSTRACT

This study examines the performance consequences of pay dispersion in publicly-listed firms in Turkey for the period 2009 to 2013. Our study focuses on vertical pay dispersion, which reflects intra-firm and vertical differences between pay at two important hierarchical levels: top executive level and lower hierarchical level. We intend to present arguments based on equity theory and tournament theory, and will propose two contradictory hypotheses to test them within the context of an emerging market. Results provided in the present study confirm that pay dispersion between executives and employees has a positive impact on a firm's profitability in Turkey. Our study contributes current empirical evidence by examining vertical pay dispersion in an emerging country context, which may have a different cultural orientation and societal-wide assumptions concerning fairness, power and disparities, relative to its developed country counterparts.

Keywords: Pay dispersion, vertical pay dispersion, emerging economy, Turkey

INTRODUCTION

Top management compensation research focuses on CEO and executive pay level and structure. There is accumulated empirical knowledge on the antecedents and consequences of executive compensation (Devers et al., 2007; van Essen, Otten and Carberry, 2015; Finkelstein, Hambrick and Cannella, 2009). However, academic and popular interest in the pay gap between employees at the highest and lowest ranks of organizations, or "pay dispersion", is relatively new (Winter-Ebmer and Zweimuller, 1999; Heyman, 2005; Lee, Lev and Yeo, 2008). Existing studies only propose limited insight about the determinants and consequences of pay dispersion.

For example, some research has shown that, since employees always compete with one another to gain promotion to managerial positions, and consequently, higher pay levels, pay dispersion encourages greater efforts and performance on the part of employees (O'Reilly, Main and Crystal, 1988; Ehrenberg and Bognanno, 1990; Becker and Huselid, 1992; Main, O'Reilly and Wade, 1993; Conyon, Peck and Sandler, 2001). Other studies, however, have revealed negative relationships between organizational and individual level outcomes and pay dispersion (Becker and Huselid, 1992; Trevor and Wazeter, 2006; Shaw and Gupta, 2007; Bolino and Turnley, 2008; Dallas, 2011). This study examines the performance consequences of pay dispersion in publicly listed firms in Turkey for the period 2009 to 2013. Our study focuses on vertical pay dispersion, which reflects intra-firm and vertical differences between pay at two important hierarchical levels: the top executive level and lower hierarchical level (Gupta, Conroy and Delery, 2002). We intend to present arguments based on both equity theory and tournament theory, and to propose two contradictory hypotheses that will be tested within an emerging market context. Tournament theory's core assumption is that employees' motivation and performance increase alongside pay disparities between organizational levels. Executive pay level motivates all employees to perform well. Equity theory suggests the opposite; the main predictions underlying this theory advocate that since all employees considered pay level as a reference point for assessing the fairness of their pay and rewards, pay differences provoke feelings of inequity, injustice, and jealousy, which reduce employees' organizational commitment and job satisfaction levels.

The rest of this paper is structured as follow. First, we discuss the theoretical foundation of pay dispersion. Second, we develop our hypotheses. We then present our sample, research model and methods. Finally, we summarize our primary results and conclusions, and discuss the implications of these findings for scholars and professionals.

THEORETICAL DEVELOPMENT AND HYPOTHESIS

Theoretical perspectives for vertical pay dispersion and its implications for firm performance

Scholars have long recognized that the way in which executives, especially CEOs of organizations, are remunerated and rewarded in relation to their colleagues and their employees holds important implications for corporate performance (Cowherd and Levine, 1992; Tosi and Greckhamer, 2004; Connelly et al., 2013). Organizations may adopt a wide variety of compensation systems and practices, highlighting different levels of pay dispersion both among peers (horizontal dispersion) and between different ranks within the company (vertical dispersion). The current study focuses on the dispersion between executives' pay and workers' compensation, in other words, vertical dispersion, which has been the subject of academic research for several decades (Connelly et al., 2013). While researchers agree that this dispersion has risen dramatically the causes and in particular, the effects of this pay gap, are not entirely clear. The theoretical framework of this analysis regarding the impact of vertical compensation dispersion to firm performance has two distinct theoretical bases, which will be reflected in the two different hypotheses.

Tournament theory

Tournament theory (Lazear and Rosen, 1981), which is based on economic game theory, is one of the foundations of pay dispersion research (Henderson and Fredrickson, 2001; Connelly, Tihanyi, Crook and Gangloff, 2014). Tournament theory proposes that employees are in competition with one another for higher-ranking positions and salaries; consequently employees' efforts increase alongside pay imbalances and as a result of the differences between various organizational levels. Tournament theory accepts a higher level of executive pay as a means for motivating individuals at all organizational levels to exert more effort and to perform well

(Becker and Huselid, 1992), and to try and win promotion to a higher level within the firm. This is not only valid where it concerns the ultimate CEO level, but is also true for employees striving to reach any other managerial position (Cappelli and Cascio, 1991; Henderson and Fredrickson, 2001; Lambert, Larcker and Weigelt, 1993; DeVaro, 2006). Several research findings support these predictions and have disclosed that top executives and especially CEOs serve as significant reference points to employees; thus, vertical disparities in pay levels have substantial consequences for employee behavior (Wade, O'Reilly and Pollock, 2006). The pay disparity is also justified as a tool for attracting and retaining top competencies in the higher ranks of the company (Bloom and Michel, 2002).

Although a number of scholars have attempted to understand the implications of a widening pay gap between top managers and employees (Beaumont and Harris, 2003; Wade et al., 2006), their attempts have failed to reach a consensus regarding its implications. One opinion, which primarily relies on tournament theory arguments, advocates the benefits of a large vertical pay disparity and debates that this will provide encouragement for promotions, motivate higher efforts and competition, and increase performance (Baker, Jensen and Murphy, 1988; Ehrenberg and Bognanno, 1990; DeVaro, 2006). Several empirical findings support this view and have discovered a positive relationship between firm performance and pay dispersion (Main, O'Reilly and Wade, 1993; Lallemand, Plasman and Rycx, 2004; Heyman, 2005).

Equity Theory

A subsequent line of research based on equity theory suggests, however, the opposite argument for vertical pay dispersion. Equity theory states that people expect pay to be distributed according to their relative contributions, and that each employee constantly compares their own contribution to the organization and the rewards received from the organization, relative to their individual reference group. This reference group does not need to comprise only their peers (Kulik and Ambrose, 1992), but will also include those above and below them in the organizational hierarchy, as well as members of other organizations. Employees perceive their

outcomes to be unfair when their ratio of input to outcomes falls out of line with their reference points. Through this mechanism, the pay gap can generate a feeling of inequity within the organization. Employees may then attempt to correct this feeling of inequity (Cowherd and Levine, 1992). This view advocates that since employees observe pay level as an assessment of the fairness of their compensation system, large pay gaps will stimulate feelings of inequity, injustice, and jealousy, which will have a negative effect on their job satisfaction and organizational commitment level (Finkelstein, Hambrick and Cannella, 2009). Hence, scholars taking this perspective generally affirm that a large vertical pay disparity tends to diminish motivation, effort, and cooperation between peers (Cowherd and Levine, 1992). Vertical pay dispersion can similarly stimulate careless risk-taking, reduce employee safety (Becker and Huselid, 1992), and ultimately lead to a higher employee turnover (Bloom and Michel, 2002; Gupta, Conroy and Delery, 2002). Existing empirical evidence supports this perspective, representing a negative relationship between vertical pay dispersion and organizational outcomes (Bloom, 1999; Siegel and Hambrick, 2005; Grund and Westergaard-Nielsen, 2008; Fredrickson, Davis-Blake and Sanders, 2010).

Contrasting hypotheses

As the research findings presented above suggests, these two theoretical perspectives are often considered as contrasting each other. Both theoretical views provide explanations for describing and interpreting results that positively link pay dispersion to firm performance, or that justify the negative effects of a pay gap on organizational performance. When we compare the results previous studies, we observe that accumulated knowledge on the performance implications of pay dispersion had been derived from a developed country context, primarily from the US, where American stock market regulators mandate the disclosure of the gap between the pay of a company's CEO and its top executives, and the median income of its employees. However, a limited number of studies have been conducted outside the US that propose workers respond to vertical pay disparities differently in different countries, depending on the societal context in which they live and country level institutions (Greckhamer, 2016). The present study aims to examine the performance implications of vertical pay

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**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

We examined the impact of pay dispersion on firm performance one year after the focal year (Time t+1), while controlling for the prior year's performance (Time t-1). The results of the tests for hypotheses 1 and 2, which expects a higher pay dispersion to be positively or negatively related to firm profitability, is shown in Table 2. In model 1, we only included the control variables, and the only significant control variables were firm size and firm leverage, indicating a bigger firm size to be

positively associated with performance, whereas firm leverage was negatively related with ROA.

The main effect of our independent variable, i.e., vertical pay dispersion, was tested in model 2. The addition of the main effect of the independent variable (i.e., pay dispersion) in model 2 significantly increased the explanatory power of this regression model over model 1. Pay dispersion impact on performance was found to be positive and statistically significant. As hypothesis 1 predicted, pay dispersion had a positive and significant effect on a firm's profitability ($\beta = .018$, $p < .000$). This finding supports our hypothesis 1, which is based on tournament theory assumptions.

Table 2 Regression Analysis Results

Variables	Model 1	Model 2
Constant	-.649	-.640
Control Variables		
Prior year performance	.024	.027
Leverage	-.119***	-.132***
Munificence	.014	.015
Complexity	.008	.009
Firm size	.173***	.169***
Family ownership concentration	.016	.027
Year effect	Included	Included
Independent Variable		
Pay Dispersion		.018***
Adjusted R2	.207	.217
F	12.989***	10.106***

DISCUSSION

Based on tournament theory (Lazear and Rosen, 1981; Henderson and Fredrickson, 2001; Connelly et al. 2014;), the empirical evidence provided in the present study confirms that pay dispersion between executives and employees has a positive impact on an organization's profitability.

In the related literature, it has long been suggested that pay dispersion has important consequences for firm performance; however, a full understanding of its impact remains elusive. Some scholars suggest that pay dispersion positively influences effort and performance, while others, emphasizing equity concerns, draw attention to the potential negative performance implications of pay dispersion. In this study, we first developed and then tested these two theoretical explanations of the performance

consequences of pay dispersion on manufacturing firms listed on the Istanbul Stock Exchange. Perhaps most important is our finding that intra-firm, inter-rank pay dispersion has significant and positive implications for a firm's profitability. Although the empirical findings of studies examining the effects of pay dispersion within organizations have been contradictory, a smaller number of studies have specifically examined inter-rank pay dispersion between organizational levels, particularly between the highest and lowest levels. Relatively few studies have investigated vertical pay dispersion. Our study contributes current empirical evidence by examining vertical pay dispersion in an emerging country context, which may have a different cultural orientation and society-wide assumptions of fairness, power and disparities, relative to their developed country counterparts (McDaniel and Gibson, 2012).

Although there may be some exceptions, we assume that top executives are generally interested in increasing their salaries. However, although we found a positive relationship between pay dispersion and short-term performance, our study draws attention to the fact that increasing pay dispersion may have potential negative effects on long-term firm performance (Winter-Ebmer and Zweimuller, 1999; Heyman, 2005).

Academic studies are still working to understand the implications of pay dispersion. By attempting to integrate tournament and equity theory approaches to pay dispersion, we hope that our study brings clarity and academic insight to this discussion from an emerging market perspective. We believe that pay dispersion also has important consequences for human resource management functioning, in terms of affecting recruitment, selection, and the retention of both top managers and other employees. We suggest that developing a more complete understanding of how pay dispersion impacts on human resource policies and practices, TMT recruitment and retention, as well as on other stakeholders, will offer interesting and potentially fruitful research opportunities.

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INVOLVING CUSTOMERS IN NEW SERVICE DEVELOPMENT: PAST, PRESENT AND FUTURE

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ABSTRACT

Research on service innovation suggests that involving customers in new service development (NSD) is a major contributing factor to new service success. The objectives of this paper is to provide an overview of the literature regarding the involvement of customers in the development of new services and to offer guidelines for future research. Results show that past research has considered various antecedents and consequences of customer involvement and has also analysed various dimensions of the nature of involvement such as the intensity and modes of involvement and the communication process used to involve customers. Current research is mainly occupied with determining specific managerial practices that can lead to successful involvement of customers; the role of relationships as well as consumer motives, needs and experiences in the involvement process; the selection of customers for involvement and the effect of virtual environments. Future research should focus both on more in-depth, qualitative studies and more detailed quantitative models; analyse both buyer and seller perspectives; develop customer selection guides; formalize the involvement process; determine the role of relationship concepts in involvement and investigate how social media and brand communities can be effectively used for involving customers.

Keywords: New service development, customer involvement, services, service innovation, co-creation, customer participation, consumer involvement

INTRODUCTION

In today's highly competitive and rapidly changing environment, developing successful services fast is a strategic imperative for businesses (Kindström and Kowalkowski, 2009). The advent and use of the Internet has also revolutionised and changed dramatically the role that customers can play in service innovation. Customers are knowledgeable and powerful and supply vast amounts of information on social media and virtual communities that can be used by firms for developing new services. On the other hand, research on service innovation suggests that involving customers in the

development of new services is a major contributing factor to the success of new service offerings (e.g. Alam, 2002; Kristensson, Gustafsson, and Archer, 2004; Carbonell, Rodríguez-Escudero, and Pujari, 2009, 2012; Melton and Hartline, 2010, 2015; Dadfar, Brege, and Semnani, 2013; Zhihong, Duffield, and Wilson, 2015). Therefore, the involvement of customers in the development of new services is an issue that has attracted the attention of researchers during the last 15 years. However, relevant literature is still limited, results are fragmented and there is no framework to address fully the management of customer involvement (CI) in the new service development (NSD) process.

The purpose of this study is twofold, to provide an overview of the literature regarding the involvement of customers in the development of new services and to offer guidelines for future research. Results of this review will help researchers identify the critical issues and concepts related to CI in NSD and shape future research in the field. This is a timely contribution since the importance of the role of customers has increased exponentially during the last few years due to the advent of the Internet and therefore, it is important for firms to manage effectively customer contributions to NSD.

The paper is structured as follows. First, we explain the methodology followed; then we present the results of the review; thirdly we identify the emerging, contemporary issues that need attention and finally we conclude with guidelines for future research.

RESEARCH METHODOLOGY

This review includes the analysis of peer-reviewed literature on CI in NSD. So, all papers included in this review approached CI from the perspective or “co-creation for others” (Witell, Kristensson, Gustafsson, and Löfgren, 2011), that is participating in developing services that can benefit other customers. In order to select articles for inclusion, a set of selection criteria was set. The first was that only academic papers will be used. Practitioner articles were excluded. Secondly, all papers selected had to do with CI in NSD either directly, when the title or the text included these two constructs (CI referred to also as user involvement or co-creation and NSD referred to also as service innovation), or indirectly, because it was inferred by the content of the paper. Conceptual papers and literature reviews were not included in this study. Finally, only papers that used services as a context of investigation were analysed. Relevant papers in product markets were not included in this review.

In order to identify relevant papers a search was initially made on three major business journal databases, namely EBSCO (Business Source Complete), Emerald, and ScienceDirect, using various keywords that appear in the title, abstract or keywords fields. Keywords used included customer involvement, new service development, service innovation, user involvement, co-creation, and customer participation. Carlborg, Kindström, and Kowalkowski (2014) conclude that the first CI paper in services has been published in 2002 so the search was limited to articles published between 2002

and 2016. This search identified a large number of papers (more than 100). However, many of these papers analysed CI from the perspective of co-production in service delivery and many others involved product markets. So, each paper was evaluated individually to determine whether it should be included in the review. Also, all cross-references identified were analysed. Ultimately, a total of 37 studies (from 2002 to 2016) were selected for examination.

The first phase of analysis involved reading all papers in chronological order and gain a total perspective of the evolution of research in the field. In the second step, we tried to categorize the information contained in the from all papers. Eventually, there were seven categories of information analysed: theoretical positioning (the type of service customers (B2B or B2C); the type of perspective (seller or buyer side); the type of service or services involved, and the country from which the sample was drawn); stages of NSD investigated; antecedents of CI; nature and dimensions of CI; consequences of CI; emerging contemporary issues, and future research challenges. From the reading of all papers it became evident that these categories of information are suitable for presenting in detail the content of all papers.

RESULTS

General Observations

Studies on CI in NSD begin in 2002 (Alam, 2002) but there is an increasing interest in the subject from 2012 onwards. Papers mainly appear in services or new product development journals. Services Journals (Journal of Service Management, Journal of Services Marketing, Journal of Service Research, the Service Industries Journal, International Journal of Quality and Service Sciences and Managing Service Quality) have published more than half of papers (54%) whereas Product Innovation Journals (Journal of Product Innovation Management, Creativity & Innovation Management; Innovation: Management, Policy and Practice, International Journal of Innovation Management, and International Journal of Innovation Science) have published 19% of papers. The rest are split between business-to-business area publications, mainline marketing and management journals and specialized journals that deal with a specific industry (e.g. tourism or banking). This focus on service journals is expected since the subject analyzed deals with the development of new services.

Furthermore, we observe that 18 studies examine the seller side; 12 explore buyers' perspectives in retail services (financial, hotels, hospitals etc.) and seven (7) studies consider both sides of the dyad, buyer and seller. Only 10 (27%) studies are in business-to-business markets and 27 (73%) in retail markets. Moreover, the majority of studies are done in Europe (59%) and within Europe mainly in Scandinavian countries and Spain. The rest of the studies concern the USA, Asia (mainly Taiwan) or

Australia. There is one study that covers USA, Europe, and Asia and therefore, is considered global and two studies that are done online and therefore are not bound to any specific country.

Methodology

In terms of methodology the first studies in the area were mainly qualitative (case studies and interviews) and experiments. However, surveys started increasing from 2012 onwards because the field started to mature and new types of qualitative research emerge such as netnography and action research. Overall, 16 studies are qualitative and 19 quantitative.

NSD Stages

It is important to note that the focus on different stages tends to change as the field matures. In the early years up to 2009 most studies focused on the first stages of the NSD process or even only on idea generation. However, from 2010 onwards researchers prefer to analyze CI in the whole NSD process by considering all stages. In total, 18 studies explore all stages of the NSD process and another four investigate CI irrespective of stage.

Antecedents of CI

The study of antecedents of CI is not very extensive. However, the main antecedents analyzed are classified into three categories:

1. Type of customer that should be involved. Various studies investigate the role of different types of customers such as close and lead (Alam, 2011b; Schumacher and Kuester, 2012), ordinary or guided or consulted or pioneering (Magnusson, Matthing, and Kristensson, 2003; Kristensson et al., 2004; Magnusson, 2009).
2. Key customer characteristics for effective involvement. A number of characteristics are investigated including proactiveness (Alam, 2011b); knowledge and experience (Alam, 2011a, b; Schumacher and Kuester, 2012; Sigala, 2012); being in a close, trusting relationship with the provider (Nicolajsen and Scupola, 2011; Alam, 2011b; Carbonell et al., 2012); lead usersness (Alam, 2011b; Carbonell et al., 2012); customer motives; desires, and emotions (Engstrom and Elg, 2012), and involvement or dissatisfaction with the service (Schumacher and Quester, 2012).
3. The environment. This is mainly shown in Carbonell's work (Carbonell et al., 2009; Carbonell and Escudero, 2014, 2015) where the influence of technological turbulence is investigated.

Nature and Dimensions of CI

The concept of CI has not been determined yet and no formal scale exists so researchers try to conceptualize it by using various types of information. The conceptualization of CI is focused on 4 types of dimensions.

1. Intensity of involvement in each NSD stage (Alam, 2002; 2006; Melton and Hartline, 2010; Paasi, 2014). However, there is no agreement on how intensity can be measured and whether involvement should be intense in all stages.
2. Modes of involvement including focus groups; taking part in an NSD team; retreats; phones, faxes and emails, and brainstorming (e.g. Alam, 2002; 2006) as well as web-based tools such as social media or virtual communities (Ryzhkova, 2012; Sigala, 2012).
3. Communication with customers that focuses on communication skills (Athanasopoulou and Johne, 2004); interaction tactics (Alam, 2011b) and the communication process involved in co-creation (Gustafsson et al., 2012).
4. Managing CI effectively through the NSD process. This area includes studies on how to select the right customers for involvement (Magnusson et al., 2003; Kristensson et al., 2004; and Magnusson, 2009) and in which stages should customers be involved. For example, Melton and Hartline (2015) argue that customers should be involved only in the design stage in the development of radical service innovations. Furthermore, other studies emphasize that the effective management of CI should be characterized by collaborative capabilities; customer orientation; knowledge integration capabilities; effective information recording; reviewing and use; appropriate user motivation and getting users to derive ideas from personal experiences (Kristensson et al., 2008; Ordanini and Parasuraman, 2011; Carbonell and Escudero, 2014;2015; Zhihong et al., 2015).

