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The role of corporate culture, market orientation and organisational commitment in organisational performance: the case of non-profit organisations

Abstract

Purpose – The study proposes a conceptual framework that explores the relationships among the following constructs: corporate/organisational culture, market orientation, organisational commitment and organisational performance in non-profit organisations.

Design/methodology/approach – In line with previous studies in the field, a quantitative research design was adopted. The data collection was performed through a mail survey of a sample of Portuguese non-profit organisations operating in the area of health. Structural equation modelling was used as a means to analyse the hypothesised relationships.

Findings - Results have shown that organisational culture impacts on organisational performance. Concerning the market orientation consequences, the study results suggest that higher levels of market orientation result in both high levels of organisational commitment and organisational performance. Results also suggest that organisational commitment does not affect performance in a very significant way.

Research limitations/implications - The study was restricted to non-profit organisations, particularly those operating in the area of health and used cross-sectional data to test the research model and hypotheses. Whilst these findings remain valid, they cannot be used for universal generalisations. This study has significant theoretical and practical implications.

Practical implications – Practitioners and researchers agree that organisational culture may lead to different performance results, although little attention has been given to this issue. The study is useful for understanding organisational culture, market orientation, organisational commitment and organisational performance in non-profit organisations.

Originality/value- This paper offers original findings through simultaneously examining the relationships between organisational culture, market orientation, organisational commitment and organisational performance in the context of non-profit organisations. The findings add weight to the recent emphasis on business-oriented approaches as a lever for improving performance in non-profit organisations.

Keywords: Corporate/Organisational culture, Market orientation, Organisational commitment, Organisational performance, Non-profit organisations

1. INTRODUCTION

Public and non-profit organisations are increasingly committed to introducing deep changes associated with the growth of contract-based services, improving service quality standards towards users, introducing efficient and effective mechanisms of management (Macedo and Pinho, 2006; Rodrigues and Pinho, 2010). In this context, the adoption of business-oriented approaches in non-profit organisations is recognised as a critical factor, with organisational culture and market orientation potentially playing a pivotal role in influencing organisational outcomes.

The phenomenon of organisational culture is established as a dominant concept in organisational theory and other fields of organisational research (Harris and Ogbonna, 2002). According to O'Reilly (1989) organisational culture refers to how well an organisation meets customer requirements and the extent to which organisational members "fit" within a particular organisation. It has been defined as "the pattern of shared values and beliefs that help individuals understand organisational functioning and thus provide them with norms for behaviour in the organisation" (Deshpande and Webster, 1989, p.4). Despite increased research interest in this construct, there is no clear agreement about its definition and measurement among researchers and practitioners (Deshpande and Webster 1989). However, there is consensus that this complex and broad construct is the critical element that management can use to shape strategic direction, particularly in circumstances requiring a rapid response to external pressures (Smircich 1983; Appiah-Adu and Blankson 1998).

Market orientation, a related but distinct construct (Denison 1990; Farley et al. 2008), has for the past few decades dominated the marketing theory and practice. The market orientation construct, which is considered to reflect the implementation of the marketing concept (Kohli and Jaworski 1990; Narver and Slater 1990), can either be viewed from a behavioural (Kirca et al., 2005) or from a cultural perspective (Homburg and Pflesser 2000). Although some researchers view market orientation as an aspect of organisational culture (Homburg and Pflesser 2000), or as a culture within the firm (Deshpandé and Webster, 1989; Narver and Slater, 1990), others regard it as a separate construct (Farley et al., 2008). In this study, market orientation is not considered as a type of culture, but rather as a pattern of behaviours which exists in varying degrees within organisational types (McClure, 2010).

The rationale for studying organisational culture and market orientation is that both can influence organisational outcomes through the impact they exert on organisational commitment and performance (Lok and Crawford 2004). Organisational culture, for example, plays a critical role in creating a set of key values, understandings and a favourable working environment where committed employees contribute positively to the organisation's wellbeing (Appiah-Adu and Blankson 1998; Goodman et al. 2001). Similarly, market oriented behaviours are controllable variables that organisations can strive to improve in order to enhance the commitment of organisational members to better performance. Thus organisational commitment, which is the willingness of members to give their effort and loyalty to an organisation, has numerous antecedents and consequences, such as organisational performance (Buchanan, 1974; Rashid et al., 2003; Yiing and Ahmad, 2009).

Despite the significance of these issues, existing knowledge about the relationships among these concepts is fragmented, with researchers from different academic fields focusing either on the market orientation-performance or the organisational culture-performance relationship. This study addresses this fragmentation by drawing together the relationships from these different fields, while applying concepts that are more typically associated with corporate organisations. The primary goal is to examine the relationships among the following constructs: corporate/organisational culture, market orientation, organisational commitment and organisational performance.

Specifically, the study contributes to knowledge by considering the following research questions: To what extent does corporate culture impact on organisational commitment and performance? To what extent does market orientation impact on organisational commitment and performance? To what extent does organisational commitment impact on performance? This paper examines the relationships among these constructs within the specific context of non-profit organisations. This context is worthy of attention because these organisations are required to adopt a different attitude to their funding sources and organisational strategies than their commercial counterparts (Macedo and Pinho, 2006). In other words, non-profit organisations have to find creative new ways of managing their scarce resources in order to accomplish their goals. In contrast to the private sector, in which organisations profits among their stakeholders, non-profit organisations exist primarily to fulfil the social, philosophical, moral or religious values of their founders (Jeovans, 1992; Macedo and Pinho, 2006).

The data in this study is gathered in the non-profit health sector. The quantitative research design involves a mail survey targeted at Portuguese non-profit organisations that provide health services. Structural equation modelling was used to analyse the hypothesised relationships. Studying these relationships within this particular setting is timely, as studies of organisational culture in non-profit health organisations are limited, and the influence of the healthcare working environment on individuals and organisational outcomes has been neglected by researchers (Rathert et al., 2009). Given the deep structural reforms and changes imposed on these organisations, the concept of organisational culture and its implications on organisational commitment and performance has become a priority (Scott et al. 2003c).

Against this backdrop, concepts such as corporate/organisational culture, market orientation, organisational commitment and performance are crucial for non-profit organisations. As Gallagher and Brown (2007) acknowledge, organisational culture is the central driver of superior business performance. The findings contribute to culture-performance studies in a non-profit services setting, and to the market-orientation-performance literature by revealing the importance of the construct to service organisations (Kirca et al., 2005).

The paper is organized as follows: First, the relevant literature and research hypotheses are reviewed. Second, the description of the research method is presented. Next, the results are discussed, along with different research hypotheses. Finally, the limitations and future research avenues are identified.

2. LITERATURE REVIEW

Corporate culture

The concept of culture, which stems from the study of ethnic and national differences, provides a frame of reference for interpreting individual experiences and establishing norms for defining what is considered legitimate and desirable. Organisational culture is a complex phenomenon that shapes everyday organisational life and which has many different and competing definitions (Barney, 1986). In his seminal study on organisational cultures, Pettigrew (1979, p.574) defines culture as “the system of such publicly and collectively accepted meanings operating for a given group at a given time. This system of terms, forms, categories, and images interprets a people’s own situation to themselves”. Barney (1986,

p.657) refers to “a complex set of values, beliefs, assumptions, and symbols that define the way in which a firm conducts its business”; while Hagget (1975, p.238) speaks of “patterns of behaviour that form a durable template by which ideas and images can be transferred from one generation to another, or from one group to another”. Thus culture influences the conclusions people draw from their observations, the assumptions they make when they do have factual knowledge, and the way they behave. As Schneider and Rentsch (1988) put it, organisational culture describes “why things happen the way they do” versus organisational climate, “what happens around here”.