Consequences of CI

Another category of variables analyzed by CI researchers involves different types of performance of new services, one financial and three non-financial:

1. Financial performance in terms of sales or profit (Carbonell et al., 2009; Chien and Chen, 2010; Melton and Hartline, 2010; 2015; Weng and Huang, 2012) although most of the time they are not considered alone.
2. Idea quality that is conceptualized with measures such as radicality/innovativeness (Ordanini and Parasuraman, 2011; Melton and Hartline, 2015); novelty/originality (Magnusson et al., 2003; Kristensson et al., 2004, Matthing, Sanden, and Edvardsson, 2004; Magnusson, 2009; Mahr and Lievens, 2012; Carbonell et al., 2012; Carbonell and Escudero, 2014, 2015); perceived value; feasibility or producibility (Magnusson et al., 2003; Kristensson et al., 2004, Matthing et al., 2004;

- Magnusson, 2009); knowledge value and relevance (Mahr and Lievens, 2012), volume of ideas (Ordanini and Parasuraman, 2011) and quality of service ideas (Schumacher and Quester, 2012).
3. The quality of the developed service that is measured with concepts such as service quality (Dadfar et al., 2013); service advantage (Carbonell et al., 2012; Carbonell and Escudero, 2014, 2015); superior and differentiated service (Alam, 2002, 2006; Alam and Perry, 2002), and service marketability (Melton and Hartline, 2010).
 4. The effectiveness of the development process expressed with many different concepts including process complexity (Melton and Hartline, 2015); speed to market (Alam, 2002, 2006; Alam and Perry, 2002; Athanasopoulou and John, 2004; Carbonell et al., 2012; Carbonell and Escudero, 2014;2015); launch preparation (Melton and Hartline, 2010); role flexibility; teamwork, and cross-functional integration (Chien and Chen, 2010), and overall measures of project (Melton and Hartline, 2010) or process efficiency (Chien and Chen, 2010).
 5. Customer satisfaction used in two recent studies (Dadfar et al., 2013; Zhihong et al., 2015). This trend is probably due to the increasing importance that relationships play in CI and customer satisfaction is a major dimension of relationship quality.

Moderating Variables

The use of moderating variables in CI studies is quite rare. Only Carbonell et al. (2012) and Carbonell and Escudero (2014, 2015) use technological turbulence.

Emerging Contemporary Issues

The study of CI in NSD reveals the existence of certain important current issues that surface in related research and are expected to guide future research. These include the following:

1. Effectiveness of CI depends on how well the process is managed. CI should be approached as a management process with specific managerial practices that lead to success. Such practices should cover areas such as selecting the best customers for involvement; communicating effectively throughout the NSD process; motivating customers and integrating the knowledge acquired.
2. The selection of stages for CI is not very important in services. Since services have more ad hoc, parallel processes with fewer stages, differentiating CI by stage is not important. What is critical though is to identify the ways CI can become more effective in each stage. For example, researchers should look into which customer or firm actions should be included in each stage and why.
3. The last few years, research on CI in NSD has emphasized the importance of a close relationship with customers. Therefore, firms should select customers that have a close relationship with the

firm for CI. Also, other relationship constructs such as customer satisfaction (a major dimension of Relationship Quality) and service quality are linked to CI. So, there is a need to explore further the role of relationships in effective CI.

4. Many qualitative studies in CI have shown that it is important to get users to derive ideas from their use experiences because experiences create emotions and make it easier for customers to express their needs. Therefore, it is important to understand and manage effectively customer experiences because they can influence CI in NSD. Further analysis of how firms can manage customer experience in relation to CI for NSD is imperative.
5. Selecting customers for CI in NSD is different from New Product Development. Lead customers may not be as useful here. Also, selection of customers will depend on the type of new service sought (incremental or radical). Research shows that for radical innovation, ordinary users are more useful because they have more radical ideas whereas experienced or skilled users are better for incremental innovation. So, the development of guides of customer selection is an important contemporary issue.
6. Due to the advent of the Internet and its importance in the market, another contemporary issue is the role of virtual environments in CI. Related studies look into the role of virtual customer integration platforms in NSD; the use of web-based tools for CI; the nature of lead user participation in brand communities; CI in online channels such as social media and effective management of consumer-generated content.

Future Research Challenges

Based on the insights of this review we offer a guide for future research.

- In terms of methodology there is a need for more rigorous quantitative studies and more focused and detailed qualitative enquiries that will provide more specific and rich information that will help firms manage the process of CI effectively. Also, the perspectives of both buyers and sellers should be included in future research since the quality of collaboration or relationship is important for new service success.
- More research is needed on the types of customers that are useful for CI. There is a need to develop guides of appropriate customers according to the type of information sought or the type of service developed.
- The nature of CI during NSD needs to be analysed more thoroughly. Specifically, we need answers to the following questions. How do we involve customers (modes) and how intensively?

Which types of customer contributions are sought and under which circumstances? What roles do customers play in CI? Which practices and which customer actions are appropriate for each stage or group of stages of the NSD process? What type of relationship should firms have with customers that get involved in NSD? How should firms communicate with customers and which communication skills should firms have to communicate effectively?

- Measures of new service performance on the project or program level should be analysed further and research should conclude whether it is best to use more financial or non-financial measures and why.
- The use of virtual environments or web-based tools used to transfer customer knowledge to companies should be one the key areas of research in the following years since there is a wealth of customer-supplied information that can only be exploited through online media. The question is how companies can use this data for NSD.
- Finally, future research should address the role of relationships in CI. Specifically, it is important to investigate the role of various relationship concepts (e.g. satisfaction, relationship closeness, relationship quality) in CI and their inter-relationships with service innovation concepts such as effective CI or new service success.

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SOCIAL RESPONSIBILITY IN BANKING: A BIBLIOGRAPHIC REVIEW

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ABSTRACT

The present paper proposes a review concerning the topic of social responsibility in banks. In the backdrop of economic crisis which is still ongoing, companies are requested to align with the directives and values of social responsibility. The compliance to social responsibility, nevertheless, cannot only be seen as a commandment imposed and far removed from the competitive and business environment, which passively to adapt to, but rather as an opportunity for diversification and competitive advantage. Such problem is exacerbated in a sector such as banking, in which the elements of competitive differentiation are often ephemeral and volatile, since based on price (especially in the context of loans and services) and performance (in the management of deposits).

This paper focuses on three areas, which have been extensively analyzed by the national U.S. and European literature in the banking sector. In particular, the present study examines: the relationship between social responsibility and income or stock performance of banks; the compilation of the bank operator's rankings, on the basis of results achieved in terms of social responsibility; the impacts of social responsibility in terms of customer satisfaction.

This study proposes to investigate some critical issues, in order to offer interesting ideas for new research into yet unexplored areas.

Keywords: Social responsibility, performance, regulation, legal enforcement, corporate governance

INTRODUCTION

Social Responsibility has been studied by academic research since the 70s and 80s. The notion of CSR being a social obligation was first advocated by Carroll (1979, 1991). Carroll's CSR pyramid, one of the best-known CSR models, presents company's social obligations as comprising economic, legal, ethical and philanthropic responsibilities. Carroll (1991) noted that businesses were created as economic entities driven by a profit motive, thus economic performance undergirds the other three CSR components yet only in 2011 Corporate Social Responsibility (henceforth CSR), CSR has been provided with an official definition by the European Commission as "the responsibility of enterprises for their

impacts on society". Among the various factors related to CSR, performance, rankings based on the degree of attention to social responsibility itself, and customer satisfaction have been studied extensively, from both a theoretical and an empirical standpoint. As regards the performance and customer satisfaction, literature shows that people may not believe in an explicit trade-off between being profitable and meeting legal, ethical, and discretionary responsibilities anymore. Yet, banking industry surveys have highlighted a mismatch between customer satisfaction and massive spending on CSR programs. Indeed, the omission of research on the differential impact of CSR initiatives on customer satisfaction is evident. Given both the increasing investment in CSR strategies, and the fact that customer satisfaction mediates firm market value, more awareness of the hierarchy of customer-preferred CSR initiatives is needed in order to enable banks to adapt their CSR programs, to not only benefit the community, but also to improve customer satisfaction (McDonald and Rundle-Thiele, 2008). In reference to compilation of rankings based on the CSR-care, literature underlines that these approaches have the advantage of being quite transparent and objective, as they are based on publicly available information on websites of banks and supranational bodies and reporting specialized NGOs. The biggest flaw of these researches is the limited number of banks for which reports are available, since there is a generalized problem of insufficient disclosure in CSR activities (Scholtens, 2009).

AIMS OF THE PAPER

This paper proposes a review concerning the topic of social responsibility in banks, focusing the attention in detail on: I) the relationship between attention to social responsibility and incomes or stock performance of banks; II) the compilation of rankings of bank operators, on the basis of results achieved in terms of social responsibility: the effects of cultural, ethnic and gender variables on social responsibility indicators; III) social responsibility and its impacts in terms of customer satisfaction. Furthermore, the paper would like to suggest three other areas almost unexplored and therefore susceptible to further research and insights IV) the effects of cultural, ethnic and gender variables on social responsibility indicators; V) the relationship between attention to social responsibility and degree of self regulation and cooperation; VI) the relationship between attention to social responsibility and legal enforcement on a national scale. The importance of the link between the above areas and CSR, particularly the final three areas, calls for an analysis of the current state of knowledge and a systematization of the existing results as preliminary steps to facilitate future studies. In management research, literature is useful to enable the researcher to map and assess the existing intellectual territory and to develop the existing body of knowledge.

In order to make this bibliography as exhaustive as possible, but also having to take into account the inability to analyze the vast literature on CSR, it was decided to concentrate on the most recent researches by selecting those published since 2000 onwards.

RELATION BETWEEN CSR AND PERFORMANCE OF BANKS

Most of the research on CSR has focused on investigating the connection between CSR and corporate financial performance, while little theoretical attention has been paid to understanding whether corporations act in socially responsible ways or not. The theoretical framework proposed by Campbell (2007) is, in our view, a milestone in literature, able to systematize the socially responsible behavior of businesses and the motivations behind these behaviors. This model, with reference to business in general and not only to banking sector, summarizes the previous literature on CSR in eight postulates according to which companies would be induced to implement CSR activities (see also Shleifer, 2004):

- Companies with poor financial performance and / or acting in a poor economic environment will be less likely to act in a socially responsible way. In fact, if the possibility of obtaining short-term profits are low, the lack of resources could jeopardize the creation of shareholder value (Margolis and Walsh, 2001; Orlitzky *et al.*, 2003).
- Companies will be reluctant to act in a socially responsible manner whether they operate in environments which are too competitive or too little competitive (McCraw, 1984; Schneiberg, 1999).
- Companies will be more inclined to act in a socially responsible way if there is a strong regulation and an effective legal protection of investors especially if such-regulation is based on consensus and negotiation between the government, companies and stakeholders (Grant and Downey, 1996; Siglitz, 2003; Grant, 1997).
- Companies will be more likely to act in a socially responsible way if there is an effective and well-organized system of self regulation based on the threat of intervention by the state or by an industrial crisis of vast proportions (Schneiberg, 1999; Streeck and Schmitter 1985).
- Companies will be more inclined to act in a socially responsible way if there are independent organizations such as NGOs, social movements, press or institutional investors able to monitor their behavior, and if necessary able to mobilize to change it (Aguilera and Jackson, 2003; Driver and Thompson, 2002; Mitchell *et al.*, 1997).
- Companies will be more inclined to act in a socially responsible way if they operate in a context where the demand for such behavior by important stakeholders is institutionalized for example in major economic journals, professional and training curricula, and in other contexts which the

participation of managers is required (Aguilera and Jackson, 2003; Dore, 1983; Hall and Soskice, 2001; Whitley, 2004).

- Companies will be more inclined to act in a socially responsible way if they belong to associations of businesses that promote socially responsible behavior (Martin, 2000, 2005, 2006).
- Companies will be more inclined to act in a socially responsible way if they are institutionally engaged in a dialogue with social partners and stakeholders (trade unions, investors, the local community), (e.g., Aguilera and Jackson, 2003; Roe, 2003).

In this context it is worth mentioning the work of Chih and colleagues (2010) which seek to empirically test the Campbell postulates, studying a sample of 520 financial institutions in 34 countries in the period between 2003 and 2005. The authors conclude that there is not any significant relationship between the attention given to CSR and the performance of the financial intermediary. In detail, they encounter a series of other important results, such as: the bigger the company the more socially responsible the actions of the intermediaries, the more intense the competitiveness of the market, the greater the legal protection of investors and finally, the more collaborative and non-confrontational the relations between employers and employees. From the methodological point of view, researchers use the ROA index as independent variables for the studied regression as a proxy for performance, the H statistics index defined by Chih and Cheng (2008), as a proxy of the degree of market competitiveness; the study of the independent variables related to legal enforcement and the degree of cooperation between employers and workers will be dealt with in the last section of this paper.

The dependent variable taken as a proxy of the CSR instead is a dummy variable which takes the value 1 if the intermediary is included in the Dow Jones Sustainability World Index (DJSI World) and 0 otherwise. The curvilinear relation between the degree of competition and the degree of socially responsible behavior proposed by Campbell appears to be confirmed by empirical findings.

Simpson and Kohers (2002) analyzing a sample of 385 US commercial banks in the period between 1993 and 1994 came to the opposite conclusion that is there is a positive and significant relationship between the degree of adherence to CSR and the financial and economic performance of banks. The authors use a measure of the dependent variable CSR derived from the Community Reinvestment Act of 1977 (CRA), which consists of a dummy variable that takes the value 0 if the CRA rating is "improvement needed" and 1 if the CRA rating is "outstanding". The rating, which can assume four levels, is based on 12 items among which are listed the more significant: 1) ability to communicate with members of the community to ensure credit needs; 2) degree of involvement of the BoD in CSR activities; 3) efforts of marketing to make sure that the types of credit offered are widespread in the community; 4) participation in community development projects. In order to measure the dependent variables

Simpson and Kohers refer to two distinct indicators: the ROA index and the relationship between losses on loans and the total number of loans. The CRA was enacted to force banks to meet the credit needs of low-middle income customers by financing their housing needs and supporting their economic development. Taking for granted the existence and positivity of the relation between CSR and Financial Performance (henceforth FP), these authors state that the only possible direction future research can move is to explain, through a theoretical construct, the above relation and identify the direction of it, particularly whether it is CSR to determine FP or vice versa.

Even, Cornett, Erhemjamts and Tehranian (2016) by examining the relation between CSR and performance of banks, in the context of the ongoing financial crisis, found that banks with high scores in terms of CSR show also high performances: being socially responsible is therefore a rewarding behavior. These researchers, based on their empirical findings, argue that big banks, to a greater extent than smaller one, are dedicated to socially responsible initiatives. After 2009, however, there was less attention towards CSR issues by big banks.

CLASSIFICATIONS OF INTERMEDIARIES ON THE BASIS OF PERFORMANCE IN TERMS OF CSR

The scholars who have dealt with this thematic area have sought to draw up rankings of the degree of attention to CSR on the basis of the different items often using the triple-bottom-line theoretical framework by Elkington (1997), widely employed both in the literature and in the best practices. According to Elkington's model, the performance assessment must concern not only the economic aspects, but also the environmental and social ones, thus aiming to create autonomously qualitative and multidimensional indicators (Birindelli *et al.*, 2015; Scholtens, 2009). Usually the methodological approach is the Content Analysis Method (Abbott and Monsen, 1979; Beattie and Thomson, 2007).

CSR is regulated by international and national self-regulatory measures, without binding legal force (soft law). Among the most relevant CSR disposals, we mention the OECD Guidelines (OECD 2011), the ISO 26000 Standard (ISO 2010) and the GRI (acronym for Global Reporting Initiative) Guidelines for Sustainable Reporting.

In the last few decades, the relevance the community and institutions attach to CSR has progressively increase but some authors (Karaibrahimoglu, 2010) think there is a dilemma between the enhancement and the weakening of CSR activities during the economic downturns. The contrast concerns, on one hand, the strengthening of the CSR initiatives required by the increasing social and environmental awareness and, on the other, the tendency of the organizations to limit such investments because of the lack of financial resources.

In this area, widely covered by business literature in general, but a little less by the specific literature about banks, the contribution of Scholtens (2009) seems interesting. This author develops a framework which analyzes 32 major European banks in the 2000-2005 period and comes to a classification of their degree of adherence to CSR principles. The CSR indicators derived from the World Commission on Environment and Development (1987) are dummy variables and are divided into four areas, namely: adherence to codes of ethics and use of sustainability reporting; environmental management; financially responsible products and social conduct. This approach, according to the author, turns out to be more immediate and transparent than CSR ratings prepared by specialized institutions such as KLD and EIRIS and allows repeatability and verification of results. It also offers both a classification of individual banking institutions and a classification at country level pointing out that banks in the Netherlands, Belgium, Germany, France and the UK get the highest scores in terms of CSR, while banks in Sweden, Italy and Japan register the most disappointing results. The author also finds a positive association between performance in terms of CSR and, respectively, the size and financial standing of the bank as measured by the capital ratios. Along the lines of Scholtens (2009), studying a sample of 30 European banks, has set himself the goal of submitting a ranking indicating the degree of adherence to the values of CSR based on 48 dummy independent variables considered by the authors the most important drivers of CSR in banks. These items are obtained from literature, accounting and financial reporting and the websites of banks and are grouped into four areas of analysis (disclosure, organization and management, offer of socially responsible instruments, adherence to agreements / international standards / certifications and indices). In any case, they are the product of a subjective evaluation process, based largely on the "perceptions" of the respondents (Hillenbrand and Money, 2007). The dependent variables are represented not only by the intermediary position in the aforementioned ranking but also by the ratio between the added value created by the bank and its total assets. The results that the authors come to are that banks should pay more attention to the disclosure of their activities in the field of CSR, since the scores in this area are relatively worse than those achieved in others. The areas of organization and management and offer of socially responsible instruments, are those in which the analyzed banks get the best results, demonstrating great sensitivity in CSR issues, in line with the success of the tools developed to fight against social exclusion and poverty of the poorest social strata and least developed countries. The interpretation of the results relating to the items included in the area and international agreements looks rather ambiguous. If adherence to those standards expected of financial institutions such as UNEP FI and the UN Global Compact Principles appear widespread, it is more difficult to find adherence to those agreements pertaining to specific subject areas such as combating gender discrimination, money laundering, environment protection and human rights.

Weber and colleagues (2005) use a multi-level analysis that begins with the pre-selection of 171 banks that have joined the UNEP Convention of 2001, after identifying the 22 best organizations in terms of sustainability. The authors only interview 8 of those organizations and conduct an in-depth analysis of production processes trying to assess their ability to integrate sustainability into the business strategy. The analysis is performed for three distinct business areas: a) credit business, including microcredit, loans for environmental and social projects with interest rates lower than standard and residential mortgages aimed at the realization of sustainable housing from an energy and environmental point of view; b) wealth management including asset management and mutual funds investing in sustainable projects; c) investment banking activities promoting the creation of job opportunities for local communities in which the investment is made, the use of renewable resources and projects having a positive impact on local environment. For each area, the authors attempt to identify the leaders in the ability to integrate sustainability into core activities, grouping the banks on three levels depending on the efficiency of the implementation: leaders, mid-level banks, sufficient level banks. The specific identification of the leaders is beyond the scope of this paper, so they will not be detected. The focus of this section is on the study of the method used and its theoretical and practical implications. Finally, the authors identify five models of integration of sustainability in the banking sector: integrating sustainability-related events; sustainability as a new banking strategy; sustainability as value drivers; sustainability as a public mission; and sustainability as a requirement by customers. These models can be effectively employed even in other banks to implement sustainability in their business. The authors suggest five models of integration of sustainability in the banking strategy:

- Integration of sustainability through the creation of technical funds for the purposes of environmental protection, through the introduction of an environmental tax or the use of a global conference on sustainability.
- Sustainability as a new banking strategy from a social and ethical perspective, besides the financial one. This strategy is the one adopted by those banks which only undertake sustainable businesses.
- Sustainability as a value driver in the implementation of sustainable products, eco-mortgages and similar products. The difference with respect to the concept of sustainability as a new banking strategy is that these products and services do not constitute the core business and do not represent the main portion of the bank's revenues. The strategy consists in the use of the concept of sustainability only if it improves profits or the reputation of the bank. Sustainable products coexist with all other standard products and services. The business strategy of the bank as a whole is not pervasively affected by the concept of sustainability.