The concept of organisational culture is **considered** to be “one of the most fascinating and yet elusive topics for management researchers” (Harris and Ogbonna 2002, p.31), with more than 4600 articles examining the subject since 1980. The central role of organisational culture within the business and management literature (McKinnon et al. 2003) is due to the belief that this social characteristic can be a major determinant of organisational, group, and individual behaviour (Hartnell et al. 2011).

Multiple conceptualisations of organisational culture are found in the literature (Gregory et al. 2009). The central notion is that the term “culture” refers to core organisational values and norms (Flamholtz 2001) that have an influence on different variables in the organisational setting. According to Moorman (1995, p.320), previous research indicates that organisational culture affects organisations in two ways. First, it can influence "the firm's choice of outcomes and, second, the means to achieve these outcomes, including organisational structure and processes". Jones (1983) argues that organisational culture acts as a cognitive map and provides the mechanisms, norms and values that members need to follow and internalise. It also affects the way in which people consciously and subconsciously think, make decisions and ultimately how they perceive, feel and act (Lok and Crawford, 2004). Organisational culture has also been shown to have significant effects on performance (Rashid et al. 2003; Mannion et al. 2005).

Research into culture types or forms is the predominant perspective in the conceptual development of culture (Hartnell et al. 2011; Lok and Crawford, 2004). Culture types have been extensively studied because they are known to be a "useful tool in differentiating organisations based on culture" (Richard et al., 2009, p. 819). Organisational cultures can be analysed along many dimensions, resulting in conceptually different, but fundamentally

similar, models and theories (Yiing and Ahmad, 2009). For example, Wallach (1983) proposes bureaucratic, supportive and innovative organisational cultures; while Martin (1992) speaks of integration, differentiation and fragmentation types. Wallach (1983) identifies three main types of organisational cultures (i.e., bureaucratic, supportive and innovative). Adaptability, achievement, clan and bureaucratic types have been proposed by Draft (2005), with clan, adhocracy, hierarchy, market also suggested by Cameron and Freeman (1991) and Deshpandé et al. (1993).

This study applies the culture framework developed by Deshpande et al. (1993). Drawing on Cameron and Freeman (1991), Deshpande et al. (1993) observe that, since cultures are defined by the values, assumptions, and interpretations of organisational members, and because a common set of dimensions organizes these factors on both psychological and organisational levels, a model of culture types can be derived. These culture types are based on two axes. The first, describes the continuum from organic to mechanistic processes and focuses on whether the organisation is more flexible and spontaneous in opposition to control, order and stability. The second, emphasises internal maintenance (smoothing activities, integration) in opposition to external positioning (competition and differentiation). Deshpande et al. (1993) use these axes to form a two-way table that distinguishes four organisational culture types, namely: 1) clan culture, which emphasises cohesiveness, participation and teamwork; 2) adhocracy culture, which stresses values of entrepreneurship, creativity and adaptability; 3) hierarchy culture, which highlights order, rules and regulations; and 4) market culture, which emphasises competitiveness and goal achievement (see Figure 1).

< Figure 1: A Model of Organisational Culture Types >

The Deshpande et al. (1993) view of organisational culture types adopted here is commonly used to empirically assess the construct, especially when dealing with other organisational variables, such as organisational commitment and performance. Indeed, the assumption that certain types of organisational cultures lead to superior organisational performance is one of the main reasons for organisational cultural interest (Rose et al., 2008).

Market orientation

Increasing interest in organisational culture has coincided with “a heightened awareness of the pivotal importance of an orientation towards the market” (Harris, 1998, p.354). The marketing literature widely accepts that the adoption of a market orientation is crucial to most organisations. The need to respond to major changes that occur in the environment has led to increasing attention to the manner in which organisations develop and maintain their focus on customers and markets (Appiah-Adu and Rachhod 1998). This strategic orientation provides a unifying focus and a clear vision of the organisation’s strategy, centred on the creation of superior value for the customers (Kohli and Jaworski 1990).

The systematic study of market orientation began in the early 1990s and has been conceptualised in different but related approaches. Two conceptualisations of market orientation have gained wide support (Piercy et al. 2002): the behaviour-based view of market orientation developed by Kohli and Jaworski (1990); and the culture-based interpretation of market orientation tested by Narver and Slater (1990). The first approach proposed by Kohli and Jaworski (1990) relies on three main sub-dimensions, namely: (a) organisation-wide generation of market intelligence relevant to current and future customer needs; (b) vertical and horizontal cross departmental dissemination of this intelligence; and (c) organisation-wide responsiveness to the intelligence, including the design and selection of products and services, the production, distribution and promotion of the product.

The second approach, proposed by Slater and Narver (1995, p.67), defines market orientation as “the culture that (1) places the highest priority on the profitable creation and maintenance of superior customer value while considering the interests of other key stakeholders; and (2) provides norms for behaviour regarding the organisational development of and responsiveness to market information”. Relying on Narver et al. (1998), and considering that market orientation is fundamental part of an organisation’s culture rather than simply a set of processes and activities, each employee should consider the main purpose of an organisation to be creating value for its customers. Therefore, when developing a market-oriented culture, the major concern is to have organisational members committed to delivering superior customer value (Mahmoud and Hinson, 2012).

At first sight there might appear to be an overlap between the market orientation and organisational **culture** constructs. However, in this study, market orientation is not treated as a type of culture but as a set of behaviours that exists in varying degrees within different organisational types (McClure, 2010). Thus while acknowledging the relevance of culture-like conceptualisations of market orientation, the research posits that organisational culture expresses the "pattern of shared values and beliefs" (Deshpandé and Webster, 1989), while market orientation is the set of behaviours (driven by, or coexisting with, various organisational types Harris and Ogbonna, 1999) related to the generation, dissemination and responsiveness to market intelligence (Kohli and Jaworski, 1990). The presence of both values and behaviours are paramount in organisational functioning, i.e., in all organisations there are "sets of values which influence the way people behave" (Flamholtz, 2001, p.269).

Analysing the consequences of adopting a market orientation approach has been a hot topic in the marketing and strategy literatures (Pulendran et al. 2000). Yet relatively little research has considered how such adoption influences employee responses (job satisfaction and organisational commitment). In non-profit service settings, which feature direct organisation-customer interactions, understanding the effects of implementing market-oriented behaviours is an even greater necessity (Kirca et al., 2005). In this study the relationships between market orientation and organisational commitment and between market orientation and organisational performance will be further examined.