- Sustainability as a public mission in the event that banks carry out their activities on behalf and in the interest of a public entity as a state, an area (the Swiss cantons) or a local authority.
- Sustainability as a requirement by customers. The bank adjusts its policy to the wishes and needs of customers, by periodically asking them if its actions are consistent with their needs and social sustainability.

The authors conclude by listing some practical suggestions which are able to make the banking sector sustainable in the future: a) bank executives must support integration (top-down process); b) sustainability has to be integrated into operational activities in terms of products, services and processes; c) the integration of sustainability into the core business of banks; d) the integration of sustainability into the overall business strategy of a bank; e) sustainability is not a soft factor, but a measurable business result.

IMPACT OF CSR ON CUSTOMER SATISFACTION

This thematic area seems scarcely explored as the literature focuses on non-financial companies without investigating what happens with particular reference to the banking sector. In this thematic area most of the research has made use of the theoretical framework based on hierarchy of customer preferences for CSR initiatives by Bhattacharya and Sen (2004). In spite of the notoriety of this model it must be recognized that a comparative analysis of the efficacy of each of the dimensions has not carried out so far.

Bhattacharya and Sen (2004) CSR framework is made up of three broad parts - the company-specific inputs, the internal and the external outputs from consumers - that benefit the focal company, the consumers themselves, and the social issues. The model reflects two sets of "multiplier" factors that moderate the effects of the CSR initiatives on the internal outcomes and that moderate the effects of the internal outcomes on the external outcomes. These factors are broadly classifiable into three categories pertaining to the company, the consumers, and the competition. Because of the heterogeneity of consumer responses, the problem for managers is to understand when, how and why consumers' respond to CSR initiatives, and the above research-guided framework is aimed to face this difficult task.

McDonald and colleagues (2008), starting with a thorough literature review on CSR, ask future research to answer the question whether, for the purpose of customer satisfaction, a customer centered policy or a CSR centered policy give better results for banks. To this end, they seek to establish a ranking of both CSR item and those with a more marked customer focused character, which allows for identification of which items are more interesting and should be further explored. In the non-banking

area important research by Luo and Bhattacharya (2006) and Maignan and Ferrell (2001) indicate a positive association between CSR and customer satisfaction, yet the same Luo and Bhattacharya showed that the relation between CSR and customer satisfaction was not always linear, and indeed in the case of companies with limited innovative capacity, it was reversed. McDonald and colleagues (2008) found that surveys conducted by the banks themselves often show that institutions which have made significant investments in socially responsible initiatives have not had a significant return in terms of customer satisfaction. This is confirmed by Pomering and Dolnicar (2006) who, investigating the CSR initiatives of a specific bank have seen how customers prefer initiatives that benefit them directly, rather than those that benefit their wider community. If it is a fact that customer satisfaction is one of the most important determinants of firm value, banks cannot disregard them in the implementation of socially responsible initiatives.

Ultimately through the use of the multi-dimensional model of CSR Bhattacharya and Sen (2004), McDonald and colleagues (2008) confirm what was argued by the prevailing literature, namely that customer-focused initiatives make it possible to obtain better customer satisfaction than those focusing on CSR, but they also point out that the effects of CSR initiatives in consumer behavior have not yet been sufficiently explored by scientific research. The goal of future research will be to identify a hierarchy of CSR initiatives that would allow banks to focus on those initiatives that give a greater return, even under the profile of customer satisfaction, since according to Auger and colleagues (2006) there is a hierarchy of consumer preferences for ethical and social issues, and therefore not all initiatives in CSR have the same impact in terms of customer satisfaction.

EFFECTS OF VARYING CULTURAL, ETHNIC AND GENDER ON CSR

Among the thematic areas that were not elicited enough by the literature it is that of socio-cultural variables such as gender, ethnicity, professional. The main goal of this section, therefore, is a survey of literature on international, cross-cultural CSR policy in general and cross-cultural CSRO (namely individual orientation towards CSR) in specific. The main theoretical reference model, in this fields are, Carroll's (1979, 1991) framework of CSR and Schwartz's (1999, 2006) theory of cultural value orientations. Carroll defines CSR as the result of the combination of four components: a) economic responsibilities namely profitably producing goods and services requested by society; b) legal responsibility: operating within the laws and the social rules established by society; c) ethical responsibilities: acting by conforming to society's expectations and social rules established, by doing what is right and fair; d) discretionary responsibilities: acting as good citizens contributing to the welfare of the society and the improvement of the quality of life. According to Schwartz cultures could be described in several dimensions and are ordered by importance in relation to one another to form a

system of values viewed as interdependent and non orthogonal dimensions (Schwartz, 1992). Schwartz (1992) distinguished seven types of cultural value orientations comprising three polar cultural value dimensions: a) embeddedness versus autonomy; b) hierarchy versus egalitarianism; c) mastery versus harmony.

Literature about this area confirms significant differences in CSR across cultures even within one single internationally operating organization; meeting such differences does not come at the expense of economic performance levels or legal limitations (Van den Heuvel *et al.*, 2014). The most important question arising from this issue is whether CSR-oriented organizations will survive in the long term in the whirlpool of supercapitalism (Reich, 2007) and hypercompetition (D'Aveni, 1994), which strongly emphasizes shareholder satisfaction.

In this thematic area it is worth quoting the work of van den Heuvel and colleague (2014) that, examining 416 employees of a bank operating internationally, study the orientation and attitude towards CSR depending on one's country. The context studied was geographically divided into three clusters, each corresponding to one of the business units of the bank: Western Europe, English-speaking countries and South Asia. The dependent variable CSR is defined by four distinct components according to Carroll theoretical framework. The authors administered a questionnaire to employees consisting of 44 items, divided into 11 set, each containing 4 items, one for each of the components of CSR identified above, asking them to distribute 10 points among the various items of these 11 sets.

Univariate and Multivariate Analyses of Variance and T-test on independent groups were carried out to verify the research hypotheses, namely the significance of the difference between the averages of the overall scores obtained in the various transnational clusters. In conclusion, the authors confirm their assumptions about the presence of significant differences within a single organization operating at an international level as regards CSR orientation according to their nationality, gender and professional area; such difference it is not significant only for the first component. For example, the Anglo-Saxon countries and those in South Asia give greater weight to competitiveness, economic performance and to the legal component and more limited weight to the ethical component than in Western Europe ones. Western European countries, however, attaches a greater weight to the discretionary component than the Anglo-Saxon countries. This suggests the difficulty in implementing a uniform CSR strategy for all countries. As for gender influence, men generally classify the four responsibilities in order of importance as follows: economic, legal, ethical, and discretionary, whereas women classify economic responsibilities only third after the legal and ethical ones. As for the functional variable, the authors found that employees belonging to the random cluster, compared to CSR experts, believe legal responsibilities to be far more important, while the latter attach more importance to ethical responsibilities. The authors suggest as an additional line of research the study from a transnational

perspective, but in the context of a variety of organizations instead of only one since the corporate culture tends to prevaricate and to prevail on the cultural national orientation of employees. Further research on the differences in CSR across various cultures should be undertaken, incorporating various populations in different countries, through multi-national banks with branches across different countries since research is often focused on banks located in just one nation.

THE RELATIONSHIP BETWEEN CSR AND RESPECTIVELY LEGAL ENFORCEMENT AND COOPERATION BETWEEN EMPLOYERS AND EMPLOYEES

This thematic area, while being interesting for its practical implications, definitely appears to be the least explored in the literature, therefore also worthy to be further investigated by future research. The theoretical framework for this area is the same Campbell (2007) model analyzed in section about the performance and a useful research starting point can be represented by the work of Chih and colleagues (2010), partially shown in the section devoted to financial performance and the cash flows linked to adoption of CSR measures. In this section, the aspects related to legal enforcement and the cooperative and self-regulating frameworks, will be briefly analyzed. The authors use three indicators as a proxy of legal enforcement including the Shareholders Right Index (La Porta *et al.*, 1998) which can take values between 0 and 6, where 6 indicates the highest level of protection for shareholders and Legal Enforcement Index, which can assume values between 0 and 10 where 10 corresponds to the greatest possible degree of protection of investors prepared by the legal system; a proxy index of cooperation between employers and employees was derived from the Global Competitiveness Report which may assume values from 1 to 7, where 7 indicates the highest possible degree of cooperation; an index measuring the degree of self-regulation and may assume a value of 1 if the intermediary adopts either the Equator principles or the Wolfsburg principles and 0 if the intermediary does not adopt either of the two principles. The dependent variable, featuring also in this case the CSR, is represented by a dummy variable which takes the value 1 if the intermediary is included in the Dow Jones Sustainability World Index (DJSI World) and 0 otherwise. The authors (Chih, Chih and Chen, 2010) conclude that the financial intermediaries operating in countries with strong legal enforcement measures engage in CSR activities with greater determination while financial intermediaries in those countries with effective protection for investors are less involved in CSR activities; self-regulation in the financial sector has a positive impact on CSR; finally, financial intermediaries in countries with more cooperative relations between employers and workers and high quality management schools will be more attentive to CSR.

CONCLUSIONS

In the present article we have tried to address the issue of social responsibility of banks trying to identify, through a review of recent literature, determinants and effects. Moreover, we have tried to suggest some ideas for future research in CSR fields like those of customer satisfaction and legal enforcement which have been poorly explored so far. The conclusion is that compliance with social responsibility, can not only be seen as a commandment imposed from above, far removed from the competitive business environment, but rather as an opportunity for the diversification and competitive advantage (Birindelli *et al.*, 2015). This interpretation is even truer in the banking sector, where competitive differentiators are often ephemeral and volatile, since they are based on the price (under loans and services) and performance (in the management of deposits). Yet it cannot be denied that the values of social responsibility are often invoked by the various subject of the system (governments, companies, NGOs) to defend their interests. In particular, governments invoke social responsibility to demand and justify an extension of its regulatory powers, companies set themselves up as bastions of social responsibility to demand more autonomy from regulatory constraints, while NGOs make use of CSR to increase their lobbying powers and to rake in more resources in the form of donations from governments and enterprises (Michael, 2003).

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FOR LOVE AND MONEY! EMPLOYEES, VOLUNTEERS AND ECONOMIC PERFORMANCES IN USA NONPROFIT ART ORGANIZATIONS

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ABSTRACT

The economic performance of nonprofit art organizations is affected by the labour intensity of employees and volunteers.

Marketing and, above all, relationship marketing are very important to engage employees and volunteers, emphasize and strengthen their commitments, and maximize the competitive advantage in a resource-constrained sector. A relationship marketing perspective helps art organization to understand who employees and volunteers are and what drives them, and to create a seamless integration between paid and unpaid workers. This facilitates productive relations among staff and volunteers, and their connections to the organization's goals.

The aim of the paper is to profile 300 nonprofit art organizations in the USA in terms of the relationship between their ratio of employees to volunteers and their economic performances in 2015. Following k-means cluster analysis, three main clusters are significant. The most crowded cluster (130 organizations) shows the highest program service revenue with the greatest share of employees. Marketing staff are essential in the *The Marketing Expert* cluster, who reveals an organization focused on internal labour intensity.

The two remaining clusters show higher fundraising expenses, contributions and ratio of volunteers than The Marketing Expert. The external labour intensity of volunteers is essential for art organizations in *The Fundraiser* cluster with the highest gains and solvency.

The paper highlights the joint importance of employees and volunteers in the performance of art organizations, which have so far not been thoroughly investigated using cluster analysis. Relationship marketing plays a pivotal role, which can be further optimized by the managers of these organizations.

Keywords: economic performance, marketing, USA nonprofit art organizations, employee, volunteer, cluster analysis.

INTRODUCTION

Labour intensity is very important in nonprofit organizations, who fulfil missions, which do not only affect economic growth but also build social capital and welfare. Nonprofit art organizations in the USA show high levels of labour intensity (Slavich, Montanari, 2009; Turbide et al., 2009 and 2008), whose pillars are employees with their creative skills on the stage, in museum rooms and marketing offices, and volunteers who, above all, outside of 'creative rooms' support friendships, advocacy, marketing and fundraising goals. The *internal labour intensity* of marketing and fundraising staff is signaled through marketing and fundraising commitments and goals, which can be magnified by the *external labour intensity* of volunteers, who either may support more the fundraising side than the marketing side of art organizations or may support the match of both fundraising and marketing.

Consequently, the economic performance of these nonprofit organizations is affected.

In this context, relationship marketing (Das, 2009; Morgan, Hunt, 1994; Berry, 1995) is an important strategy to attract, maintain, and enhance long-lasting relationships with paid and unpaid staff over time in nonprofit organizations. The marketing perspective allows non-profit organizations to understand who employees and volunteers are and what drives them, allowing nonprofits to identify the strategies most appropriate to managing them. In addition, relationship marketing helps to meet the needs of stakeholders and to provide them with information directly suited to their interests (Bussel, Forbes, 2002, 2006), and to spread awareness of the social values which lead to the achievement of the mission (Sargeant, 2009; Andreasen, Kotler, Parker, 2003).

Adopting a marketing approach allows nonprofit to generate stakeholders trust and commitment (Hussain, Rawjee, Penceliah 2014), and to exploit strategically the valuable resources and capabilities that are at the nonprofit organization's disposal, among which are employees and volunteers. Furthermore, according to some scholars (Colbert 2001; Hill, O'Sullivan and O'Sullivan 1995; Radbourne, Fraser 1996) the more the organization learns about and monitors the stakeholder's needs, preferences, attitudes and concerns, the greater will their satisfaction and commitment level grow. This is especially true for nonprofit art organizations, which are services-oriented organizations, and they are built on relationships (Grönroos, 1994,1996, 2004; Rentschler et al., 2002; Padanyi, Gainer, 2004).

The aim of the paper is to profile 300 nonprofit art organisations in the USA in terms of the relationship between their ratio of employees to volunteers and their economic performance in 2015. Following k-means cluster analysis, three main clusters are significant for volunteering in connection with fundraising (external labour intensity) and employees in connection with marketing and advertising (internal labour intensity).

ECONOMICS OF INTERNAL AND EXTERNAL LABOUR INTENSITY IN NON-PROFIT ART ORGANIZATIONS

Internal labour intensity is depends on creative professionals in non-profit art organizations, whose non progressive production function has been the focus of economic literature for decades (Slavich, Montanari, 2009). The commitment of employees concerns identification with the mission of the organization, long-term relationships and satisfaction. It includes visions and the importance of monitoring for satisfaction. Employees can affect performances and, if they mature with the organization, their advocacy and efforts can impact on both economic and social performances (Hegenbuch, D. J., Little, S. W., Lucas, D. J. 2015). Employees show a labour intensity, which is not subsidiary to the volunteers' one, though some fungible competences can be interchanged (Handy, F., Mook, L. and Quarter, J. 2007). Deviation is possible, if boards do not invest in intensity and trustworthiness (Van Erde, W., Peper, P. 2008).

The external labour intensity is supported by several stakeholders, among them, volunteers, who are not paid by the organizations, though they show advocacy for and commitment to. Nonprofit art organizations have always relied on voluntary relations, while volunteers have invested time, emotions, advocacy, congruent identities, tangible and intangible resources (Carpenter, Myers, 2010; Einolf, Chambré, 2011; Bussell, Forbes, 2007 and 2002). If motivations can range from tangible to intangible (Meier, Stutzer 2008; Ziemek, 2006; Katz, Rosenberg, 2005), the range of variables of the utility function of volunteers include: empathy for a specific good cause, altruism for any good cause, commitment to the welfare of the whole society, self-identification and self-esteem (Chaddha, Rai, 2016). In volunteers' opinions relations gratify them for being in a community with other people and 'empathic souls'.

Employees and volunteers collaborate. From the starting point of their relationship, the selection and governance of volunteers they both need charismatic leaderships and, above all, that the board of nonprofit organization verifies changing viewpoints of volunteers over time (DeVoe, Pfeffer, 2007). Volunteers' levels of satisfaction can change, as well as their impact on turnovers. Employees and audiences are essential to the functioning and revenues of non-profit art organizations. Volunteers are essential, too (Ewing, Govekar, Govekar, Rishi, 2002).

Employees and volunteers can be the same people and the latest nonprofit literature is paying attention to the allocation of time, rewards and reputation, when staff-giving (as volunteers in another organization) change relations and governance inside of firms (Rodell, Lynch, 2016; Grant, 2012). This may not be the case with art organizations: employees are fully devoted to their art organization and they can work as volunteers within it (for fundraising events and big donors' events). No literature has been found that looks at art and nonprofit employees working as volunteers in other art and

nonprofit organizations. Only some USA art organizations support their staff-giving (for networks of theatre seasons and productions). In contemporary nonprofit organizations, some staff-giving can be found. Nevertheless volunteering can suffer for recession and millennials, who do not seem to be particularly interested in volunteering (Ertas, 2016; Collins, Long, 2015).

THE IMPORTANCE OF RELATIONSHIP MARKETING IN NONPROFIT ART ORGANIZATIONS

Relationship marketing (Morgan, Hunt, 1994) is represented by all the marketing activities geared to the creation, to the maintenance and management of relational assets consisting of long-run relationships with stakeholders. Furthermore, according to Buttle (1996), relationship marketing is about healthy relationships characterized by concern, trust, commitment and service. It is about a mutual exchange and fulfilment of promises (Grönroos, 1994). *Adopting a marketing perspective* – without forgetting the ethical dimension and the values which distinguish the economic role played by nonprofit – pushes art organizations toward innovative strategies for the realization of their mission (Lovell, Weinberg, 1984; Andreasen, Kotler, Parker, 2003; Kolb, 2013) and in a more strategic direction (Conway, 1997).

It must be remembered that relationship marketing is not just about relationships with customers. In fact, a relationship marketing approach is crucial in dealing with different groups of stakeholders (Peck, 1996) and with different relationships between these groups (Christopher, Payne, Ballantyne, 1991; Morgan and Hunt, 1994; Doyle, 1995; Gummesson, 1996).

A relationship marketing approach is important especially in art organizations which are, as nonprofit service-oriented institutions, multi-stakeholders and multipurpose. Consequently, nonprofit organizations have many relationships that are vitally important. At the same time, they have a multitude of constituencies and must work out the relationship with each of them (Drucker, 1991; Peck 1996; Bussel, Forbes, 2006, 2007).

In the arts, in addition to the audience and visitors who are essential to the arts organization's survival (Bussel, Forbes, 2007), there are other stakeholder groups (Andreasen, Kotler, Parker, 2003; Bruce, 1995), amongst them volunteers and employees.

Art nonprofit organizations recruit employees and volunteers and invest time, money and commitment in them (Bussel, Forbes, 2006). To succeed, art organizations must focus on building effective relationships with employees and volunteers, in order to enhance their engagement and ultimately to improve their performance (Kumar, Pansari, 2016; Bussel, Forbes, 2006). To create a seamless integration between paid and unpaid workers, volunteers must be trained, supervised and evaluated as if they were employees.

In order to exploit the relationship marketing potentialities, arts nonprofit organizations must make visible their unique value proposition (Delaney, 2014; Sargeant, 2009; Wyme, Knowles, Gomes, 2006), that is the value that the nonprofit provides to its stakeholders, from the audience to volunteers, from employees to donors and to the community. Often, the unique value proposition is not fully and clearly expressed; nevertheless, its relevance is crucial both for stakeholders, as it allows them to appreciate the distinctive specificities of the organization, and for the organization itself, so that it can explain the value generated by its activities and benefits to those parties willing to offer their resources.

If the unique value proposition is consistent with the mission and it is properly communicated, it can meet stakeholders' needs and allow the art organization to recruit people as volunteers (Wymer, Knowles, Gomes 2006).

When dealing with actual and potential volunteers, employees, audience and other stakeholders, the value proposition is very important. If the value art organizations are offering is close to the value stakeholders are receiving, there should be the basis for a long-lasting relationship. The challenge is to invest in that relationship to ensure, on an ongoing basis, that all involved parties get what they want and need. In fact, people volunteer for specific benefits and will only continue with this activity if they are satisfied (Bussel, Forbes, 2002). Therefore, it is important, when dealing with volunteers, to understand the motivational mix that drives people to invest their time in volunteering (Voss, Voss, 1997), also considering that motivations change over the volunteer life cycle (Bussel, Forbes, 2003). In art organizations volunteers' motivations are often very similar to those of visitors and audience members.

Volunteers can help as *artists* directly performing the mission of the organization or as *fundraisers*, soliciting grants and contributions of money and goods and services from potential donors. They can also be in charge of some of the general activities relating to the accomplishment of the art organizations' mission.

On the one hand, for instance, art organizations can offer to participate in the effort to improve lives through art programs, on the other hand, volunteers can provide ushering, ticket taking and other services, administrative support in the office; the organization and execution of fundraising events and the promotion of nonprofit activities to their friends.

Volunteers might be regarded and managed as a source of labor, as a special type of visitor or audience member, and as part of the organization's public engagement strategy.

Employees and volunteers, working together, can provide funding, audiences, sponsorship, and support as well as act as unpaid advocates for art organizations (Bussel, Forbes, 2003; Raymond, 1992).

THE STUDY

The main objective of the study is to investigate the impact of employees' and volunteers' activities on the performances of art organizations in the USA. Specific research objectives are represented by the following research questions:

RQ.1 Are art organizations in the USA affected by labour intensity?

RQ.2 If yes, how does it impact on these art organizations' performances?

To answer the research questions, a sample of 300 art museums, symphony orchestras and opera houses in the USA which had the highest total income in 2015 is analyzed. The sample was selected from Guidestar.com databases and clustered, thanks to a k-means cluster analysis, to identify profiles with different labour intensity.

METHOD

990 forms from the fiscal year 2015 are here analyzed with the Internal Revenue Service (IRS), categories 'A69-Symphony Orchestra', 'A6A-Opera' and 'A51-Art museums': 100 organizations for each category, from the highest to the lowest total income. These reports can be downloaded from the Guidestar website www.guidestar.org and the main websites of the organizations themselves. The Guidestar website contains 990 forms from nonprofits, such as detailed statements of revenues and expenses and financial statements. The sample adds up to 257 organizations, whose 990 forms were downloadable at www.guidestar.org or at their own websites at the end of 2016.

As reported in the 990 form glossary revenues of a nonprofit organization in the USA may include: Direct public support: contributions, gifts, grants and bequests received directly from the public. It refers to amounts received from individuals, trusts, corporations, estates, foundations, public charities or raised by an outside professional fundraiser; Government contributions or grants: payments from the Government to a nonprofit organization to further the organization's public programs. Direct public support, Government contributions and grants are summed so that the whole extent of Contributions can be estimated. The other revenue categories are: Program service revenues: fees and other monies received by an organization for services rendered.

If contributions and program service revenues constitute more than 80% of the sample, ancillary revenues derive from Investment income and Other revenues. Revenue diversification will be here analyzed as concerns main categories: Contributions with the target of willingness-to-donate and Program Service Revenue with the target of willingness-to-pay.

Expense categories include: Program Service Expense related to marketing and production of the core business; Fundraising expense and Management and general expense, a miscellaneous cost that is not

related to the previous accounting lines. According to IRS standards, if the fundraising expense must be separately reported, the marketing or advertising expense can be included in the Program service expense. The advertising and marketing expense will here be separately counted so that it can be compared with the fundraising expense. The personnel expense will also be calculated here, in order to appreciate the magnitude of the internal labour intensity of employees.

Next to the analysis of revenue and expense categories, the (Net) Gain or Loss of the year as the difference – positive or negative – between revenues and costs, Net Assets and Total assets are here analyzed.

Economica performance is here connected with the ratio of employees and volunteers in these organizations. These data can be found in the first page of 990Forms.

First of all, these data are entered into Excel and indexed to total revenues – for revenue categories – and total expenses – for expense categories -. Gain or loss is also included in the analysis, indexed to total revenues. The ratio of Net Assets/Total Assets is also calculated, in order to appreciate the solvency of the sample. Employees and volunteers are calculated as ratios of the total employees+volunteers.

Secondly, these ratios are clustered, in order to obtain meaningful groups with relevant and separating features.

Cluster analysis is the process of dividing a set of observations into a number of groups. In particular, K-means clustering is an iterative follow-the-leader strategy. First, the number of clusters, k , must be specified. Then a search algorithm finds k points in the data, called seeds, that are not close to each other. Each seed is then treated as a cluster center. The routine goes through the points (rows) and assigns each point to the cluster it is closest to. For each cluster, a new cluster center is formed as the means (centroid) of the points currently in the cluster. This process continues with an alternation between assigning points to clusters and recalculating cluster centers until the clusters become stable. Cluster means show the average performances of significant groups.

KEY FINDINGS

Having clustered the above-mentioned ratios with *JUMP Statistics*, three clusters are significant in Table 1. Five outliers will not be considered. Clusters are the sum of 252 organizations.

Ratios	Number of organizations in clusters		
	Labels		
	130 organizations The Marketing Expert	35 organizations The Fundraiser with the highest gain and net assets	87 organizations The Fundraiser
Contributions/Total Revenues	0.59	0.71	0.60
Program Service Revenue/Total Revenues	0.30	0.06	0.22
Program Service Expense/Total Expenses	0.76	0.71	0.74
Management and general Expense/Total Expenses	0.16	0.18	0.17
Fundraising Expense/Total Expenses	0.07	0.07	0.10
Advertising Expense/Total Expenses	0.05	0.02	0.04
Gain or Loss/Total Revenues	0.05	0.28	0.09
Net Assets/Total Assets	0.47	0.92	0.84
Personnel Expense/Total Expenses	0.52	0.43	0.36
Employees/Employees+Volunteers	0.70	0.58	0.17
Volunteers/Employees+Volunteers	0.30	0.42	0.82

Table 1. Cluster K-means, 2015's average economic performances of nonprofit art organizations in the USA (ratios) and shares of employees and volunteers.

All clusters show contributions to be the prevailing source of revenue. Nevertheless, one cluster shows the highest program service revenue (30 percent) together with the highest program service expense (76 percent). This most crowded cluster, *The Marketing Expert* shows the highest internal labour intensity, with the highest employees' share, the highest personnel expense, program service expense, advertising expense and the highest program service revenue. With 130 organizations, this cluster is giving evidence of an internal labour intensity. The volunteers' share is 30 percent, the lowest one of the sample. The fundraising expense is as much as in *the Fundraiser with the highest gain and net assets* (7 percent).

The Fundraiser with the highest gain and net assets is the least crowded cluster, with 35 organizations. The highest contributions are together with the second highest employees' and volunteers' shares of the sample.

The Fundraiser with 87 organizations shows the highest share of volunteers (82 percent) and the second highest gain and net assets. Here, the fundraising expense is the highest of the sample (10 percent).

High shares of volunteers (in clusters labelled as Fundraiser) positively affect gains and solvency in comparison with the most crowded cluster, the Marketing Expert, where volunteers' share is only 30 percent.

DISCUSSION

The purpose of this article is to understand the impact of employees' and volunteers' activities on the performances of U.S. art organizations.

From the literature, it is apparent that nonprofit art organizations rely on paid and unpaid staff and that relationship marketing is acknowledged as a helpful paradigm for enhancing the connection among art nonprofits and their staff, ensuring that they are connected to the organization's strategic goals.

Volunteers are valuable resources for nonprofit arts organizations and they are actively working, together with employees, to increase and expand engagement with the public, with traditional and nontraditional audiences, with social issues, community needs, as well as other issues related to nonprofit management. Arts nonprofits can see their volunteers not just as a tool that helps them achieve their mission but as part of the mission itself.

To understand if and how art organizations are affected by labour intensity a k-means cluster analysis was conducted, and a profiling of art organizations in the USA detected three different clusters in 2015. The *Marketing Expert* includes 26 museums and 104 symphony orchestras and opera houses. In relation to the literature, the internal labour intensity is here influencing economic sales, so that marketing officers and fundraisers exploit the best of their relationships with multiple stakeholders. Among the museums we can find the International Center of Photography in New York, Los Angeles County Museum, Museum of Fine Arts in Boston, National Academy of Design in New York, Phillips Collection, PS1 in New York and other high-lighted museums, whose employees are fully maturing their fundraising skills. Nevertheless, price and product marketing is constantly improving with flexible pricing, edutainment, local quarters and community empowerment. The American Symphony Orchestra, California Symphony Orchestra, Chicago Symphony Orchestra and Sinfonietta, Cincinnati Symphony and Opera, Dallas Symphony Orchestra, Houston Symphony Society, Kansas City Symphony, Seattle Opera, The Atlanta Opera and the Carnegie Hall can be here praised for their fundraising strategies: memberships, funds, endowments, planned giving and calls for bequests. At the same time, they offer rush tickets (for last minute purchases with discounted price), gift certificates and cards and new-to-opera nights for newcomers with exciting pre-performances, lectures, exclusive behind the scene activities, etc. They provide flexible series like a create-your-own-season-package and a neighborhood series with connections to local restaurants and businesses.

The *Fundraiser* cluster (87 organizations) with the highest share of volunteers and the highest fundraising expense includes 39 museums. Among them, the Dallas Museum of Arts, Detroit Institute of Arts, Columbus Museum of Art, Portland Art Museum and San Diego Museum of Art target the multiple engagement of local and national friends, foundations (corporate, independent and community), sponsors, trusts, planned givers and any other philanthropy. The same and skillful fundraising is present in symphony orchestras and opera houses of this cluster. In relation to the literature, the external labour intensity is playing the pivotal role: a long-lasting relation with volunteers positively affects the motivational mix, engagement, benefits and economic performances. Between these clusters, the Fundraiser with best performances includes 33 museums (out of 35 organizations). MOMA of New York, Whitney Museum, Cleveland Museum of Art, Philadelphia Museums of Art, Denver Art Museum and other 'giants' are here included with their mature reputation, the best-trained volunteers and employees, whose skills are constantly monitored, as these organizations are focused on new targets, in order to exploit willingness-to-donate and willingness-to-pay. In relation to the literature, long-lasting and mature relationships induce the best performances. All clusters profit by gains and net assets. Nevertheless, where volunteers are present at the highest ratios, commitments and advocacy result in the best performances. Art organizations in the USA should not underestimate the importance of their internal and, above all, external labour intensity.

MANAGERIAL IMPLICATIONS

Managers of art organizations should consider options to spend for internal and external labour intensity, stimulate and develop relations with different focus on employees and volunteers as valuable media to get in touch communities, sponsors' local governments' and other stakeholders' engagement. Managers must be aware that, in order to be competitive, relations needs to be nurtured, monitored, changed and evolved according to the needs of the organization and multiples stakeholders.

As aforementioned, marketing and fundraising have diverse positive effects, if they are carried out with an engagement approach. Engagement and empowerment of who is working 'for love and money', they result in the best economic and social (relational) performances. Managers should become aware that the advocacy of volunteers can determine the best economic performance.

Nevertheless, marketing, fundraising, volunteers' training, monitoring all require significant endeavors, in term of funding, timing, community involvement and stakeholders' engagement. Public-private partnerships are essential for the implementation of the process and in order to ensure its success.

CONCLUSION

Employees' and volunteers' advocacy, skills and efforts positively impact and affect performances of art organizations in the USA. The cluster analysis confirms both the high level of staff engagement, for different weights of internal and external labour intensity, and economic results, above all, when fundraising is the leading strategy. Increasing fundraising mean increasing contributions, gains and net assets, thanks to the leading role of volunteers, who are calling for communities, friends, sponsors and multiple stakeholders to get involved.

Employees are essential, too. They express their skills both in marketing and fundraising, they train volunteers and they perfectly match with volunteers' commitments. Trade-offs between fundraising and marketing are avoided: resources are optimized for both strategies, so that gains and net assets are maximized.

One limitation concerns the short-term nature of analysis, for only one-year of accounting data, 2015. The very next research will engage in a longer-term analysis and a bigger sample than this one, in order to explore the impacts of labour intensity and relationship marketing on the whole nonprofit cultural industry in the USA, from performing to visual arts.

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CAN A HIGH WOMEN QUOTA IN SUPERVISORY BOARDS INFLUENCE ENTERPRISE SUCCESS?

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ABSTRACT

Many large companies in Europe include mainly men in supervisory boards and the women quota is often lower than 20 %. In Germany an optional women quota of 30 % in supervisory boards was proposed for capital market oriented companies in 2016. Some assume that without a gender quota the earnings of enterprises would shrink as male and female members in supervisory teams do not work in such a harmonized and structured way. Others think that a women quota in supervisory boards should be requested by law and should not remain optional. In this context, conducting research and analysing the impact of the women's presence in supervisory boards on the success of companies appear as a necessary topic. The present article looks at the companies of EURO STOXX 50 in the year 2015 and their success and tries to establish whether this success can be related to the percentage of female members in supervisory positions. It replicates in this way the study of Binder, Alonso-Almeida and Bremser (2016) which analysed the relationship between female's representation in the management board (executive board) and firm performance (measured by earnings before taxes - EBT) of the EURO STOXX 50 companies in 2014. It is in the same time an extension of the original study as the supervisory board is brought under scrutiny.

Keywords: women on corporate boards, firm performance, key performance indicators, gender quota, earnings before taxes

INTRODUCTION

This article contributes to the literature in the field of Key Performance Indicators (KPIs) as success factors e.g. the Earnings before Taxes (EBT). It offers an insight into the relationship between the economic success of 50 European companies and the gender balance on supervisory boards. For this purpose the article builds upon existing literature in the field of KPIs, diversity management, supervisory boards, and women quota, etc. Thus, the paper can help investors or business owners to gain a thorough understanding of the current business environment. The paper is structured as follows: the next section presents the literature review and introduces the hypothesis. Section three contains the

research methodology. In section four the findings are discussed. Finally, section five develops insights for investors and owners and shows the limitations of the study and offers suggestions for future lines of research.

LITERATURE REVIEW

A controversial issue during the past decades was women's presence in supervisory boards. Women are still the exception in German supervisory boards but their representation increased gradually (Holst and Kirsch, 2014). It can be seen that more women are integrated in supervisory boards in Northern Europe (e.g. Norway, Iceland, Latvia, Finland and Sweden to mention the top 5 countries with the highest women quota). It depends on the examined countries if a study can find a significant link between firm performance and the women quota in supervisory boards. On the one hand, it was shown e.g. for Denmark that a higher women quota in supervisory boards can determine a better company performance (Lückerath-Rover, 2011) but on the other hand, this finding could not be verified for the same country by other studies (Rose, 2007).

Beaufort and Summers (2013) identified at European level a 1.5% change of women representation in mainly male supervisory boards between 2009 and 2013. If women were already member in a supervisory board, the women quota was likely to increase further. When one woman was a board member, the women quota stood at 3.2%; by already 3 women in the supervisory board, the women quota increased to 3.7%. According to the above study the average women quota in supervisory boards in Europe in 2013 was 7.9%. France stood out as a positive example with a women quota of 28.1% in 2013.

Another result was registered by a Catalyst study which examines the relationship between women on corporate boards and their companies' financial performance in the United States (Catalyst, 2007). The study "Women matter. Gender diversity, a corporate performance driver" shows that companies with a higher proportion of women in top management perform better (McKinsey, 2007). Other authors signal rather the lack of evidence that female representation in supervisory boards improves profitability (Ferreira, 2014). It is suggested that rather benefits for the society should be measured when women occupy supervisory board positions. In a study with 108 German large corporations which took place between 2009 and 2013, there was not enough evidence to indicate a significant relationship between gender diversity and firms' financial performance (Dick, 2015).

There are however, institutional factors driving gender quotas in supervisory boards such as e.g. welfare provision for state-owned enterprises, political coalitions and a legacy of initiatives (Terjesen *et al.*, 2015). It is more likely to establish a high gender quota in supervisory board with left-leaning governments. In a survey of 201 Norwegian firms the positive effect of the women quota in supervisory

boards is seen in increased board development activities and in a decreased level of conflict (Nielsen, 2010). Another exhaustive study, in which 2.360 companies from the Morgan Stanley Capital International All Country World Index (MSCI ACWI) were observed over a period of 6 years by the Credit Suisse Research Institute (2012) shows as a result a better mix of leadership skills, a wider pool of talent and a better risk aversion, the higher the women quota in supervisory boards in the companies is (Kersley and O'Sullivan, 2012).

What needs to be acknowledged is the fact that gender balance became a priority and diversifying corporate supervisory boards often represent a target to be achieved. Small improvements can be seen with a law instituted quota for women in supervisory boards (Corkery and Taylor, 2012). In Norway, Italy, France, Spain and starting with 2016 also in Germany optional gender quota exist (Sullivan, 2015). Norway was the first country to legislate board quotas in 2004 and many countries followed with law determined or optional women quotas in supervisory boards, however, less than 10 % of the board members consist of women (Dizik, 2015).

Moreover, men in supervisory boards have often better networks and for this reason the male supervisory board managers often recruit male followers which minimizes the women quota in supervisory boards on the long run (Terjesen *et al.*, 2015). Rosa *et al.*, (1996) analysed the impact of gender on small business performance in the United Kingdom (UK) and concluded that there are "some considerable differences by sex in quantitative economic and financial performance measures" (p. 476).

Another study with reversed causality shows that in over 3,876 public companies the presence of independent female directors is necessary in supervisory boards to contribute best to the firms' performance (Terjesen *et al.*, 2015). This means that, when no women are included as supervisory board members, the companies' results are lower (measured by Tobin's Q and shown by the Return on assets ROA). Finally, another study with reversed causality about 151 of the capital market listed German firms shows that only after a critical mass of about 30% (e.g. 3 women in absolute positions) is attained, then a higher firm performance can be reached (Joecks *et al.*, 2012).

The present research focuses on the companies of the EURO STOXX 50 index, and aims at exploring whether there is a link between the EBT of these successful European companies and the number of women in supervisory boards. It has to be noted that the relationship between the EBT and the women quota in management boards was analysed thoroughly by Binder *et al.*, (2016), however, the focus of this article lies on the supervisory board and especially on the link between firms' performance measured by EBT and the proportion of women on the supervisory boards. The following hypothesis is formulated and will be tackled in the following sections:

H1: Enterprises which have a higher gender quota in supervisory boards are more successful and achieve a higher EBT.

METHODOLOGY

The EURO STOXX 50 Index was selected to represent the performance of the 50 largest companies among 19 supersectors in the year 2015. There are enterprises of seven Eurozone countries which are integrated in this index. This index has a fixed number of components and is part of the STOXX blue-chip index family. Moreover, EURO STOXX 50 index is one of the most liquid indices for the Eurozone and serves for benchmarking purposes. The index is a financial control index which ensures stable and up-to-date figures. It represents the performance of only the largest and most liquid companies in a sector (STOXX Limited, 2016).

The research was conducted for the first time at the beginning of the year 2016 and it was carried on in the year 2017. The original study published in 2016 tackled the relationship between EBT and the women quota of executive boards, relying on data extracted from the 2014 annual reports of the fifty EURO STOXX companies and financial websites (compare figure 1).