Organisational Commitment

The concept of organisational commitment has received attention from both academics and practitioners (Cohen 1992), and is viewed as an important variable in facilitating the understanding of an employee's workplace behaviour (Bateman and Strasser 1984). Organisational commitment plays an important role in organisational behaviour. It refers to an employee's emotional attachment, identification with, and involvement in the organisation (Jaworski and Kohli 1993). Specifically, it concerns an employee's affective reactions towards their employing organisation as a whole. The seminal work of Buchanan (1974) suggests that organisational commitment is made up of three dimensions: 1) organisational loyalty, which addresses affection and attachment to the organisation, namely a sense of belongingness reflected as a wish to stay in the organisation; 2) organisational identification,

which represents pride in the organisation and the subsequent internalisation of its norms, values and goals; and 3) organisational involvement, which refers to engagement with the work itself due to its contribution to the organisation as a whole.

According to Lok and Crawford (2004), organisational commitment is a work attitude that is directly related to employees' intention to stay with the organisation or to actively participate in their tasks, which is partly linked with job performance. An employee who nurtures the feeling of "loving working here" is believed to develop a predisposition or emotional attachment that creates a favourable psychological alignment with the organisation (Beer 2009). Employees who are psychologically aligned with the mission and values of the organisation, tend to be more motivated.

Organisational performance

Organisations constantly seek to improve overall organisational performance. The assessment of organisational performance is a recurring theme in management and marketing literature and has been the subject of extensive empirical investigation. A variety of meanings have been attributed to the concept of performance (Appiah-Adu and Ranchhod 1998), and there is little consensus about how organisational performance is defined (Ford and Schellenberg 1982). Despite the various definitions and interpretations, researchers seem to agree that organisational performance is a complex and multidimensional phenomenon (Dess and Robinson 1984).

Measuring the performance of any organisations is a difficult task. Traditionally, for performance evaluation, it is preferable to use objective measurements (Kim 2005). However, when these are not available, the use of subjective measurements is also valid. Indeed, several authors prefer to use subjective performance measures due to the multidimensional nature of the construct (Venkatram and Ramanujam 1987). In the marketing field, where subjective measures are frequently used, high reliability and validity have been shown and strong correlation with objective measures has been demonstrated (Dess and Robinson 1984).

3. HYPOTHESES DEVELOPMENT

Corporate culture and organisational commitment

A key objective of this study is to investigate the relationship between organisational culture and organisational commitment. Numerous antecedents of organisational commitment have been proposed in earlier studies. As the seminal work by Steers (1977) acknowledges, antecedents of organisational commitment are diverse in their nature and origins. For example, earlier studies have emphasised the importance of factors such as personal characteristics, job-role related characteristics and work experiences (Maxwell and Steele 2003).

Among the possible antecedents of commitment, corporate culture has received low levels of empirical investigation (Lok et al., 2009). However, previous research examining culture suggests that this factor has a positive and significant impact on employee attitudes towards job satisfaction, organisational commitment, turnover intentions, and morale (Richard et al., 2009). McKinnon et al. (2003) found that affective responses, such as organisational commitment, are related to organisational culture types that are based on respect for people, team orientation, and innovation.

In certain types of organisations, such as non-profit organisations, employees expect much more than money and fair treatment. They expect not only to live by the values that bind them to the community but also to work in a trusting and open relationship environment which contributes to personal growth, personal challenge, responsibility and meaning (Beer, 2009). As Beer (2009) notes, although not all employees have these needs, it is advantageous to the organisation to select employees who exhibit such needs. In some cases, the organisation may even be willing to compromise some of its goals to ensure dedication and commitment from its employees. The study by Lok and Crawford (2004) also finds organisational culture to be an important antecedent of commitment, and the same authors have empirically demonstrated this association in the area of health (Lok and Crawford, 1999). Similarly, Rashid et al. (2003) acknowledge that certain types of organisational culture are related to certain types of commitment, but find no correlation between bureaucratic cultures and any type of commitment.

Based on the above discussion, the following hypothesis is presented:

H1: The different culture types have a positive/negative impact on organisational commitment.

H1a: Both hierarchy and clan types have a negative impact on organisational commitment

H1b: Both adhocracy and market types have a positive impact on organisational commitment

Corporate culture and organisational performance

The study reported in this paper considers whether there is a relationship between organisational culture and organisational performance. Prior research has established that organisational culture is associated with organisational performance (Denison 1990; Rashid et al. 2003). For example, Holmes and Marsden (1996, p.26) argue that “organisational culture impacts significantly on an organisation, its employees’ behaviour and motivations and, ultimately, on that organisation’s financial performance”.

According to Flamholtz (2001), the general recognition that culture affects performance is based on the idea that culture affects goal attainment. The likelihood of achieving goals is therefore greater in companies with strong cultures than in those where the culture is relatively weak. Specifically, culture is viewed as a critical organisational development area or a key strategic building block for successful organisations (Flamholtz 2001). Thus Rashid et al. (2003), who examined the relationship between corporate culture types (consensual, entrepreneurial, bureaucratic, and competitive) and performance, found that organisational culture played an important role in promoting financial performance.

In the healthcare setting, several studies have attempted to prove a positive and significant relationship between organisational culture and organisational performance (Davies et al., 2007; Davies et al., 2000; Gerowitz et al., 1996; Scott et al. 2003a; 2003b). Scott et al. (2003b) found evidence that organisational culture may be a relevant factor in health care performance, even though the nature of the relationship may be complex. Mannion et al. (2005), who studied different cultural patterns for high and low performing hospitals, found that organisational culture and performance are related. In this line, the following hypothesis is presented:

H2: The different culture types have a positive/negative impact on organisational performance.

H2a: Both hierarchy and clan types have a negative impact on organisational performance

H2b: Both adhocracy and market types have a positive impact on organisational performance

Market orientation and organisational commitment

Organisational commitment, which refers to an employee's emotional attachment, identification with, and involvement in the organisation (Jaworski and Kohli 1993), plays an important role in organisational behaviour. Previous research examining the effects of market orientation on job-related attitude suggests that a number of psychological and social benefits are afforded to employees (Kohli and Jaworski 1990). The reasoning is that market orientation raises employee morale, increases job satisfaction and commitment to the organisation, since all departments work toward a common goal: satisfying the final customer. Given the social and organisational support people receive in a market oriented environment, it is reasonable to assume that market orientation is an important variable influencing this job related attitude. Specifically, Jaworski and Kohli (1993) acknowledged that a market orientation leads to a sense of pride in belonging to an organisation in which all departments and individuals work toward the common goal of satisfying customers. Organisational commitment gives employees a common goal which binds the individual to the organisation (Naudé and Desai, 2003). As part of a successful team, employees believe they are making an important contribution to the organisational success. Several authors (Kohli and Jaworski, 1990; Castro et al. 2005) have called for more studies exploring this relationship. However, to the best of our knowledge very little research has demonstrated this relationship in the non-profit sector. Considering the above:

H3: The higher the market orientation, the greater the organisational commitment of employees.

Market orientation and organisational performance

Over recent years, many studies have examined the relationship between the degree of market orientation and organisational performance (Castro et al. 2005). Deshpandé and Farley (2004) argued that the study of the market orientation–performance relationship is very much an on-going research field. Almost all studies have empirically demonstrated implementing market orientation approach will almost inevitably lead to superior organisational performance (for a review, see the meta-analysis conducted by Cano *et al.* 2004 and Kirca *et al.* 2005). This assumption is based on the fact that a market oriented posture creates a favourable environment to fulfil the customer needs, and thus has a positive impact on customer satisfaction (Kara et al. 2004).