Nr.	Company's name	Sector	Country	No. of Women	Total supervisory board members	Percentage of Women on the Board	Earnings before Taxes (in Mio. EUR)	Employees total	EBT/Total no. of Employees (in thousands)
1	Air Liquide	Chemicals	FR	5	12	41,67%	2.490,40	50.000	49,81
2	AIRBUS GROUP SE	Industrial Goods & Services	FR	2	12	16,67%	2.359,00	136.574	17,27
3	ALLIANZ	Insurance	DE	4	13	30,77%	9.763,00	142.459	68,53
4	ANHEUSER-BUSCH INBEV	Food & Beverage	BE	2	14	14,29%	11.482,33	150.000	76,55
5	ASML HLDG	Technology	NL	3	9	33,33%	1.856,08	14.681	126,43
6	ASSICURAZIONI GENERALI	Insurance	IT	4	10	40,00%	3.293,00	70.000	47,04
7	AXA	Insurance	FR	5	14	35,71%	7.521,00	98.279	76,53
8	BASF	Chemicals	DE	3	12	25,00%	5.297,00	112.435	47,11
9	BAYER	Chemicals	DE	4	20	20,00%	5.254,00	116.800	44,98
10	BCO BILBAO VIZCAYA ARGENTARIA	Banks	ES	3	12	25,00%	4.428,00	137.968	32,09
11	BCO SANTANDER	Banks	ES	4	11	36,36%	9.172,00	193.863	47,31
12	BMW	Automobiles & Parts	DE	6	20	30,00%	8.706,00	122.244	71,22
13	BNP PARIBAS	Banks	FR	7	14	50,00%	9.790,00	189.077	51,78
14	CARREFOUR	Retail	FR	4	16	25,00%	1.673,00	380.920	4,39
15	DAIMLER	Automobiles & Parts	DE	5	20	25,00%	12.280,00	284.015	43,24
16	DANONE	Food & Beverage	FR	5	13	38,46%	1.925,00	99.771	19,29
17	DEUTSCHE BANK	Banks	DE	7	22	31,82%	-6.261,00	101.104	-61,93
18	DEUTSCHE POST	Industrial Goods & Services	DE	7	20	35,00%	2.055,00	497.745	4,13
19	DEUTSCHE TELEKOM	Telecommunications	DE	8	20	40,00%	4.754,00	225.243	21,11
20	E.ON	Utilities	DE	2	12	16,67%	-5.841,00	56.490	-103,40
21	ENEL	Utilities	IT	2	6	33,33%	5.229,00	67.914	76,99
22	ENGIE	Utilities	FR	11	19	57,89%	-5.262,00	154.950	-33,96
23	ENI	Oil & Gas	IT	1	5	20,00%	-3.535,00	28.246	-125,15
24	ESSILOR INTERNATIONAL	Health Care	FR	3	16	18,75%	1.120,00	61.000	18,36
25	FRESENIUS	Health Care	DE	0	12	0,00%	3.262,00	222.305	14,67
26	GRP SOCIETE GENERALE	Banks	FR	7	14	50,00%	5.878,00	145.700	40,34
27	IBERDROLA	Utilities	ES	5	13	38,46%	2.931,30	30.938	94,75
28	Industria de Diseno Textil SA	Retail	ES	2	8	25,00%	3.212,67	152.854	21,02
29	ING GRP	Banks	NL	2	8	25,00%	5.680,00	54.873	103,51
30	INTESA SANPAOLO	Banks	IT	5	19	26,32%	4.056,00	90.807	44,67
31	L'OREAL	Personal & Household Goods	FR	6	15	40,00%	4.517,40	82.900	54,49
32	LVMH MOET HENNESSY	Personal & Household Goods	FR	4	17	23,53%	5.983,00	125.346	47,73
33	MUENCHENER RUECK	Insurance	DE	8	20	40,00%	3.223,00	43.554	74,00
34	NOKIA	Technology	FI	2	8	25,00%	1.511,00	56.690	26,65
35	ORANGE	Telecommunications	FR	6	15	40,00%	3.197,00	156.000	20,49
36	PHILIPS	Industrial Goods & Services	NL	3	9	33,33%	623,00	112.959	5,52
37	SAFRAN	Industrial Goods & Services	FR	4	17	23,53%	-1.355,00	70.087	-19,33
38	SAINT GOBAIN	Construction & Materials	FR	6	15	40,00%	622,00	170.372	3,65
39	SANOFI	Health Care	FR	5	14	35,71%	5.243,00	115.631	45,34
40	SAP	Technology	DE	4	18	22,22%	3.991,00	76.986	51,84
41	SCHNEIDER ELECTRIC	Industrial Goods & Services	FR	5	13	38,46%	1.736,00	160.000	10,85
42	SIEMENS	Industrial Goods & Services	DE	6	20	30,00%	5.983,00	348.000	17,19
43	TELEFONICA	Telecommunications	ES	2	18	11,11%	316,00	129.890	2,43
44	TOTAL	Oil & Gas	FR	4	12	33,33%	3.677,45	96.019	38,30
45	UNIBAIL-RODAMCO	Real Estate	FR	4	11	36,36%	2.678,30	1.966	1.362,31
46	UNICREDIT	Banks	IT	1	5	20,00%	1.775,88	43.479	40,84
47	UNILEVER NV	Personal & Household Goods	NL	6	11	54,55%	7.133,00	168.921	42,23
48	VINCI	Construction & Materials	FR	6	15	40,00%	3.022,00	185.452	16,30
49	VIVENDI	Media	FR	6	14	42,86%	1.196,00	16.395	72,95
50	VOLKSWAGEN PREF	Automobiles & Parts	DE	3	20	15,00%	-5.688,00	114.006	-49,89

Figure 1: Overview of the 50 EURO STOXX companies from 2015 (Source: own representation based on the information from: <https://www.stoxx.com/index-details?symbol=SX5E>, retrieval date: 03/03/2017)

The current study looks at the number of women in supervisory boards as presented in the 2015 annual reports of the fifty EURO STOXX companies, and data regarding the EBT of each of the fifty companies was collected similarly to the research from 2016, via financial websites.

The composition of EURO STOXX index in 2015 changed slightly in comparison to the year before. Two new companies were included in the EURO STOXX index: Fresenius (Germany) and Safran (France) replaced Repsol (Spain) and REWE (Germany), a change which became effective on September

2015 (STOXX Limited, 2015). The composition change of the index takes place once a year, in September, when only the biggest companies are maintained on the basis of their market capitalization and their price index. Out of the 50 EURO STOXX companies four have e.g. the highest index weights: Total (France) with 4.78%, Sanofi-Aventis (France) with 4.39 %, Bayer (Germany) with 4.29 %, and Anheuser-Busch InBev (Belgium) with 4.11 %.

In order to examine how successful these companies are, the EBT was chosen as being a relevant KPI, taking thus into consideration the fact that companies may face different tax rates in different states. In other words, the lack of a harmonized taxation system across the Eurozone will not affect the results of this study, the EBT making possible a comparison of the 50 EURO STOXX companies at European level.

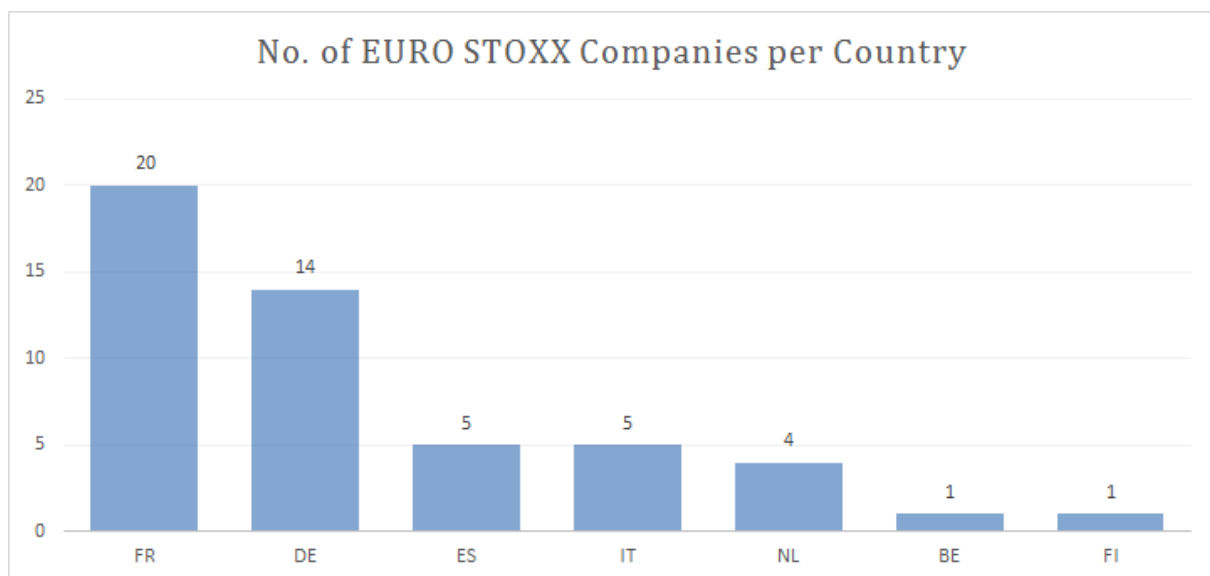


Figure 2: Number of EURO STOXX companies per country (Source: own representation based on the information from: <https://www.stoxx.com/index-details?symbol=SX5E>, retrieval date: 03/03/2017)

FINDINGS

Figure 2 shows the number of companies that each country has in EURO STOXX 50 index. Most EURO STOXX companies are located in France (20) followed by Germany (14), Spain (5) and Italy (5). The Netherlands has four companies in the EURO STOXX index, while Belgium and Finland have only one big company.

In order to test the raised hypothesis (H1: Enterprises which have a higher gender quota in supervisory boards are more successful and achieve higher EBT), two steps are necessary. In a first step, the EBT

and the EBT / employee of the selected companies should be examined. In a second step, the gender quota per sector and in total should be analyzed for supervisory boards and the findings should be brought together.

Figure 3 shows a top 10 ranking of the EURO STOXX companies according to their achieved EBT in 2015.

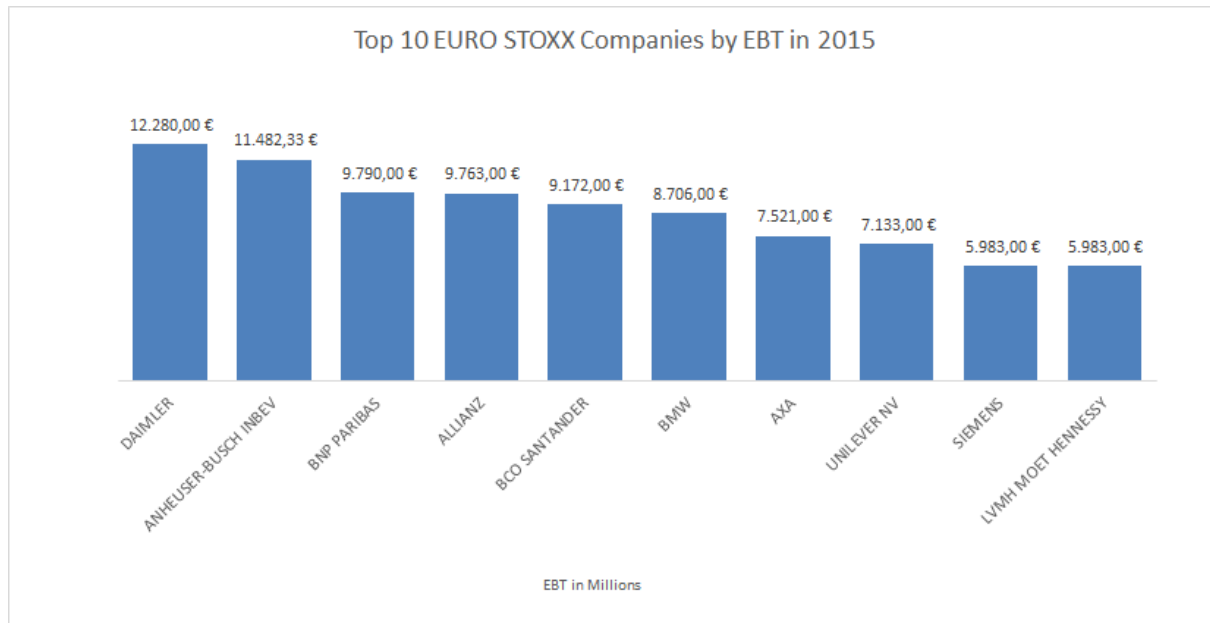


Figure 3: Top 10 EURO STOXX companies by EBT with figures of 2015 in million EUR (Source: own representation – the EBTs of all the 50 companies were taken from <http://www.finanzen.net/> - retrieval date: 03/03/2017)

On the first place in 2015 was Daimler (Germany) with an EBT of €12.3 million, also the highest value of all companies analysed in this study. Daimler has overtaken Volkswagen (Germany), which was on the first place in 2014 with €10.8 million, but it suffered a serious draw back in 2015 due to the emissions scandal. Daimler is followed in the 2015 EBT-ranking by Anheuser-Busch InBev (Belgium) with €11.5 million and BNP Paribas (France) with € 9.8 million.

While in the 2014 EBT-ranking one could find Deutsche Bank (Germany), E-On (Germany), Enel (Italy) or Eni (Italy), in 2015 these four companies are no longer among the biggest companies by EBT. Deutsche Bank e.g. suffered in 2015 claims for compensation and the energy sector went through a critical situation which caused in all cases lower EBTs for these companies.

If by now the focus was on offering a broad insight on the EURO STOXX companies and the KPI EBT, in the following section the emphasis will be on completing this insight by introducing also the information on gender quotas in supervisory boards as found in the annual reports of the EURO

STOXX companies. In this respect, figure 4 shows the percentage of women in supervisory boards in each of the 7 countries.

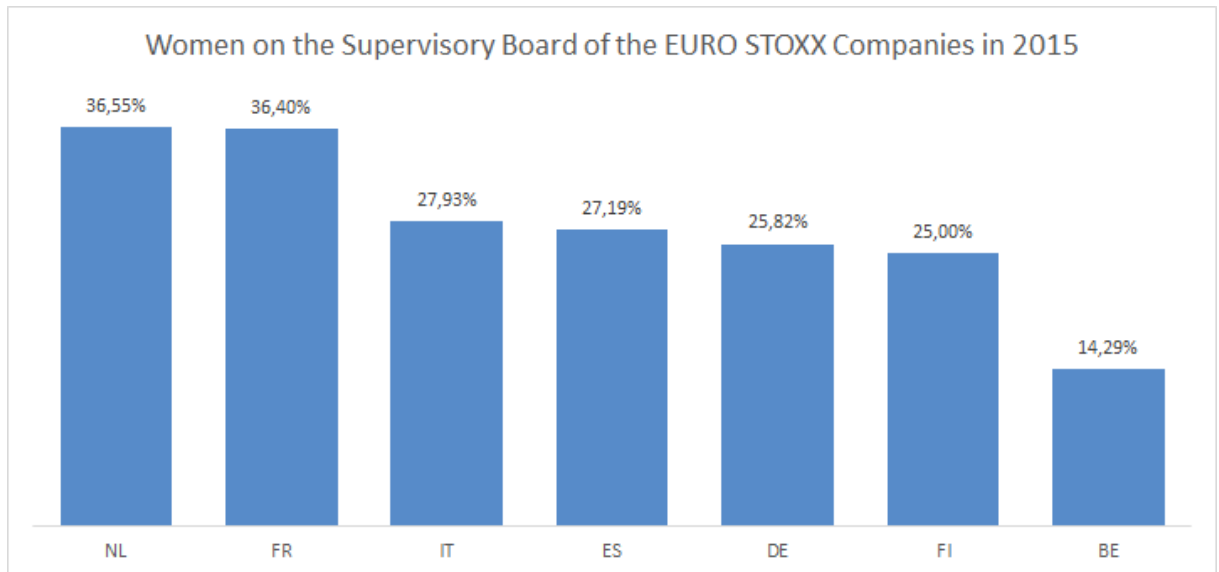


Figure 4: Number of women on the supervisory board of EURO STOXX companies in 2015 in different countries

(Source: own representation – the information with regard to the number of women on the supervisory board was extracted from the 2015 annual reports of the respective companies)

In six out of the seven countries the women quota in supervisory boards in 2015 is higher than 25% in average. In contrast only in two countries the women quota in management boards in the year 2014 was higher than 25%: This shows that there are more women in supervisory boards than in management boards. The highest women quota in supervisory boards has Netherland with 36.6% followed by France with 36.4%. Additionally, it can be seen that the expected women quota of 30 – 40% is not yet achieved by EURO STOXX companies.

Due to the fact that the countries Germany and France have the highest number of companies in EURO STOXX 50 index and the highest EBT per company and per employee these two countries are examined more closely.

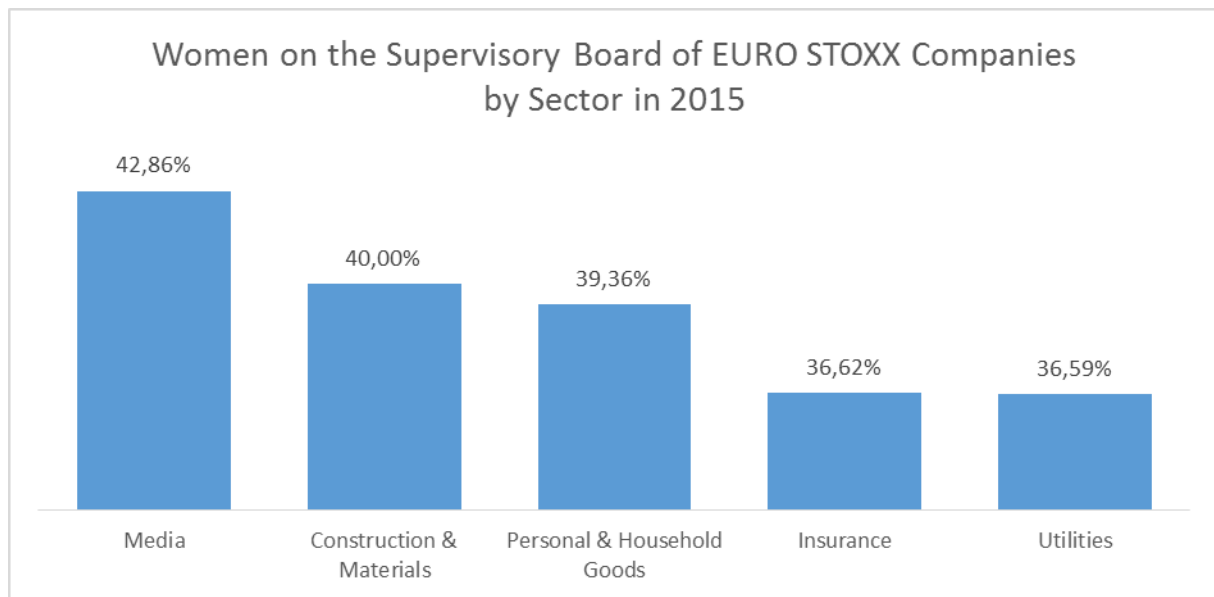


Figure 5: Womens' quota on the supervisory board of EURO STOXX companies in 2015 by sectors – a top five (Source: The information with regard to the number of women on the supervisory board was extracted from the annual reports of the respective companies end of 2015)

The analysis can be deepened by looking at the women quota in different sectors. Figure 5 displays a top 5 ranking of the sectors according to women' presence in supervisory board. The highest women quota in supervisory boards can be seen in the media sector (42.9%). However, this can be misleading as there is only one company – Vivendi (France) – active in this sector. Vinci (France) and Saint Gobain (France) follows with a women quota in supervisory boards of 40.0%, but again these are the only two companies active in the sector 'Construction & Materials'. The sectors 'Personal & Household Goods', 'Insurance', and 'Utilities' follow with more companies that are located in these sectors to strengthen the results. In all of these sectors the women quota in supervisory boards is therefore over 35%. If this value is considered, then this answers the expectations which are entrenched in the law of several countries or in the corporate codes of different companies as recommendation.

Finally, the next figure presents the first three sectors which have the highest women quota in supervisory boards per country.

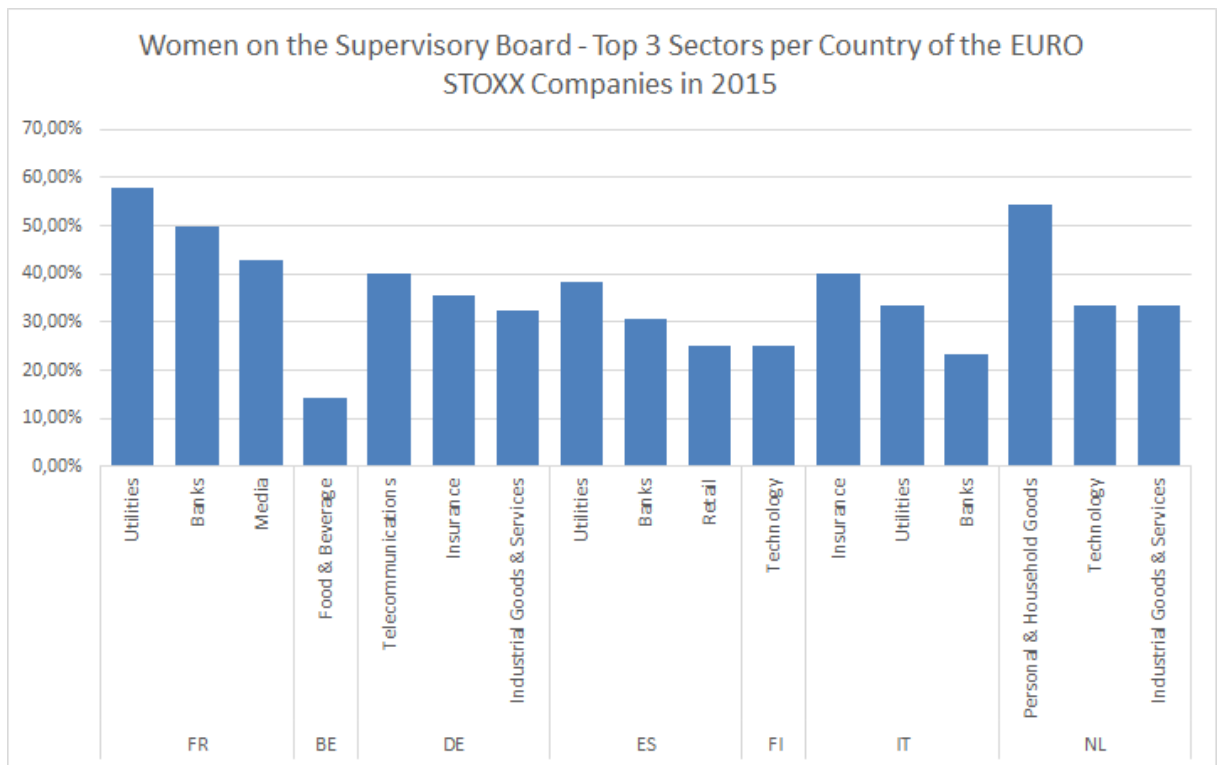


Figure 6: Number of women in the supervisory board in STOXX companies in 2015 in the Top three sectors of each country (Source: own representation – the information with regard to the number of women on the supervisory board was extracted from the 2015 annual reports of the respective companies)

It can be shown that the women quota is high especially in traditional branches such as 'Personal and Household Goods' e.g. in the Netherlands. A relative high women quota can be seen e.g. in France in the branches 'Utilities', 'Banks', and 'Media'. Lower women quota in supervisory boards can be found in new technology branches such as 'Telecommunication' or 'Industrial Goods and Services' e.g. in Germany. This result is significant over all countries.