Kumar et al. (1998, p.203) argue that examining the market orientation-performance relationship in a "context- specific" setting (such as healthcare) provides “evidence for the applicability of an important strategic management and marketing concept to the field of health care management”. These authors acknowledge that that healthcare industry has gone through what many observers referred as “quantum changes”, resulting from shifting offering healthcare services as a social to an economic good. Survey results from 159 hospitals yielded a strong positive and significant relationship between market orientation and various measures of organisational performance (Kumar et al., 1998). Raju et al. (2000) confirmed this association between market orientation and performance in 175 US hospitals. Wood et al. (2000) found strong support for the relationship between market orientation and hospital performance within not-for-profit hospitals. Therefore, the following hypothesis is proposed:
H4: The higher the market orientation, the greater the organisational performance.

Organisational commitment and organisational performance

The notion that employees’ attitudinal responses (such as organisational commitment) are positively related to organisational performance continues to arouse the interest of scholars as well as managers. Several studies have explored the relationship between employees’ responses and organisational outcomes at the organisational level of analysis (Ryan et al. 1996; Schneider et al. 2003; Hwang and Chi 2005).

Employee commitment to the organisation is expected to positively affect organisational performance, since employees with high levels of organisational commitment “will be more willing to work toward organisational goals and objectives and give their services wholeheartedly to the organisation and to the public, hence promoting organisational performance” (Kim 2005, p.246). In a high-commitment culture, the psychological contract is the set of high mutual expectations and obligations that create value for both parties (Beer 2009). Highly committed employees will be more willing to engage in high standard behaviours that are vital to organisational success and these job-related attitudinal responses may be important determinants for organisational performance.

The literature holds that the higher the level of organisational commitment, the greater the level of performance. For example, Miller and Lee (1999) found organisational commitment to be positively related to the return on asset (ROA), empirically supporting this relationship. In a similar vein, Conchas (2000) acknowledge that the more committed the employees are, the greater the shareholder returns. However, very little research, either in the public or the private sector, has empirically proved this relationship. Considering the above analysis, the following hypothesis is suggested:

H5: The higher the organisational commitment of employees, the greater the organisational performance.

In summary, the theoretical framework examined in this study hypothesises that both organisational culture (clan/adhocracy/hierarchy/ market) and market orientation are antecedents of organisational commitment and organisational performance. It also examines the effect of organisational commitment in organisational performance. The proposed conceptual model is depicted in Figure 2.

< Figure 2: Conceptual Model >

3. METHODOLOGY

3.1 Research Setting

The Portuguese health sector was deemed appropriate for study for two reasons. Firstly, the sector has particular relevance in global economies due to the costs to GDP of the system. These costs are continuing to rise due to technological and scientific advances which are increasing healthy life expectancy, changing demography, ageing populations and the impact urban life styles. Secondly, the Portuguese health system relies mainly on the National Health System (NHS), but this system is also supported by a vast number of public and non-profit entities as well as private organisations that are involved in promotion, prevention and health treatment (“Lei de Bases da Saúde”, Law Decree nº48/90 de 24 August). Specifically, the Portuguese system is formed of three coexisting systems; i) The NHS, which covers the entire population; ii) the existence of different public and private sub-systems; and iii) the existence of a voluntary private insurance system. The present study focuses mainly on the second category which includes institutions called “Misericórdias” which are under the coordination of the Health Ministry but which also have considerable management autonomy. Before the foundation of the NHS (created in 1979 through the Law Decree nº 56/79, 15 September) these institutions had played an important role in providing health services throughout Portuguese territories since the 19th century. The study of these Misericórdias is timely, since these institutions currently face numerous challenges relating to the introduction of rules for efficient organisational management (Law Decree nº27/02, 8 November).

Recent and on-going reforms of the Portuguese NHS sector have been unable to achieve the required fiscal savings (Cruz and Ferreira, 2012). The implication is that the processes of change associated with new governance models require a deep analysis of the implications for a number of organisational variables, as is being undertaken by this study.

3.2 Sample Design

In line with other organisational culture and market orientation studies, a descriptive quantitative research design was used. This research methodology was judged suitable means

for organising the data collection and to enable empirical testing of the proposed model. The data gathering involved a cross-sectional survey which was conducted with a national sample of non-profit health organisations.

An introductory letter and a questionnaire were sent to the CEO of a population of 250 non-profit health care organisations in Portugal. These organisations were identified from numerous databases (Health Ministry and Dun & Bradstreet, 2011) covering organisations in the health sector. In the first mailing, a cover letter, a questionnaire and a pre-paid reply envelope was sent to the person in charge of the organisation, since these individuals are most likely to be involved in strategic decisions. The researchers offered to provide a summary of research findings as an incentive. This mailing was followed two weeks later by a second mailing that included a reminder letter and a reply envelope. In total, 143 usable questionnaires were returned, which corresponds to a 57% response rate.

A self-completion questionnaire was developed, addressing the following issues: identification, organisational environment, market orientation, corporate culture, commitment and performance. The questionnaire was pre-tested with senior management from four non-profit organisations operating in the area of health located in the region of Braga (Portugal). The goals of the pre-test were to assess clarity of questions, determine the length of time required for completion, and examine the appropriateness of the subject matter for the population of interest. Based on this feedback the questionnaire was modified, and some items were eliminated, others changed and some added. Non-response bias was assessed by comparing the responses of early respondents with those of late respondents (Armstrong and Overton 1977).

3.3 Measurement Scales

The majority of scales used to measure the constructs were drawn from relevant literature in the field with fewer adaptations to a non-profit organisational context. After selecting the suitable measurement scales from the literature, face validity was addressed with a panel of experts (four managers and three marketing academics) who tried to identify potential problems in their application (Hunt, Sparkman and Wilcox, 1982). Table 1 depicts the definition and operationalisation of the constructs used in the paper.

< Table 1: Construct definition and operationalisation >

Top-level executives were deemed to be suitable respondents as they are likely to be heavily involved in the strategic decisions of the organisations, particularly those related organisational culture, organisational commitment, market orientation and organisational performance. In relation to measuring organisational commitment from the perspective of managers, we follow the same approach as the classic work of Jaworski and Kohli (1993) as well as of other authors (Rodrigues and Pinho, 2010; Lok and Crawford, 2004; Rashid et al., 2003).

4. ANALYSIS AND RESULTS

4.1 Sample Profile and Measurement Model Estimation

The organisations represented in this sample provide different types of services, covering diverse areas such as internment care, day health centres, external medical care/counselling services and home assistance care. In terms of location, the sampled organisations cover the national territory and are mainly located in the North and Centre of Portugal. The most represented districts are Lisbon (30%), followed by Porto and Braga (15%), Aveiro (6%), Islands (Azores and Madeira) (7%), Évora (5%) and Santarém (4%). Nearly 28% of the sampled organisations were founded before the nineteenth century, 16% were set up between 1901 and 1950, while the remaining 54% were established from 1950 onwards.

In order to develop appropriate measures for this study, we followed standard psychometric scale construction procedures (Churchill, 1979). To purify the initial measures and to ensure the homogeneity of original scales, several item-to-item correlations were performed. Items that showed a low item-to-total correlation (< 0.30) or high cross-loadings were dropped from the analysis. To control for common method bias, we computed the Harman single-factor test (Podsakoff et al., 2003) by extracting three factors with eigenvalues greater than 1.0, and where the first factor accounted for less than fifty per cent of variance explained. Additionally, respondents were not told the specific objectives of the study and were guaranteed anonymity of responses. We thereby concluded that common method bias is not a significant problem.

4.2. Measurement Model Estimation

In order to test the hypothesised factor structure, a confirmatory factor analysis (CFA) using EQS 6.1 (Bentler, 2006) was performed on the measurement model. Prior to this, the dimensionality of the market orientation construct was tested by submitting the 20-items comprising the MARKOR construct (Kholi et al. 1993) to a CFA in which a specific set of items were grouped to three dimensions of the MARKOR scale. Overall, nine out of twenty items were eliminated based on the following criteria: 1) items that presented a weak convergence ($t < 1.96$); 2) items that evidenced a low standardised loading ($\lambda^2 < 0.60$); and 3) items that contributed the least to the explanation of the model considering the cut-off point of $R^2=0.3$.

Within the Intelligence Generation (IG) sub-scale, items IG3 (“We are slow to detect changes in our users’ preferences”), IG4 (“We poll our users at least once a year to assess their satisfaction in relation to our services”), and IG5 (“We are slow to detect fundamental shifts in the non-profit sector (e.g., technology, regulation, etc.) did not fulfil the requirements; within the Information Dissemination (ID) sub-scale item ID3 (“When something important happens to a user, the whole organisation knows about it within a short period”) was excluded; and for the Responsiveness (RI) sub-scale, five of nine items [RI1 (“It takes us a long time to decide how to respond to other non-associated NPOs’ changes” – **Reversed** (R)), RI2 (“For one reason or another we tend to ignore changes in our user preferences” - **Reversed** (R)), RI5 (“If another non-profit organisation was to launch an intense campaign target at our users, we would respond immediately”), RI7 (“User’s grievances or complaints fall on deaf ears” (R)) and RI8 (“Even if we came up with a great “marketing” plan, we probably would not be able to implement it in a timely fashion” **Reversed** (R))] were excluded. The CFA results on this scale showed a significant Chi-Square - χ^2 (df = 41, N = 143) = 77.19, $p < 0.01$, which means that the observed and implied (estimated) variance-covariance matrices are not similar. However, the fit indices (comparative fit index [CFI] = 0.95, incremental fit index [IFI] = 0.95, normed fit index [NFI] = 0.91) found the measurement scale to be fairly consistent in reproducing the population covariance structure, suggesting that these multi-item measures have reasonable psychometric properties and are suitable for analysis. Subsequently, the remaining items that tap into the same common source of variance were aggregated and averaged and a summated score was computed for each MARKOR dimension.

For the estimation process, which involves the use of a particular fitting function to minimise the difference between the sample covariance matrix (S) and the implied matrix (Σ), and given the fact that we were dealing with a categorical variable, the Least Square (LS) estimation was performed on the original data. In a sense, LS estimation is distribution-free, since it involves the minimisation of the sum of squared residual between the data (S) and the model (Σ) (Bentler, 2006). As part of the scale evaluation process, in order to improve the performance of the original scales, we also performed model specification searches. For the measurement model, three approaches were employed to improve the specification of the standard CFA model, namely: i) correlation of measurement errors was allowed; ii) cross-loading between factors was allowed; and iii) only those items that fulfilled several criteria were retained for analysis. Convergent validity, composite reliability and average variance extracted (AVE) were computed for market orientation, organisational commitment and performance. Convergent validity is evidenced by the large and significant standardised loadings. (see Table 2)

Discriminant validity was assessed by ensuring that all the construct inter-correlations were significantly different from 1, and the square root of AVE (diagonal) was greater than the correlation between the latent constructs in the model (off-diagonal) (Barclay *et al.*, 1995). All latent constructs satisfy this condition. Overall, the examination of psychometric measurement scale properties shows unidimensionality and conceptual consistency. The values of composite reliability ranged from 0.78 to 0.90, which exceeds the cut-off point of 0.70 (Table 2), confirming the reliability of the main constructs.

< Table 2: Summary statistics of the Measurement Model >

Consequently, market orientation, organisational commitment and organisational performance have been shown to have suitable measurement properties. After examining the construct validity and the reliability of the measurement model, the next step was to empirically **test** the proposed theoretical model.

4.3 Structural Model Estimation

In order to test the proposed hypotheses the structural model was estimated. The chi-square for the overall model was significant - χ^2 (df = 87, N = 143) = 146.0, $p = 0.001$, which means that the difference between the estimated population covariance matrix and the sample (observed) covariance matrix is not significant. However, the fit indices suggest a reasonable fit of the model to the data, such as: comparative fit index [CFI] = 0.93, incremental fit index [IFI] = 0.93, normed fit index [NFI] = 0.90. The RMSEA of the structural model is 0.069, which can be considered acceptable. Models with an RMSEA of 0.08 or below show satisfactory fit (Hair et al., 1998). The relationships proposed in the model are examined in Table 3.

< Table 3: Summary statistics of the Measurement Model >

As illustrated in Table 3, considering four variables aggregated, three of the original hypotheses were confirmed and two were not. However, narrowing the analysis to each culture type, which is a categorical variable, the computation of t-tests enabled us to find some differences between culture types and the organisational commitment. First, descriptive analyses show a difference between both culture types: the clan culture type (M = 4.05; SD=0.78), which is predominant in our survey, and the hierarchy culture type (M=3.30; SD=1.01). Second, an independent-samples t-test was conducted to compare the commitment scores for two types of corporate cultures. Results show a significant difference in scores for two types of culture - clan culture type and hierarchy culture ($t(99) = 2.48$; $p < 0.05$; $\eta^2 = 0.05$). Concerning H1b results indicate that there is not any significant difference in scores for two types of culture - adhocracy culture type and market culture type ($t(44) = 1.54$; $p > 0.05$). However, we may conclude that H1a is partially supported.

5. DISCUSSION

Nearly 62% of the organisations included in our sample match a “clan culture type”, whose dominant attributes are cohesiveness, participation, team work and sense of family. Principles such as loyalty, tradition, interpersonal cohesion are particularly relevant. This can be

justified by the fact that the strategic emphasis of these organisations is the development of human resources, commitment and morale (Cameron and Freeman, 1991). The second most representative is the “market culture type” with 20%. This corporate culture type emphasises competitiveness, and goal achievement. Finally, the third corporate culture type is the “adhocracy” with 11%. This corporate culture type emphasises values of entrepreneurship, creativity and adaptability.

Of the five proposed hypotheses, three were supported by the data. Organisational culture did not have a significant impact on organisational commitment but impacted significantly on organisational performance. Market orientation was found to impact significantly on both organisational commitment and performance. Finally, organisational commitment did not affect performance in a statistically significant way. The main implications of these findings are discussed below.