If France and Germany, the countries with the highest number of companies in the EURO STOXX index are compared, further differences can be identified. In France, the sectors with the highest women representation in the supervisory boards are 'Utilities', 'Banks' and 'Media' with a women quota in supervisory boards of 58%, 50% and 43% respectively.

When these sectors with a high women quota in supervisory boards are compared to the companies with the highest EBT per employee, hypothesis 1 can be verified: in the top 10 companies by EBT per employee all enterprises of the 3 sectors with the highest women quota are present (see figure 7).

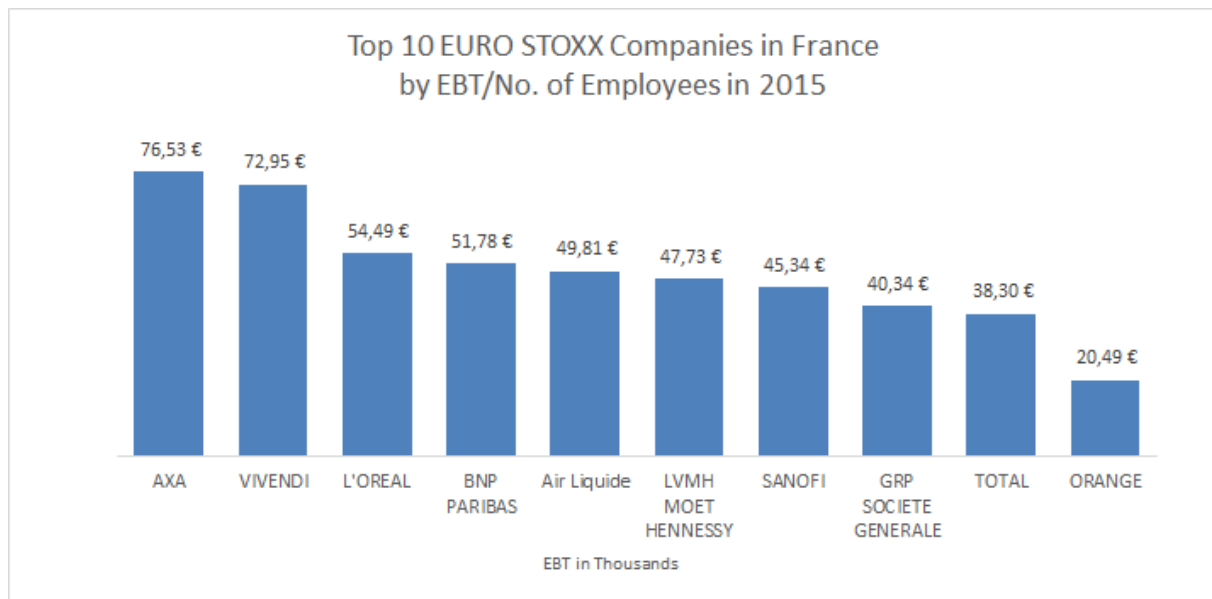


Figure 7: Top 10 EURO STOXX companies in France by EBT / number of employees x 1.000 in 2015 (Source: own representation – the information with regard to the number of women on the supervisory board was extracted from the 2015 annual reports of the respective companies)

If one looks e.g. at the sector 'Banks' enterprises such as BNP Paribas and GRP Société Générale are included in top 10, and in the 'Media' sector the company Vivendi is enclosed in the top 10 best enterprises by EBT per employee. The sector 'Utilities' shows a special situation as the enterprise Engie had a negative EBT in 2015 due to high depreciations and cost saving projects. For this reason Engie was not included in the hypothesis' verification.

In Germany, the highest women quota in supervisory boards is reached in companies from different sectors compared to France: 'Telecommunications' (40%), 'Insurance' (35%) and 'Industrial Goods and Services' (33%). The women quota in Germany is in general much lower. Germany has the most successful companies in terms of EBT and EBT per employee but it has a women quota of only 26%.

The sector 'Automobiles and Parts' in which Germany makes high profits is not even mentioned under the three most important sectors when the women quota in supervisory boards of the EURO STOXX companies is measured. In spite of this, hypothesis 1 (H1: Enterprises which have a higher gender quota in supervisory teams are more successful and achieve a higher EBT.) can be verified.

In the top 10 best companies by EBT per employee in Germany, one can find e.g. in the sector 'Telecommunications' the company Deutsche Telekom. In the 'Insurance' sector Münchener Rück, and Allianz are included as best companies by EBT per employee. Siemens can be seen in the sector 'Industrial Goods and Services' as the best company by EBT per employee. Moreover, in top 10 companies by EBT per employee all enterprises of the 3 sectors with the highest women quota are included (see figure 8).

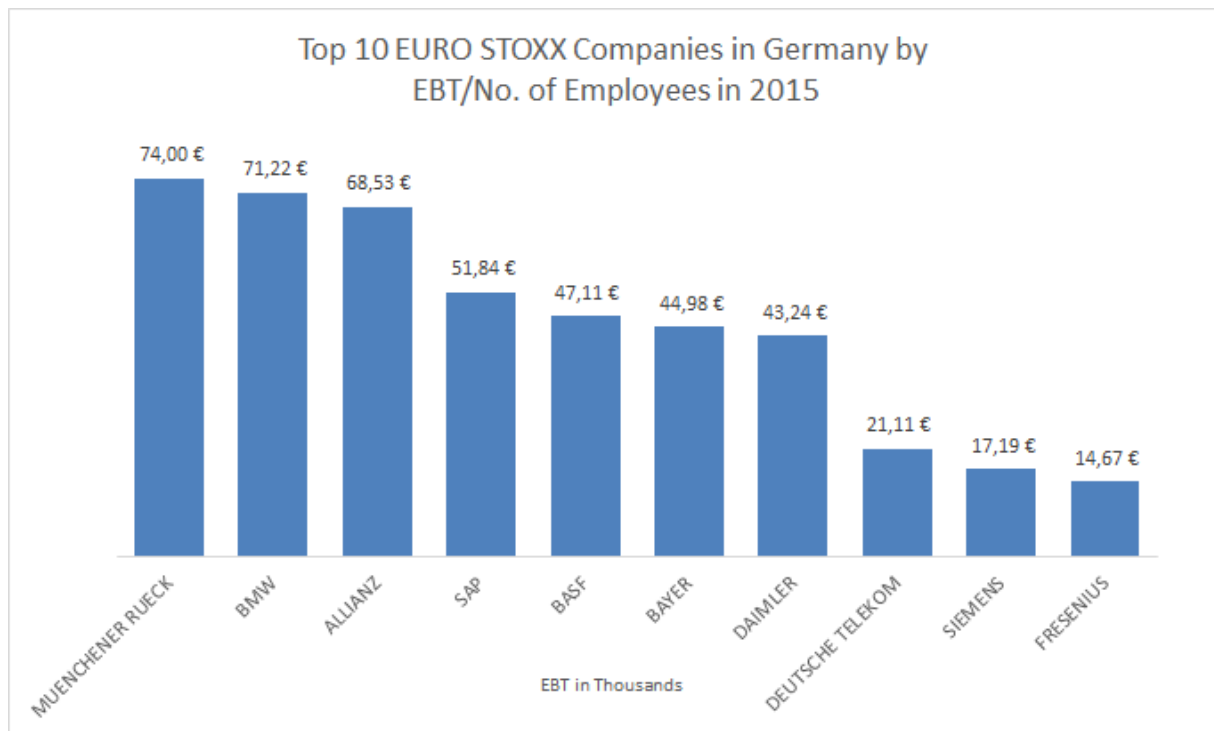


Figure 8: Top 10 EURO STOXX companies in Germany by EBT / number of employees x 1.000 in 2015 (Source: own representation – the information with regard to the number of women on the supervisory board was extracted from the 2015 annual reports of the respective companies)

To conclude, France has a higher concentration of women in supervisory positions (36%) as well as a higher number of companies in the EURO STOXX index. However, these companies are less successful than the German companies in terms of EBT per employee. The German companies have a better EBT per employee although the women quota is lower when compared with that of French companies (26%). However, the 26 % women quota seems to lead to better results by EBT per employee in the top 10 companies compared to other German enterprises.

When the correlation between the EBT and the percentage of women on supervisory board is shown in the case of the French companies, all enterprises except of Engie (which registered a negative EBT) show a positive correlation. A similar result can be seen also in the case of German companies after running a correlation for the EBT and the percentage of women on the supervisory board, all companies show a positive correlation. Finally an increasing women quota in the German companies seems to cause an increasing EBT.

DISCUSSION OF RESULTS AND CONCLUSION

As the statistical analysis of the previous section has shown, hypothesis 1 (H1: Enterprises which have a higher gender quota in supervisory teams are more successful and achieve a higher EBT) can be

supported. Nevertheless, these findings should be treated cautiously. They do not imply that women in supervisory positions are more effective than men. With the exception of three companies, the supervisory boards of the other EURO STOXX 50 companies contain mainly male persons. The success of a company is also a result of the entire supervisory board, male and female alike.

Moreover, a successful result in the form of EBT or EBT per employee for an enterprise is generated mainly by the management board and not by the supervisory board only.

Furthermore, another type of information should be included in future research, such as women qualification, experience, educational background, etc. All these aspects could provide a more realistic image regarding the role of women in supervisory boards and company performance. Moreover, as presented in the literature review, female participation in supervisory boards shows mixed results with regard to company performance. Therefore, a more holistic approach is needed, researching not only the number of women on board but also considering women participation in total workforce, industry' sectors, management, subsidiaries, etc.

In the same time EBT as a performance indicator provides only a rough approximation of company success, a combination of indicators could provide better results. Even the consequent measurement of the KPI EBT per employee in all cases as relative figure brings additional insights. A long term research could bring more results and appropriate solutions to improve the situation of women the boards of companies.

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THE POWER OF NARRATION (STORY) FOR LEARNING AND FOR LIFE: BRIDGING PAST AND FUTURE

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ABSTRACT

The conference session is centered on diverse uses of narration (story) for insight and understanding. Each panelist (see short biographical information) recognizes the research-based power of narration for attention to complexities O'Toole and Bennis identified in their *Harvard Business Review* article "reflecting the complex challenges business leaders face."

The proposal anticipates short (9-12 minutes) well-focused presentations from each of five panelists, with professional visual enrichment. Previous contributions by these panelists for the EMAB conferences in Verona (2015) and in Warsaw (2016) have been highly successful and engaging opportunities. Those presentations, and this one, model an integrated collaborative multi-voice approach that includes hands-on audience participation. Take-away value for participants is enhanced by the interactive design.

For the 2017 conference, the presenters have added to their preparation and the session another voice and yet another perspective, that of a current university student who has experienced a story-based approach in her studies. Narration has strengthened both her present learning and awareness of her own preferred ways of learning to carry forward into career and life. All presenters will link their sharing to the conference theme of bridging past and future.

The goal of the session being prepared for Rome, like the earlier contributions in Verona (curated examples of excellence in teaching and learning) and in Warsaw (cross-cultural skill development) is to provide a platform for thoughtful conversation during the session time as well as throughout the days of the conference. Ongoing networking post-conference is an expectation the presentations will enable.

Keywords: teaching, consulting, learning, learning theory, narration, story, management education

THE POWER OF NARRATION (STORY) FOR LEARNING AND FOR LIFE: BRIDGING PAST AND FUTURE

“Narrative imagining—story—is the fundamental instrument of thought. Rational capacities depend on it. It is our chief means of looking into the future, of predicting, of planning, and of explaining . . . Most of our experience, our knowledge and our thinking, is organized as stories” (Turner in Pink, 2006, p. 101)

“The human brain has always been highly tuned towards narratives, whether factual or not, to justify ongoing actions Stories motivate and connect activities to deeply felt values and needs” (Schiller, 2017, p. 2).

This proposal requests a 90-minute session for the 10th Annual EuroMed Academy of Business Conference.

The five individuals who will bring this session to the conference are actively pursuing both consulting and academic careers in three nations. Their professional work is grounded in awareness of the essential nature of *learning about learning*. They are aware of the critique of both managerial practice (Hamel and others) and management development and education (Mintzberg; O’Toole and Bennis, and others). Individually and at times collectively, they have sought out ideas from a range of disciplines to enrich engagement and interaction as they coach, teach, develop and inspire a variety of others, including mid-career and senior managers and governing boards in public, private, and social organizations across economies.

The conference session will be centered on diverse uses of narration (story) for insight and understanding, drawn from research into learning and communication theory. Each panelist recognizes the power of narration to bring attention to the complexities O’Toole and Bennis identified in their *Harvard Business Review* article “reflecting the complex challenges business leaders face.” The conference presenters use narration-based approaches to help ensure “learning approaches infused with multidisciplinary, practical, and ethical questions and analyses” (2005, p. 104). Imagination (a term O’Toole and Bennis highlight) and right brain-centered designs are foundational to the ideas these presenters will bring to the conference. Bridging theory and practice, bridge-building through connecting past, present and future, acknowledging the human need for meaning conveyed through story---all these are central to the ways of working that will be shared and discussed in this session. “Stories are the easiest forms to help others understand complexity” (Crossland, 2008, p. 83).

The presenters have a richness of background and experience. They **live and work** in three different countries (Czech Republic, Italy, United States); together they have **taught** at six different universities;

studied in multiple disciplines; **consulted** in organizations diverse in focus, sector and size; **researched** in the fields of organizational development, leadership, management, education, public services, gender issues, sociology, health care, human resources, cross-cultural competence . . .

They themselves are of **four different generations**. Together they have more than 126 years of professional experiences.

For this conference, individually and collaboratively, **they have identified and will each share one example of best-practice use of narrative to address an individual or organizational goal.**

“The story—from Rumpelstiltskin to *War and Peace*—is one of the basic tools invented by the human mind for the purpose of understanding. There have been great societies that did not use the wheel, but there have been no societies that did not tell stories”

(Le Guin in Pink, 2006, p. 105).

This proposal anticipates short (9-12 minutes) well-focused presentations from each of these individuals, with professional visual enrichment. **Previous contributions by these panelists for the EMAB conferences in Verona (2015) and in Warsaw (2016) have been highly successful and engaging opportunities.** Those presentations modeled an integrated and collaborative multi-voice approach that expands a conference panel session to include **engaged hands-on audience participation**. Take-away value for participants is enhanced by this interactive session design.

For the 2017 conference, the presenters have added to their preparation and the session another voice and yet another perspective, that of a current university student who has experienced a story-based approach to her studies. That approach has strengthened both her present learning and her awareness of her own preferred ways of learning which she will carry forward into career and life. All five presenters will link their session sharing to the conference theme of bridging past and future.

The goal of the session being prepared for Rome, like the earlier contributions in Verona (curated examples of excellence in teaching and learning) and in Warsaw (cross-cultural skill development) is to **provide a platform for thoughtful conversation** during the session time as well as throughout the days of the conference. Ongoing networking post-conference is an expectation, an expectation the presentations will enable.

Each presenter will provide one consulting or teaching approach--a focused story-based presentation on the use of narrative. Why use narration? Why use story?

The session will share and illustrate these diverse responses to the questions:

Story connects and makes communication possible.

Story can be a vehicle for empowering women.

Story is an appropriate foundation for scholarly research through sociological narration.

Story is an effective learning entry point.

Story is a skillful means to structure curriculum design and delivery.

INFORMATION ON PRESENTERS

Presenter #1– An executive coach with almost thirty years' experience in university teaching in management and human resources. She has researched and published in the field of management, including attention to generational differences, cross-cultural approaches, and gender studies. A somatic coach, she has created a diversity-focused consulting and training firm.

Presenter #2 – A sociologist now teaching and researching, her approach lies in linking academic knowledge with research and consulting activities in organizations. Particular interests include the ageing of population and its consequences, sociology of organizations, organizational development, working conditions and quality of life of employees, and psychosocial determinants of health.

Presenter #3 – Her twenty years' management experience in business, government and nonprofit organizations was followed by an award-winning teaching career characterized by attention to design thinking for strengthening graduate management education. She is passionate about the application of the arts, including literature, drama and poetry, and of learning theory in both managerial and educational settings. Her career has been characterized by frequent international work in leadership, organizational change and organizational development.

Presenter #4 – At the age of twenty-one, she is in her third year of university studies for a degree in nursing. She is passionate about international relief and hopes to continue to lead medical service projects around the world after graduation. An American, she lived in Europe for five years. She has traveled extensively in fourteen European nations and also in Latin America, where she contributed to a health care service project. Travel feeds her with many stories as does her love of theatre as both a performer and a director.

Presenter #5 – She is active in both consulting and teaching to develop individual and organization-based innovative thinking through experiential activities. She has twenty-five years' career expertise in marketing, business development and strategic planning, principally in health care and community-based organizations.

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REDUCING COSTS OR INCREASING MARKETING: STRATEGIC SUGGESTIONS FOR TOURISM FIRMS IN CRISIS SITUATIONS

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ABSTRACT

This research tests if the application of proactive measurements during crisis times is best mediated by cost reductions or increased marketing efforts. The research was conducted in 2013 (the fifth consecutive year of falling GDP after the 2008 economic crisis) through a structured questionnaire addressed to owners / managers of Spanish hotels and restaurants in the city of Madrid. Whereas proactive measures undertaken by the hotels and restaurants had a direct and positive impact on income generated, increased marketing measures only partially mediated this result. Cost reductions on the other hand did not show a similar effect. The conclusion highlights that it is recommended for managers and operators for tourism companies to focus on proactive measurements instead of cost reductions in crisis times. Given that the research was undertaken in the capital city of Spain, results may not be applicable to touristic destinations in non-metropolitan areas.

Keywords: Spain, Crisis, Tourism, Hotel, Restaurant, Proactive Strategies, Crisis Management

INTRODUCTION

Recent economic data show that Spain finally has come out of an economic recession that lasted for five consecutive years, from 2009 – 2013 with falling GDP year after year (World Bank). For Spanish companies, 2013 presented the worst crisis year with the numbers of companies declaring bankruptcy reaching an all-time high of 8,724 failing companies, mainly from the construction and services sector (PWC, 2016). Tourism companies that were active in 2013 had until then gone through a series of severe adaptation processes in order to survive. Therefore, this research gives insights from these companies that can enable hotels and restaurants from other touristic destinations to improve their own crisis management and to benefit from the lessons learned. Several important touristic destinations are currently facing critical situations, either because of terrorist attacks (i.e. Turkey) or economic problems (i. e. Greece). Additionally, academia will benefit from this research. Previous research has shown that proactive strategies are more effective in crisis situations for the tourism industry than reactive

strategies (Alonso-Almeida and Bremser, 2013, Alonso-Almeida *et al.*, 2015). With this analysis, the authors analyze which actions can actually mediate the effect of proactive strategies.

LITERATURE REVIEW

Strategy development in crisis times

There is a large body of research elaborating about the success of different strategies in crisis times focusing on the tourism industry. A general understanding exists, that proactive strategies are more effective than reactive ones (Huhtala *et al.*, 2014, Okumus and Karamustafa, 2005, Okumus and Karamustafa, 2005 among others). Proactive strategies are defined as strategies centering on innovations capabilities, marketing, new product development as well as new product introduction (Brzozowski and Cucculelli, 2016, Alonso-Almeida *et al.*, 2015, Ewah, 2013). These strategies are important in order to stay at the forefront of the market and attract customers.

In crisis times, the relation between proactive strategy and performance is debatable. Whereas some research shows, that reactive (cost reduction) and proactive (marketing oriented) strategies show equal results (Köseoglu *et al.*, 2013), most researchers analyzing the period after 2008 point to the success of proactive strategies (Ngo and O'Cass, 2012, Hilmola *et al.*, 2015, Ramos Conti *et al.*, 2015, Simon-Elorz *et al.*, 2015 among others) for different industries and countries. Therefore, we postulate the following hypothesis:

H1: There is a direct and positive relationship between proactive activities and revenues

Performance in this case is measured as total revenues. Compared to other performance measurements commonly employed (EBIT, ROI, Net income, ...) it has the advantage that these numbers are well known by the interviewed persons and also available for small businesses that are below the thresholds for publishing detailed financial statements. Especially in the Spanish restaurant business, many smaller establishments prevail. Most Spanish businesses in the hotel and restaurant sector are either owner-managed with no employees or below a threshold of five employees (FEHR, 2013).