Organisational culture has attracted interest in the literature because of the belief that this phenomenon is linked with a "variety of organisational process and outcomes" (Hartnell et al., 2011, p.680). Results from this study suggest that a suitable organisational culture has a significant impact on performance. Both sub-hypotheses H2a and H2b were supported by the data. Hence, overall, H₂ is supported by the data. This finding, which is consistent with previous studies (Rashid et al. 2003; Conchas, 2000; Miller and Lee 1999), supports the notion that different culture types impacts differently on organisational performance.

The relationship between market orientation and performance as outlined in H₄ is also supported. Given that continuous variables were involved, a Pearson product-moment correlation coefficient was computed to analyse the relationship between the three market orientations and performance. The following results were obtained: intelligence generation vs. performance ($r = 0.31$; $p < 0.01$); intelligence dissemination vs. performance ($r = 0.29$; $p < 0.01$) and responsiveness vs. performance ($r = 0.27$; $p < 0.01$). These results reinforce the argument that market-oriented behaviours help to achieve organisational success. This is in line with previous studies within the for-profit sector (see the meta-analysis of Cano *et al.* 2004 and Kirca *et al.* 2005) and, to a more limited degree, in the non-profit sector (Rodrigues and Pinho, 2012; Cervera and Sanchez, 2001). Hence, this study supports the notion that adopting a market orientation is associated with performance improvements in non-profit health organisations. Health organisations would therefore be advised to increase their

investments in promoting market-oriented behaviours if they want to successfully transform their organisations.

With regard to the relationship between market orientation and organisational commitment, H₃ is supported. This finding is consistent with previous studies in both the for-profit (Siguaw et al. 1994) and the non-profit contexts (Rodrigues and Pinho 2010; Caruana et al. 1999). These results are in line with Jaworski and Kholi (1993), who found that satisfying customers creates a favourable environment in which all members want to participate, sharing a feeling of worthwhile contribution, a sense of belongingness, and commitment to the organisation. Similarly, a market oriented organisation leads to a sense of pride in belonging to the organisation in which all departments and individuals work toward the common goal of satisfying customers. This relationship can be partly explained by the fact that a market oriented approach stimulates teamwork and unites employees in a common purpose.

Contrary to our expectations, the latent variable model (see Table 3) failed to support the relationship between organisational culture and organisational commitment (H₁). However, when narrowing our analysis by computing an independent-sample t-test, ~~it was~~we found that there is a statistical difference in the organisational commitment scores between clan culture type and hierarchy culture type. Although several authors have previously confirmed this association, others did not find a significant correlation between both culture and organisational commitment (Lok and Crawford, 2004). The lack of consistency between studies is thought to be linked to the type of organisational culture being examined. For instance, Rashid et al. (2003) found the bureaucratic culture type to be unrelated to organisational commitment. Perhaps this is because the bureaucratic culture, which is hierarchical, compartmentalised, organised, systematic and has clear lines of authority, may create difficulties for managers seeking commitment from employees.

Similarly, a very weak relationship was found between organisational commitment and organisational performance (H₅) in the latent model (Table 3). Although this latter result supports earlier findings that organisational commitment is unrelated to performance (Steers 1977), the results contrast with the findings of Miller and Lee (1999), Conchas (2000) and Rashid et al. (2003). These findings may be explained by the fact that the relationships among these variables are more complex than anticipated, and that different types of commitment

(affective, continuance and normative) may need to be considered. This multidimensional construct could perhaps also be examined within a mediational framework.

6. CONCLUSION AND IMPLICATIONS

The purpose of this study was to investigate the relationships between organisational culture, market orientation, organisational commitment and organisational performance in non-profit health organisations. Data were collected using validated scale instruments drawn from relevant literature. The results evidence the importance of corporate culture and market orientation in non-profit organisations and highlight their impact on organisational performance. With regard to the market orientation consequences, the results suggest that higher levels of market orientation result in both high levels of organisational commitment and organisational performance.

The results of this study have relevance for both non-profit organisational theory and practice. From a theoretical standpoint, the current study adds to the body of knowledge in the management and marketing literatures.

Firstly, this study offers an incremental contribution to the marketing literature by integrating organisational culture, market orientation, organisational commitment and performance in a single model. Hitherto there have been few empirical studies that integrate these constructs (Kara et al. 2004; Rathert et al. 2009).

Secondly, managers need to know the type of culture which prevails in their organisations and, as a result of that, reinforce their specific characteristics to potentiate the role of other organisational dimensions (Rahid et al., 2003).

Thirdly, managers could use these insights to motivate and reinforce employee commitment by building on their loyalty, identification and involvement. In line with Rashid et al. (2003) if the bureaucratic culture predominates, managers should endeavour to change the culture to better fit the objectives of organisation. This study found that so-called 'clan culture' positively affects organisational commitment, thus supporting the importance of subcultures in organisations (Lok and Crawford, 1999).

Fourthly, the study provides evidence of the importance of several strategic management concepts (organisational culture, organisational commitment and market orientation) within the field of non-profit health care management. This finding reinforces the view that organisational culture is the central driver for superior business performance irrespective of sector (Gallagher and Brown, 2007). Results from the present study lead us to the conclusion that non-profit health organisations experience positive outcomes when they become increasingly oriented to their markets.

Fifthly, as Leisen et al. (2002, p.217) suggest, “organisational culture would, at least in part, impact or determine various aspects of market orientation”. Therefore, there is potential for studies that analyse the interplay between organisational culture and market orientation more closely, including those which assume market-oriented behaviours to be a response derived from organisational culture itself (Leisen et al. 2002).

To sum up, this study addresses key arguments that link several organisational variables, such as corporate culture, organisational commitment, market orientation and organisational performance. These organisational variables have been analysed in the context of the non-profit health sector which has been undergoing a period of major change. The new organisational model for the sector, which is closer to management-oriented practices, is less bureaucratic, more efficient and is more responsive to the needs of citizens and other stakeholders.

From a practitioner perspective the importance is shown of clearly setting out organisational goals in relation to satisfying customer needs and ensuring employee commitment. Specifically, managers need to understand the important role played by the prevailing culture in their organisations in order to develop those culture types that encourage employee commitment. In the changing environment of healthcare, where managers are constantly seeking new ways to stimulate employee commitment and enhance organisational success, this is particularly the case. Organisational culture is crucial to these organisations “both as a lever for quality improvement and as an aid for understanding the management of change” (Scott et al. 2003c, p. 941). Therefore, creating a work environment that fosters the particular cultural dimensions of atmosphere, connectedness and cutting edge programming, while limiting the constraining aspects of formalisation, appears to be an important route to enhancing organisational performance. The identification of cultural attributes that facilitate

or inhibit performance allows managers from non-profit health organisations to develop coherent strategies for cultural change.

This study provides a better understanding of the strategies used by these organisations so that appropriate policies can be implemented to match user and employees' needs. Besides, most activities run by non-profit organisations are also embedded with a public and social purpose reinforcing an extensive partnership between these organisations and state agencies.

Limitations and Future Research

This study has a number of limitations. Firstly, the research was confined to a single industry, that of non-profit health organisations. Although this approach allows a deeper understanding of the actors under study to be achieved, the findings cannot be generalised to other sectors or regions. However, given the pressures created by the current economic climate for health and other non-profit organisations in other countries, the issues addressed are likely to be more widely relevant. Future studies should examine the same relationships across a wider sample or should include organisations from different sectors or those operating in different cultural contexts.