The question now remains, if cost cutting or increased marketing efforts can mediate the success of proactive strategies. In their cover story for Harvard Business Review Gulati *et al.* (2010) conclude that selective cost-cutting with a focus on operational efficiency instead of employee reduction increases the likelihood of post-crisis success. Severe cost cutting will destroy a firm's productive base and inhibit post-crisis recovery. Su and Tang (2016) point out in a recent article after the economic crisis that cost-cutting and product-innovation show similar results with respect to performance, however, fewer firms apply cost-cuttings. These are mostly younger and smaller ones. If cost-cutting is applied, those companies will later on switch to product innovation. Askenazy *et al.* (2013) add that salary reductions

flexibilise a firm's cost base and thus allow companies to come out stronger after a crisis. Cowling *et al.* (2014) suggests that cost-cutting is the most frequently used strategy in crisis times and allows firms to survive a crisis in order to switch to growth-related strategies afterwards. These articles point to a relation between cost-cutting and innovation or growth strategies. Therefore, the authors postulate:

H2: Cost-cutting (COST) positively mediates the relationship between proactive activities and revenues.

On the other hand, Gulati *et al.* (2010) also point to the evidence of many different crisis times where increased marketing efforts helped firms to come out of a crisis. A research undertaken by Rollins *et al.* (2014) shows for the US that during the economic crisis of 2008 most companies did cut their marketing spending. However, those companies that actually increased marketing activities in order to overcome the crisis ended up to be more successful. Here, a redirection of marketing spending is visible towards e-marketing in order to attract different customer segments. Earlier Srinivasan *et al.* (2005) as well as Pearce and Michael (2006) had already pointed out the importance of marketing in recession times. Especially Srinivasan *et al.* (2005) characterizes proactive strategies that enable firms with a strong marketing advantage before the crisis to build on it and increase their competitive advantage. Therefore, it is postulated:

H3: Marketing efforts (MARKETING) positively mediates the relationship between proactive activities and revenues.

The remainder of the paper is structured as followed. The next section presents the methodology employed; subsequently results are presented and discussed. The last section concludes the research, pointing out some limitations as well as recommendations for research and practice.

DATA AND MEASUREMENTS

Sample and method

Data was collected through face to face interviews with working at restaurants or hotels in the city of Madrid. Table 1 presents the descriptive analysis of the sample (n=339). Mainly, it is composed by hotels (n=178) and restaurants (n=155). Only six responses come from other typology of establishments, which are hostels or bars.

The hospitality industry was selected because of its importance in terms of national GDP. Among the Spanish regions, the capital of Madrid has the highest GDP per capita, and tourism comprises a significant portion of the local labour market (Alonso-Almeida and Bremser, 2013). According to the national federation of the hospitality industry in Spain (FEHR), in 2011 the hospitality sector represented more than 7.2% of the national GDP (FEHR, 2011).

As can be seen in Table 1, more than 85% of the hotels are over 5 years old. On the other hand, the restaurants are equally balanced among different range of ages. However, similar to the hotels, they are mainly over five years old.

	N	%	Hotel	%	Restaurant	%	Others	%
0-2 years	26	7.65	5	2.81	21	13.55	0	0
>2-5 years	57	16.76	21	11.80	36	23.23	0	0
>5-10 years	79	23.24	53	29.78	25	16.13	1	16.67
>10-20 years	75	22.06	43	24.16	31	20.00	1	16.67
>20 years	102	30.29	56	31.46	42	27.10	4	66.66
Total	339	100%	178	100%	155	100%	6	100%

Table 1. Descriptive analysis of the sample by age and typology

The questionnaire was structured in three parts and focused on the period of 2011 – 2012. The first part of the questionnaire included two questions about how the establishment had been affected by a set of impacts and how these impacts have modified the expenditure per client, the price and cost per employee. The second part of the questionnaire included one extensive question about the measure deployed by the establishment to counter the financial crisis. Finally, the last section of the questionnaire collected financial data about the evolution of the establishment during the analysed period.

Precisely, Table 2 presents this data by typology of establishment. We can observe that in both cases the main option selected was a decrease between 1-25 %. Only 47 establishments (13.91%) of the sample declared having an increase of income during the analysed period. According to FEHR (2013), in the last years every year more establishments have stopped their activity within the hospitality industry, reaching the peak of closures in 2013 with more than 45.000.

	N	%	Hotel	%	Restaurant	%	Others	%
decreased >50%	22	6.51	12	6.86	10	6.37	0	0
decreased 26-50%	51	15.09	23	13.14	28	17.83	0	0
decreased 1-25%	138	40.83	73	41.71	60	38.22	5	83.33
Maintained	80	23.67	36	20.57	43	27.39	1	16.66
Increased	47	13.91	31	17.71	16	10.19	0	0
Total	338	100%	175	100%	157	100%	6	100%

Table 2. Descriptive analysis of the sample by income and establishment type

Measures and Analysis

Based on the above review of the literature several factors were explored in light of testing the stated hypotheses. The respondents were asked to indicate, based on a 5-point Likert scale, their opinions about the different statements. For measuring the earning dimension the ordinal measure, based also on a 5-point Likert scale, presented in Table 2 was used.

The hypotheses were tested using a Partial Least Squares (PLS) approach to SEM (Chin, 1998), using the SmartPLS 2.0 software (Ringle et al., 2005).

The PLS approach's underlying mathematical algorithm makes it suitable for this research, which is characterised by a non-normal distribution. This suitability is attributed to the iterative PLS algorithm (Henseler et al., 2009), which transforms non-normal data in accord with the central limit theorem (Hair et al., 2012). The PLS results are thus robust when using skewed data (Wilden et al., 2013). PLS is referred to as a 'soft modelling' technique because it does not require that restrictive assumptions be made regarding measurement (Sosik et al., 2009); data normality (Fornell & Larcker, 1981) or known distribution (Falk & Miller, 1992); or sample size (Reinartz et al., 2009), unlike other methods. Consequently, we employed PLS because of its overall suitability to our modelling requirements.

CONSTRUCT/indicator	N	Mean	SD
MEASURES1			
Proactive (PRO)			
Employee ideas leading to cost reduction or sales increases receive a prize	337	2.706	1.605
Employee empowerment – Employees are encouraged to solve client demands without contacting their supervisors	335	2.979	1.548
Specific anticrisis methods have been introduced	343	3.282	1.476
An anticrisis plan has been developed	329	2.993	1.473
IMPACTS2			
Cost (COS)			
Employee dismissals/layoffs	343	2.291	1.435
Reduction of direct client services	348	2.146	1.307
Elimination of back-office services	288	2.003	1.305
Incremento de la subcontratación	314	2.321	1.489
Marketing(MKT)			
Company is opening in new international markets	336	2.369	1.545
Company is opening in new market segments	335	2.871	1.558
INCOME3			
Development of income during the last years (2011)?	340	3.229	1.072

¹ In a 5-point Likert scale (1: no use of; 5: totally use)

² In a 5-point Likert scale (1: no impact; 5: high impact)

³ In a 5-point Likert scale (1: decrease more 50%; 2: decrease between 26%-50%; 3: decrease 1%-25%; 4: remain stable; 5: increase over 2010)

Table 3. Operationalization of the items

RESULTS

The results section is structured into two parts that follow the analysis process. First, the measurements and the structural model were assessed. Second, an analytical approach was applied to test the mediation hypotheses. In addition, we assessed the variance accounted for (VAF) to ascertain whether the mediating effect, in each case, is either full or partial. The operationalisation of the items is presented in Table 3 (sample size, mean and standard deviation).

CONSTRUCT / INDICATOR	ITEM RELIABILITY	SIGNIFICANCE (bootstrapping)	CONVERGENT VALIDITY	CONSTRUCT RELIABILITY	
	Loading	t-value	AVE	Composite reliability	Alpha Cronbach
Proactive			0.540	0.819	0.720
Employee ideas leading to cost reduction or sales increases receive a prize	0.584	5.286			
Employee empowerment – Employees are encouraged to solve client demands without contacting their supervisors	0.594	5.575			
Specific anticrisis methods have been introduced	0.862	16.597			
An anticrisis plan has been developed	0.850	17.922			
Cost			0.510	0.805	0.678
Employee dismissals/layoffs	0.734	16.225			
Reduction of direct client services	0.709	16.046			
Elimination of back-office services	0.777	25.851			
Increased outsourcing	0.627	11.817			
Marketing			0.780	0.876	0.718
Company is opening in new international markets	0.876	24.908			
Company is opening in new market segments	0.890	26.423			

Note: AVE=Average Variance Extracted

Table 4. Validation of the measurement model: convergent validity and reliability

Research model assessment

Assessment of the measurement model

Because all first-order latent variables are reflective, they were assessed with reference to the reliability and validity attributes of the item scales used. First, individual item reliability was proven to be optimal for most of the measurements because the item standardised loadings were equal to at least 0.707 (Carmines & Zeller, 1979). The items under the suggested optimal threshold were extracted to optimise the model; nine items were dropped. Table 4 shows only those items that passed.

Second, internal consistency reliability was examined through composite reliability (Werts et al., 1974), which fulfils the same task as Cronbach's alpha (Furrer et al., 2012). However, composite reliability is more suitable for PLS because it does not assume that each indicator makes an equal contribution to the

construct (Chin, 1998). All of the latent constructs exceeded the benchmark of 0.7, as suggested by Nunnally (1978) for exploratory research, which confers reliability to the measures (Table 4).

Third, convergent validity demonstrates the unidimensionality of our constructs. The variance in the indicators accounted for this unidimensionality in terms of variance extracted (AVE) and exceeded the 0.5 threshold (Fornell & Larcker, 1981), ensuring that each set of indicators represents the same underlying construct (Henseler et al., 2009) (Table 4).

Finally, discriminant validity, which verifies that each factor represents a separate dimension, was analysed using linear correlations or standardised covariances between first-order factors that examined whether the inter-factor correlations were less than the square root of the average variance extracted (AVE) (Fornell & Larcker, 1981) (Table 5).

PRO	0.734		
COS	0.152	0.714	
MKT	0.218	0.179	0.883

Note: Diagonal represents the square root of average variance extracted. The correlations are represented below the diagonal.

Table 5. Validation of the measurement model: discriminant validity

Assessment of the structural model

Structural model evaluation in PLS relies on the measures that indicate the model's predictive power (Tenenhaus et al., 2005). The central criterion in this respect is the coefficient of determination (R^2). Table 6 shows that the R^2 values for the three endogenous variables in the model well exceeded the minimum value of 0.1 recommended by Falk & Miller (1992).

Additionally, the Stone-Geisser Q^2 statistic (Geisser, 1974) was greater than zero for the four constructs, suggesting that the model has predictive relevance.

Dimensions/ Hypotheses	Path coefficient	Bootstrapping	
		Standard error	t-value
Cost ($Q^2= 0.012$)			
Proactive (H2a)	0.180	0.112	1.606
Marketing ($Q^2= 0.037$)			
Proactive (H3a)	0.226	0.056	4.027***
Income ($Q^2= 0.037$)			
Proactive (H1)	0.087	0.070	1.228
Cost (H2b)	-0.180	0.079	2.275**
Marketing (H3b)	0.175	0.056	3.122**

Note: *** p -value < 0.01 (2.58); ** p -value < 0.05 (1.96); * p -value < 0.1

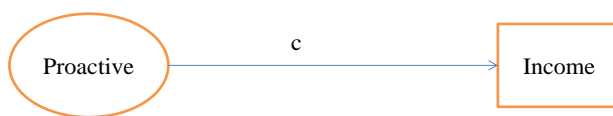
Table 6. Structural model assessment

Once the model has been assessed and validated, the analysis is extended to examine the mediating effect of both internal processes along the customer perspective in the model.

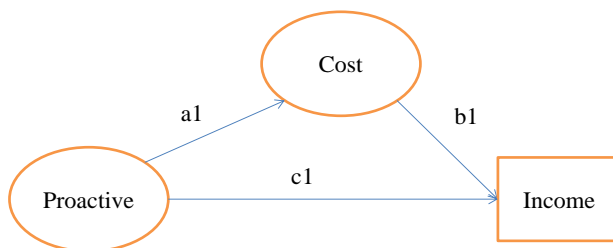
Mediating effects

The mediation hypotheses (H2 and H3) were tested based on the analytical approach described by Castro and Roldán, 2013 and Picón *et al.*, 2014. Figure 1A shows the total effect (c) of proactive activities on income. Fig. 1B.1 expresses the total effect of proactive activities on income as the sum of the direct (c1) and indirect effect ($a1*b1$) due to the mediation effect of cost. Finally, Fig. 1B.2 shows the total effect as the sum of the direct effect (c2) and the indirect effect caused through marketing ($d2*e2$).

A. Model with total effect



B.1. Model with a COST mediated effect



B.2. Model with a MKT mediated effect

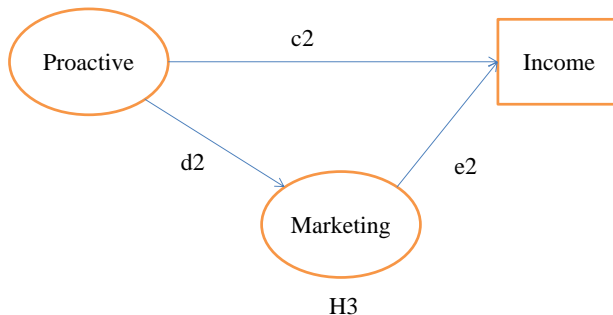
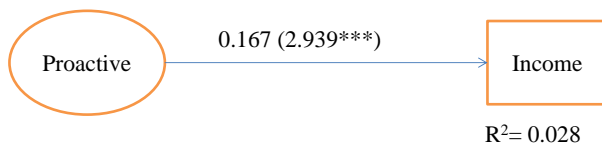


Figure 1. Mediation model

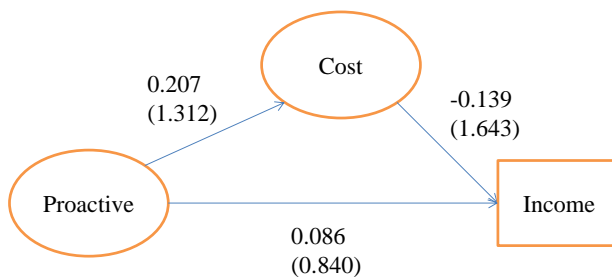
The application of bootstrapping allows for the testing of the mediation hypotheses (Preacher and Hayes, 2008). In the analysis, 5,000 resamples were generated to provide 95% confidence intervals (percentile) for the mediators. As shown in Figure 2A and Table 7, proactive activities has a significant total effect on income ($c = 0.167$; t -value = 2.939). When adding the mediator effect of costs (Fig. 2B), proactive activities decreases its influence and maintains no significant direct effect on income (H1: $c1 = 0.086$; $t = 0.840$) and there is significance relevance in the chain proactive – costs – income. On the other hand, when the mediation effect is produced by marketing, the influence of proactive activities on

income also decreases ($c_2=0.097$; $t\text{-value}= 1.400$) but there is significance relevance in the chain proactive activities – marketing – income. Therefore, these results reject H2 but supports H3.

A. Model with total effect



B.1. Model with a COST mediated effect



B.2. Model with a MKT mediated effect

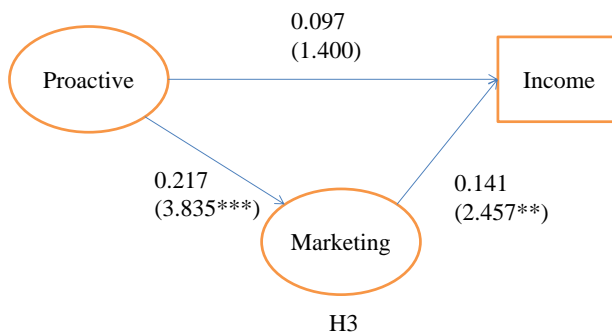


Figure 2. Structural model: Mediation

In addition, in Table 7, the value of variance accounted for (VAF) indicates the relative size of the mediating effect when it is significant (H3). Different authors (among others Shrout and Bolger, 2002; Hair et al., 2014) pointed out that VAF is a good criteria: no mediation (< 20%), the partial mediation (from 20% to 80%) and full mediation (>80%). Hair et al. (2013) showed that the VAF determined the size of the indirect effect in relation to the total effect, and was explained how much of the target construct's variance was explained by the indirect relationship via the mediator variable. According with VAF value of H3 (VAF=23%) marketing partially mediates the effect of proactive activities on income.

Mediator	Total effect Proactive → Income		Direct effect Proactive → Income		Indirect effect Proactive → Income			Mediated VAF effect			
	Coefficient	t-value	Coeff.	t-value	Point estimate	Percentile bootstrap 95% confid. interval		Lower	Upper		
COST	0.167***	2.939	c1	0.086	0.840	a1*b1	-0.028	-0.068	0.034	NO	-
MKT	0.167***	2.939	c2	0.097	1.400	d2*e2	0.030	0.004	0.063	Partial	23%

Note: significant at *** p -value < 0.01 (2.58); ** p -value < 0.05 (1.96); * p -value < 0.1 (1.69)

VAF > 0.80 full mediation, $0.20 \leq$ VAF \leq 0.80 partial mediation, VAF < 0.20 no mediation

Table 7. Mediating effect of COST and MKT between Proactive and Income

CONCLUSION

The results found are in line with existing research. It has been shown, that proactive strategies have a direct impact upon performance, measured in this case as income. Interesting to look at, are the mediating effect. Marketing activities partially mediate the effect on income whereas costs do not. That marketing activities show a partial mediation is not surprising since they draw on the newly empowered employees and benefit from anti-crisis plans and measures that streamline marketing efforts into promising market segments or international markets. For practitioners this implies that measures strengthening employee empowerment should go hand in hand with other activities that rely on empowered employees. Thus, the newly empowered will be motivated to pursue the firm's strategy.

Cost-cutting effects show no mediation on income. This could also be expected. Cost-Cutting focusing on outsourcing and dismissals or layoffs have a negative influence on employee motivation and therefore are therefore contrary and difficult to communicate measurements if the company on the other hand also wants to increase employee empowerment. Care should be taken from the part of practitioners not to decide for the easiest measures in times of crisis (cost savings are often considered to be easy and ready at hand) but instead to carefully find a balance between the different necessary actions undertaken.

Researchers can base future research on these findings. It would be interesting also to see moderator effects of cost or marketing activities. Caution has to be taken when applying the research to other industries or destinations. Since the sample was small and covered only one region, results are not easily transferable to other cities, countries or regions.

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FEATURES AND BUSINESS OPPORTUNITIES OF PIEDMONT AGRITOURISMS

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ABSTRACT

Agritourism has considerably achieved a greater importance in the last decade, underling a continuous growing, also for the Italian economy, with an annual rate greater than 4%.

Despite this relevance, the definition is not everywhere aligned, depending on the geographic areas in which agritourisms are located. The research focuses on agritourisms of Piedmont region, one of the North Italian regions characterized by a significant concentration of agritourism farms, providing accommodation, food and agricultural experiences.

The research, conducted by an empirical analysis, aims to analyze the state of the art of agritourism management depicting the main features of agritourims, with a particular emphasis on type of services offered, dimensional features, type of customers, type of manages that run such business, key financial data.

Final results show that the agritourism analyzed can be classified within the Phillip et al. (2010) framework as Working Farm, Indirect Contact (WFIC). The work shares understanding of agritourism key features as a starting point to continue the scientific and educational development of this business.

Keywords: Italian agritourism, hospitality model, management features, new opportunities.

INTRODUCTION

In Italy, the phenomenon of agritourism began to spread in the mid-60s and there were first attempts to regulate the sector in the '80s with the Law 730/1985, later repealed by Law 96/2006. The Law 96/2006 specifies the definition and establishes characteristics of agritourisms. In particular, an agritourism is the activity done by a farmer when offers tourists, in the own funds, food and accommodation, using their products and sometimes organizing recreational and cultural activities. This definition explicitly requires that farmers cultivate lands, make forestry or farm animals, since agritourisms are ancillary to agriculture and complementary to traditional production. Indeed, the Law 96/2006 aims to support agriculture through the promotion of appropriate forms of tourism in the countryside, through which protecting, qualifying and enhancing the specific resources of each territory and promoting the

maintenance of human activities in rural areas, with a differentiation of farm incomes and the promotion of rural culture and food education.

Each Italian Region also approves specific regulations with the aim of governing the creation and the management of these structures. For example, the Piedmont Regional Law 2/2015 regulates the agritourism activities in this local territory.

Italian and Regional Laws then assign an important task to farms, since they should be able to convey to the tourists everything that characterizes a territory: culture, history, traditions, landscape, environment, food and wine, cuisine. However, they should also transmit the rural values such as the respect for nature, the hospitality, the love of the countryside, the pleasure of consuming healthy and genuine products of the territory, the cycle of time and the seasonality.

Basing on this evidence the main purpose of this research is to investigate the features of agritourism in Piedmont, a relevant region in Italy for agritourism business.

An overview of the main literature on agritourism is presented in the next section, and then the methodology design including the research questions is described, followed by findings, discussion and conclusion of the work.

LITERATURE REVIEW

The agribusiness sector is one of the most representative economic activity in terms of employment and companies revenues in Italy. For instance, in Piedmont area on 2010 (Istat - VI agricultural Census data) there were 67.148 agribusiness firms (4,1% of the Italian firms in the sector) with 1.010.780 ha of UAA (Utilised Agricultural Area). This extension - near to 8% of Italian agricultural surface – is also due to an increasing number of fusions producing a larger average size of the firms (15,14 ha per firm in Piedmont against 7,96 ha per firm in Italy).

The agribusiness context is composed by several segments such as food and wine, which are the most representative economic activities in many countries in terms of employment and companies revenues (Bigliardi and Galati, 2013; Giacosa et al., 2014a; Menrad, 2004; Vrontis et al., 2016).

Agribusiness is mainly characterized by micro, small and medium enterprises, which are frequently rooted in the territory in which they are located. In this context, the agribusiness represents a set of values, symbols, and traditions (Giacosa et al., 2014b). In addition, family firms are common in this context, due to both the tradition of some long-standing family companies across generations and the entrepreneurship of producers (Contò and Lopez, 2008). However, due to limited financial resources and a consolidated mind of set, these enterprises tend to be closed to the internationalization process (e.g. they do not sell their products abroad), thus reducing their business opportunities.

In agribusiness sector, agritourism represents a significant subset.

Agritourism definition and typologies are not everywhere valid and universal, since they usually depend on the geographic areas in which they are located (Gil Arroyo et al., 2013), considering both the natural, economic and socio-demographic characteristics of a Country, but also the different influence that is associated with the presence or the lack of legal framework and policies correlated with the business model of agritourism. In U.S., for example, there is a lack of laws through which regulate the development and the marketing of these kinds of business activities (Carpio et al., 2008; McGehee, 2007), while in Europe agritourism definitions are legally formulated and correlated to particular incentives and/or subsidies (Hegarty and Przeborska, 2005; Kizos and Iosifides, 2007; Sonnino, 2004).

The lack of an unambiguous definition around the world and the presence of cognitive differences about the meaning and features of agritourisms create many problems especially in the academic literature. Indeed, the absence of a unique definition does not favour the development of a homogeneous field of studies on the sector and does not promote the dissemination of specific research in the field (Phillip et al., 2010).

In particular, the inconsistencies in defining agritourisms in literature are correlated to four particular issues (Gil Arroyo et al., 2013).

The first one refers to the identification of an appropriate setting that usually includes farms, but sometimes also ranches, nurseries and other off-farms facilities (the EU defines the term “farm” as an agricultural holding under a unique management that consists of both agricultural production and of non-agricultural activities).

Another issue is the typology of experience done by customers in an agritourism, debating whether farming should be working or also non-working (in EU, the definition of agritourism typically includes the meaning of entrepreneurial diversification of working farms activities).

In addition, another possible matter is related to the kind of activities that an agritourism should do, debating whether including only hospitality correlated services (i.e., lodging, food services and event programming) or also educational/recreational activities.

Last issue is about the meaning of the term “tourism” in the concept of “agritourism”, debating whether considering it as a minimum number of overnight staying or a minimum distance from the customer’s house.

In order to solve these issues, Phillip et al. (2010) proposed a multiple-definition of agritourisms, classifying them in five groups, on the basis of the offered activities: i) Non-Working Farm (NWF), where non-working farms serve only for scenery goals; ii) Working Farm, Passive Contact (WFPC), where there is not a strong interaction between customers and working-farms; iii) Working Farm, Indirect Contact (WFIC), where the interaction between customers and working-farms is strong, but

only focused on the exchange of agricultural products; iv) Working Farm, Direct Contact, Staged (WFDCS), where the interaction between customers and working-farms is strong and it is focused both on the exchange of agricultural products and on the experience of agricultural operations, that are staged or linked to predetermined tours; and v) Working Farm, Direct Contact, Authentic (WFDA), in which customers are directly involved in agricultural operations, exchanging their labour for food and accommodations.

Basing on the literature definition of agritourism this paper aims to analyse the key features in Piedmont agritourism with a particular focus on services offered, dimensional features, customers, ownership and management, key financial data.

METHODOLOGY DESIGN

The research focuses on agritourisms located in Piedmont region. This business is particular interesting for the Italian economy due to its continue growth, with an annual rate greater than 4% (Istat source). In the North of Italy there is the main concentration of agritourism farms, providing accommodation (41%); in addition, the 45% of agritourisms providing food services are located I the Italian northern regions.

The choice of the Piedmont Region is also driven by the relevance of this geographical area, as Piedmont is one of pre-eminent regions in terms of agri-tourist supply and which has a strong attraction for tourists such as natural resources, countryside and food and wine. Moreover, the landscape of Langhe-Roero and Monferrato become a World Heritage Site of UNESCO.

The research was conducted through an empirical analysis, using the questionnaire method (Corbetta, 1999) sent by e-mail to all the agriturisms located in Piedmont region. More specifically, the data, both qualitative and quantitative, were collected via an on-line questionnaire using the database provided by the same Region.

The questionnaire was created in June 2016 and sent by e-mail, together with a letter of presentation and a compilation guide, to the selected companies in the months of July, August and September 2016. The compilation period was about 3 months, with several requests made by telephone in order to solicit the answers. The sample is composed by 111 agritourisms that correspond to a response rate of 11%.

In order to verify the coherence of answers, some "test questions" were included in the questionnaire.

The questionnaire was chosen because it is a method that allows researchers to obtain a significant amount of data that can be used for statistical investigation. In accordance with the main literature on these topics (Chenhall, 2003), the evidence was studied using descriptive statistics. Descriptive analyses were conducted to develop a socio-demographic profile (e.g., age, gender) of managers involved in

agritourisms as well as to describe their type of engagement. Descriptive statistics were also conducted to identify characteristics of agritourism.

Basing on the methodology followed by different studies on this topic (Arroyo et al. 2013), the research investigates the key features of Piedmont agritourism with a particular emphasis on type of services offered, dimensional features, type of customers, type of managers that run such business, key financial data.

In accordance with the research purpose, the following research question was formulated: *“What are the main dimensional and organizational features of Piedmont agritourisms?”*

FINDINGS

The management features

The analysis focuses on the features of family members that run such business. The next graph shows the number of family components involved in agritourism activities.

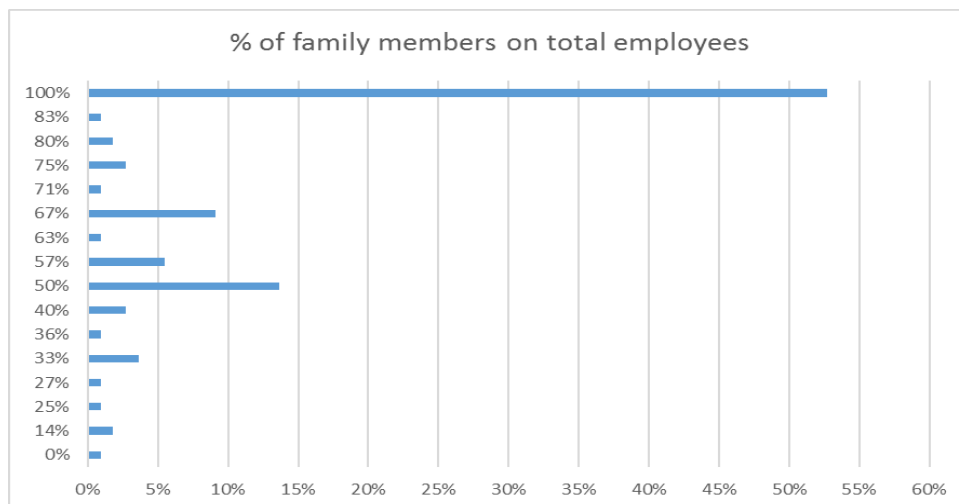


Figure 1. Number of family members involved in agritourism activities.

From the previous figure it emerges that the great majority of the sample (53%) manages the agritourism only with family members, without involving external workers. The number of generations involved in running the agritourisms are following described.

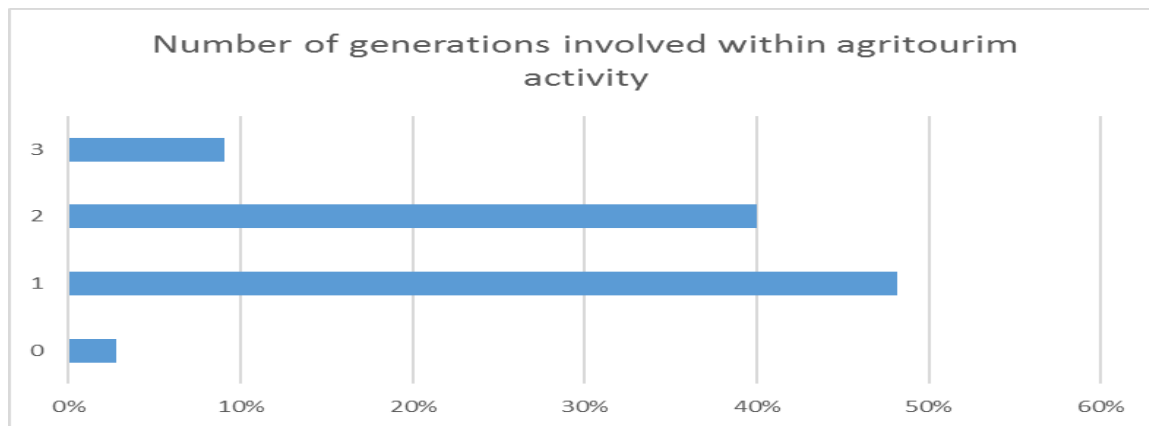


Figure 2. Number of generations.

The previous figure shows that the majority of agritourisms are managed by the first or the second generation of entrepreneurs.

The financial features

This section provides financial data of the analysed agritourisms.

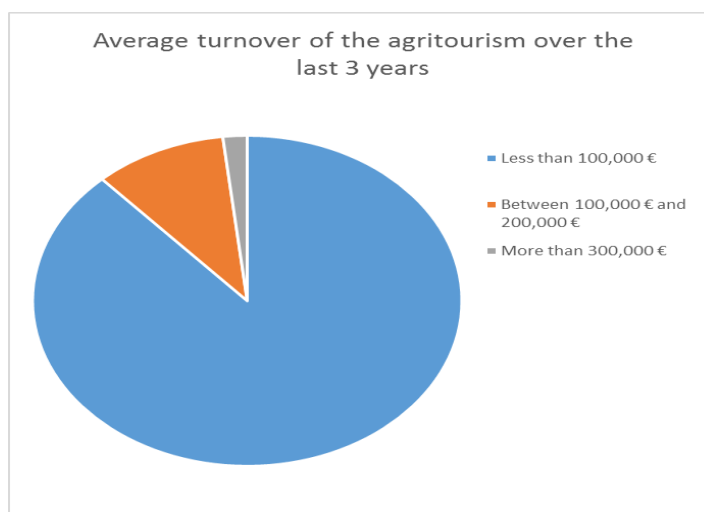


Figure 3. Average turnover over the last 3 years.

The previous figure shows that the agritourisms have generally small dimension as the declared turnover is lower than 1000,000 euros.

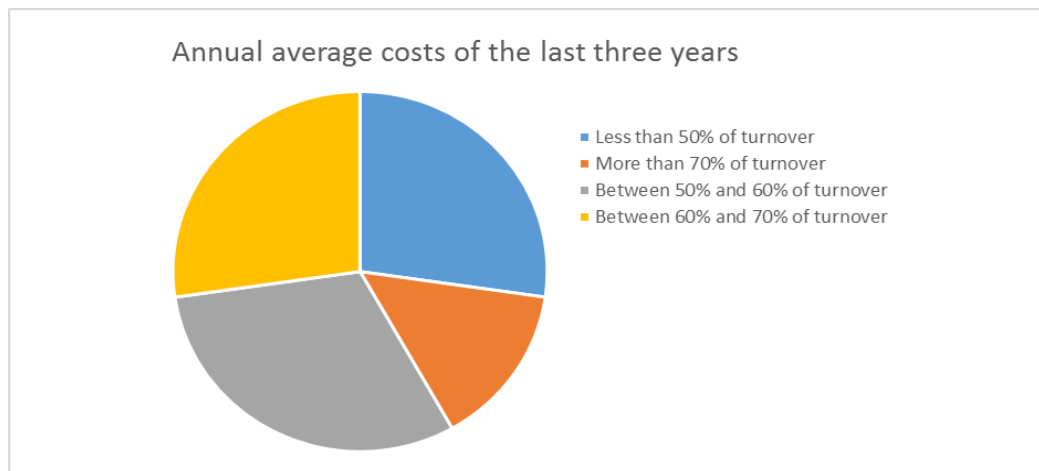


Figure 4. Annual average costs related to turnover.

As regards the cost composition in relation to turnover, it emerges that the 31% shows annual costs between 50 and 60% of turnover, while the 27% has annual costs less than 50% of turnover or between 60% and 70% of total turnover.

State of the art and new opportunities

According to the purpose of the research we firstly investigated the type of services offered by the agritourisms of the sample.

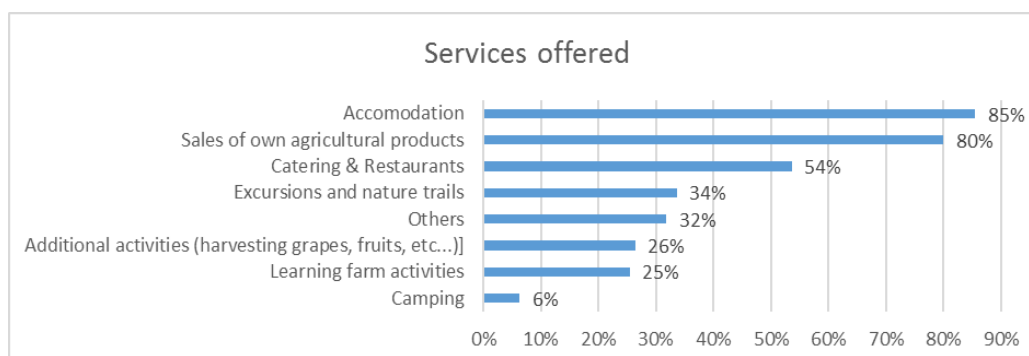


Figure 5. Type of agritourism services offered.

Basing on the previous graph, the types of services more widespread are those linked to the accommodation, sales of own agricultural products and Catering & Restaurants, while camping activities are the less widespread.

The next figure focuses on the customers with a particular attention on the customers' origins: Italian and foreign.

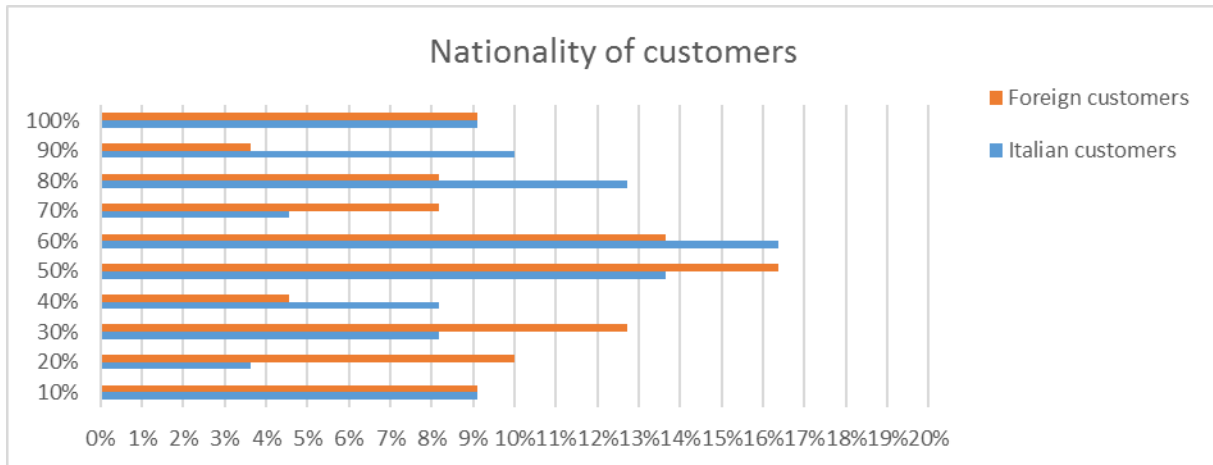


Figure 6. Nationality of customers.

The previous figure shows the different classes – Italian and foreign- of customers declared by the sample. For example, the 16% of the sample works with 60% of Italian customers and 50% of foreign customers and the 4% of the total sample works with the 20% of Italian clients and 90% of the foreign ones. The next graph shows the customers composition differentiated between young (18-35), families and over 65 years old.

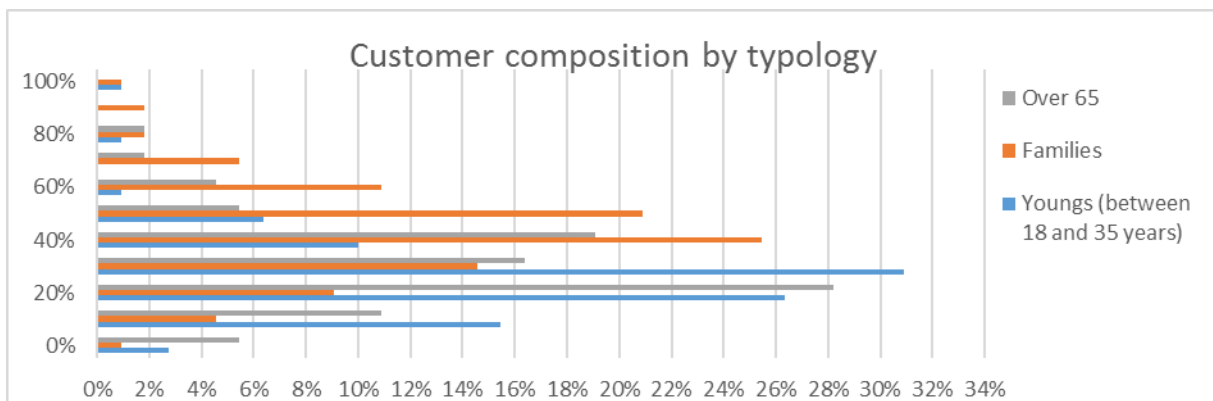


Figure 7. Customer composition by typology.

Analysing the previous graph, it emerges that around the 30% of the sample works with the 30% of young customers, while the 25% of the sample works with the 40% of families and the 28% of the sample works with the 20% of customers over 65 years.

DISCUSSION AND CONCLUSION

As underlined by the literature, about management features it emerges that the great majority of the sample manages the agritourism only with family members, without involving external workers, confirming that family firms are prevalent in this field (Contò and Lopez, 2008).

Furthermore, the research highlights that the majority of agritourisms are managed by the first or the second generation of entrepreneurs, underlining as the agritourisms phenomenon is quite recent.

Referring to the dimensional features, financial data endorse the small size of Piedmont agritourism, characterized by a turnover lower than 1,000,000 euros (Giacosa et al, 2014). However, the sample shows a good level of profitability due to the limited weight of the cost structure.

Referring to the state of the art and new opportunities, the agritourism services offered are those linked to the accommodation, sales of own agricultural products and Catering & Restaurants, while camping activities are the less widespread. Basing on this evidence and referring to the Philip et al (2010) framework the great majority of agritourism analysed can be classified within the third category of working farm, indirect contact (WFIC). In this group the interaction between agritourism and customer is mainly limited to the sale of agricultural products. In addition, we observed other two aspects about agritourism customers. The first one underlines a good balance of the customers' origin, both at national and foreign level, and the second one shed the light on the good balance also of the customer typology, identified as young customers, families and customers over 65 years.

Although the study focuses on a relevant Italian territory, caution is advised to extrapolate results beyond this region or the Italian territory due to the different regional or national legislation.

Despite the limitations of this study, due to a regional focus, results from this study carry some relevant implications for the theory and practice of agritourism. Indeed the work shares understanding of agritourism key features as a starting point to continue the scientific and educational development of this business.

This study also provides further insights on the types of experiences visitors (state of the art and new opportunities) seek, and consequently agritourism can address their offer on new customers demand, developing the range of new agricultural services. Basing on these evidences future studies should deeply analyze the key factors belonging to the agritourism business model, also enriching the sample, comparing different relevant Italian regions.

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