Secondly, the use of a single informant design relying on the CEOs of the sampled organisations as the unit of analysis is potentially a limitation. Future studies that capture data from multiple informants could productively capture the views of a range of employees and also of customers or service users. Thirdly, this study relies mainly on one dimension of organisational commitment, the affective commitment. Future studies could examine the three component model of organisational commitment proposed by Meyer and Allen (1997) and operationalised by authors such as Bang, Ross and Reio (2013). Finally, this was a cross-sectional study, providing a picture of the market orientation, organisational culture and organisational commitment of health organisations at one point in time. This limits the ability of the researcher to discover how the degree of market orientation and organisational culture and organisational commitment has evolved over time. Thus, future research adopting a longitudinal design is desirable in order to accomplish this objective.

References

- Appiah-Adu, K. and Blankson, C. (1998), "Business Strategy, Organizational Culture, and Market Orientation", *Thunderbird International Business Review*, Vol. 40, N° 3, pp. 235-257.
- Appiah-Adu, K. and Ranchhod, A. (1998), "Market Orientation and Performance in the Biotechnology Industry: An Exploratory Empirical Analysis", *Technology Analysis & Strategic Management*, Vol. 10, N° 2, pp.197-210.
- Armstrong, J. and Overton, T.S (1977), "Estimating Nonresponse Bias in Mail Surveys", *Journal of Marketing Research*, Vol. 14, pp. 396-402.
- Bang, H., Ross, S. and Reio, T. (2013), "From motivation to organizational commitment of volunteers in non-profit sport organizations, *Journal of Management Development*, Vol. 32, N° 1, pp. 96-112.
- Barclay, D., Thompson, R. and Higgins, C. (1995), "The partial least squares (PLS) approach to causal modelling: Personal computer adoption and use as an illustration", *Technology Studies*, Vol. 2, N°2, pp. 285-309.
- Barney, J. (1986), "Organizational Culture: Can it be a source of sustained competitive advantage?", *The Academy of Management Review*, Vol. 11, N°3, pp. 656-665.
- Bateman, T. and Strasser, S. (1984), "A longitudinal analysis of the antecedents of organizational commitment", *Academy of Management Journal*, Vol. 27, N°1, pp.95-112.
- Beer M (2009) *High commitment, high performance*, John Wiley & Sons.
- Bentler, P. (2006), *EQS Structural Equations Program Manual*, Multivariate Software, Encino, CA.
- Buchanan, B. (1974), "Building organisational commitment: the socialisation of managers in work organisations", *Administrative Science Quarterly*, Vol. 19, pp. 533-46.
- Cameron, K. and Freeman, S. (1991), "Culture, Congruence, Strength and Type: Relationship to Effectiveness", *Research in Organizational Change and Development*, Vol.5, pp.23-58.

- Cano, R. Carrillat, F. and Jaramillo, F. (2004), "A meta-analysis of the relationship between market orientation and business performance: evidence from five continents", *International Journal of Research in Marketing*, Vol. 21, pp.179-200.
- Caruana, A. Ramaseshan, B. and Ewing, M.T (1999), "Market Orientation and Performance in the Public Sector: The Role of Organisational Commitment", *Journal of Global Marketing* Vol. 12, N° 3, pp.59-79.
- Castro C.B, Armario E.M and Rio, M. (2005), "Consequences of Market Orientation for Customers and Employees", *European Journal of Marketing*, Vol. 39, N°5-6, pp.646-675.
- Cervera, A., Mollá, A. and Sánchez, M. (2001), "Antecedents and consequences of market orientation in public organisations", *European Journal of Marketing*, Vol. 35, N° 11/12, pp. 1259-86.
- Churchill, G. (1979), "A paradigm for developing better measures of marketing constructs", *Journal of Marketing Research*, Vol. 16, February, pp. 64-73.
- Cohen, A. (1992), "Antecedents of organisational commitment across occupational groups: A Meta-Analysis", *Journal of Organisational Behaviour*, Vol. 13, pp. 539-558.
- Conchas, E. (2000), "Company profits tied to employee commitment", *Dallas Business Journal*, Vol. 2, N° 29, pp. 37-48.
- Cruz, S.G. and Ferreira, M.M.F. (2012), "Percepção da cultura organizacional em instituições públicas de saúde com diferentes modelos de gestão", *Revista de Enfermagem Referência - III - N.º 6*, pp.103-112.
- Davies, H. Nutley, S. & Mannion, R. (2000), "Organizational Culture and Quality of Health Care", *Quality in Health Care*. Vol. 9, pp. 111-9.
- Davies, H.T.O., Mannion, R., Jacobs, R., Powell, A.E., Marshall, M.N. (2007), "Exploring the relationship between senior management team culture and hospital performance", *Medical Care Research and Review* Vol. 64, pp. 46–65.
- Denison, D. (1990), *Organisational culture and organisational effectiveness*. John Wiley, NY.
- Denison, Daniel (1996). "What is the difference between organizational culture and organizational climate? A native's point of view on a decade of paradigm wars". *Academy of Management Review* vol.21 n.3, 619-654.
- Deshpandé, R. and Webster, F. Jr. (1989), "Organizational culture and marketing: Defining the research agenda", *Journal of Marketing*, Vol. 53, January, pp.3-15.

- Deshpandé, R. Farley, J.U and Webster, F. Jr (1993), “Corporate culture, customer orientation and innovativeness in Japanese firm: a quadrad analysis”, *Journal of Marketing*, Vol. 57, January, pp. 23-27.
- Deshpandé, R. Farley, J. (2004), “Organizational culture, market orientation, innovativeness, and firm performance: An international odyssey”, *International Journal of Research in Marketing*, Vol. 21, pp. 3-22.
- Dess, G.G and Robinson, R.B. (1984), “Measuring organizational performance in the absence of objective measures: The case of privately-held firm and conglomerate business units”, *Strategic Management Journal*, Vol. 5, N°3, pp.265-273.
- Draft, R. (2005), *The leadership experience*, 3rd edition, Thompson-Southwestern, Vancouver.
- Farley, J.U, Hoenig, S. and Ismail, Z. (2008), “Organizational culture, innovativeness, market orientation and firm performance in South Africa: an interdisciplinary perspective”, *Journal of South African Business*, Vol. 9, N° 1, pp.59-76.
- Flamholtz, E. (2001), “Corporate culture and the bottom line”, *European Management Journal*, Vol. 19, N°3, pp. 268-275.
- Ford, J.D. and Schellenberg, D.A. (1982), “Conceptual issues of linkage in the assessment of organizational performance”, *The Academy of Management Review*, Vol. 7, Jan, pp. 49-58.
- Gallagher, S. and Brown, C. (2008), “A strong market culture drives organisational performance and success”, *Employment Relations Today*, Vol. 35, N° 1, pp. 25-31.
- Gerowitz, M., L. Lemieux-Charles, Heginbothan, C. & Johnson, B. (1996). ‘Top management culture and performance in Canadian, UK and US hospitals’. *Health Services Management Research*, Vol. 6, N.3, pp. 69-78.
- Goodman, E. A, Zammuto, R.F, Gifford, B.D, (2001), “The competing values framework: understanding the impact of organizational culture on the quality of work life”, *Organizational Development Journal*, Vol. 19, N° 3, pp. 58–69.
- Gregory, B.T, Harris S.G, Armenakis, A.A, Shook, C.L. (2009), “Organizational culture and effectiveness: A study of values, attitudes, and organizational outcomes”, *Journal of Business Research*, Vol. 62, N°7, pp. 673-679.
- Haggett, P. (1975), *Geography: A Modern Synthesis*, Harper & Row, New York, NY.

- Hair, J.F. Jr. Anderson, R. Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, Prentice Hall: New Jersey.
- Harris, L. (1998), "Cultural domination: the key to a market oriented culture?", *European Journal of Marketing*, Vol. 32, N° 3 / 4, pp.354-373.
- Harris, L.C. and Ogbonna, E. (1999), "Developing a market oriented culture: A critical evaluation", *Journal of Management Studies*, Vol. 36, N° 2, pp. 177-198.
- Harris, L.C. and Ogbonna, E. (2002), "The unintended consequences of culture interventions: A study of unexpected outcomes", *British Journal of Management*, Vol. 13, N°1, pp.31-49.
- Hartnell, C. Ou, A., Kinicki, A. (2011), "Organizational culture and organizational effectiveness: A meta-analytic investigation of the competing values framework's theoretical suppositions", *Journal of Applied Psychology*, Vol. 96, N°4, pp.677-694.
- Holmes, S. and Marsden, S. (1996), "An exploration of the espoused organizational cultures of public accounting firms", *Accounting Horizons*, Vol. 10, N°3, pp.26-53.
- Homburg, C. and Pflesser, C. (2000), "A Multiple-Layer Model of Market-Oriented Organizational Culture: Measurement Issues and Performance Outcomes", *Journal of Marketing Research*, Vol. 37, N°11, pp.449-462.
- Hunt, S., Sparkman, R. and Wilcox, J. (1982), "The pretest in survey research: Issues and preliminary findings", *Journal of Marketing Research*, Vol. 19, May, pp. 269-73.
- Hwang, I.S. and Chi, D.J. (2005), "Relationships among Internal Marketing, Employee Job Satisfaction and International Hotel Performance: An Empirical Study", *International Journal of Management*, Vol. 22, N°2, pp.285-293.
- Jaworski, B.J. and Kohli, A.K. (1993), "Market Orientation: Antecedents and Consequences", *Journal of Marketing*, Vol. 57, July, pp.53-70.
- Jeavons, T. H. (1992), "When the management is the message: relating values to management practice in non-profit organizations", *Non-Profit Management and Leadership*, Vol. 2, N° 4, pp. 403-17.
- Jones, G. (1983), "Transaction costs, property rights, and organisational culture: an exchange perspective", *Administrative Science Quarterly*, Vol. 28, pp. 454-67.

- Kara, A. Spillan, J.E. and DeShields, O.W. (2004), "An Empirical Investigation of the Link Between Market Orientation and Business Performance in Non-Profit Service Providers", *Journal of Marketing Theory and Practice*, Vol. 22, N° 2, pp.59-72.
- Kim, S. (2005), "Individual-Level Factors and Organisational Performance in Government organisations", *Journal of Public Administration Research and Theory*", Vol. 15, N° 2, pp.245-261.
- Kirca, A. Jayachandran, S. and Bearden, W.O. (2005), "Market Orientation: A Meta-Analytic Review and Assessment of Its Antecedents and Impact on Performance", *Journal of Marketing*, Vol. 69, April, pp.24-41.
- Kohli, A.K. and Jaworski, B.J. (1990), "Market Orientation: The Construct, Research Propositions, and Management Implications", *Journal of Marketing*, Vol. 54, April, pp.1-18.
- Kohli, A.K. Jaworski, B.J. and Kumar, A. (1993), "MARKOR: A Measure of Market Orientation", *Journal of Marketing Research*, Vol. 30, November, pp.467-477.
- Kumar, K., Subramanian, R. and Yauger, C. (1998), "Examining the Market Orientation-Performance Relationship: A Context-Specific Study", *Journal of Management*, Vol. 24, No. 2, 201-233
- Leisen, B. Lilly, B. and Windsor, R.D. (2002), "The effects of organizational culture and market orientation on the effectiveness of strategic marketing alliances", *Journal of Services Marketing*, Vol.16, N° 3, pp.201-22.
- Lok, P. and Crawford J. (1999), "The relationships between commitment and organizational culture, subculture, leadership style and job satisfaction in organizational change", *Leadership & Organization Development Journal*. Vol. 20, N.7, pp. 365-373.
- Lok, P. and Crawford, J. (2001), "Antecedents of organisational commitment and the mediating role of job satisfaction" *Journal of Managerial Psychology*, Vol.16, N°8, pp.594-613.
- Lok, P. and Crawford J. (2004), "The effect of organisational culture and leadership style on job satisfaction and organisational commitment", *Journal of Management Development*, Vol. 23, N° 4, pp. 321-338.
- Lok, P., Westwood, B., Rhodes, J. and Wang, P. (2009), "The influence of organizational subcultures in health organizations", *ITLS Working Paper*, ISSN 1832-570X.

- Macedo, I. and Pinho, J.C. (2006), "The relationship between resource dependence and market orientation", *European Journal of Marketing*, Vol. 40, N°5-6, pp.533-553.
- Mannion R, Davies HT, Marshall MN (2005), "Cultural characteristics of "high" and "low" performing hospitals". *Journal of Health Organization Management*, Vol. 19, N. 6, pp. 431-439.
- Martin, J., (1992). *Cultures in Organizations: Three Perspectives*. New York, Oxford University Press
- Maxwell, G. and Steele, G. (2003), "Organisational commitment: a study of managers in hotels. International", *Journal of Contemporary Hospitality Management*, Vol.15, N°7, pp.362-369.
- Meyer, J. and Allen, N. (1997), *Organizational Commitment in the Workplace: Theory, Research and Application*, Sage, Thousand Oaks, CA.
- McClure, R.E. (2010), "The influence of organizational culture and conflict on market orientation", *Journal of Business & Industrial Marketing*, Vol. 25, N°7, pp.514–524.
- McKinnon, J.L. Harrison, G.L. Chow, C.W. Wu, A. (2003), "Organizational culture: Association with commitment, job satisfaction, propensity to remain, and information sharing in Taiwan", *International Journal of Business Studies*, pp.25–44.
- Miller, D. and Lee, J. (1999), "People matter: commitment to employees, strategy and performance in Korean firms", *Strategic management Journal*, Vol.20, pp.579-93.
- Mohammed, A., Hinson, R. (2012), "Market orientation in a developing economy public institution: Revisiting the Kholi and Jaworski's framework", *International Journal of Public Sector Management*, Vol. 25, N° 2, pp. 88-102.
- Moorman, C. (1995), "Organizational market information processes: culture antecedents and new product outcomes", *Journal of Marketing Research*, Vol.32, August, pp.318-35.
- Narver, J.C, Slater, S. and Tietje, B. (1998), "Creating a market orientation", *Journal of Market-Focused Management*, Vol. 2, N°3, pp.241-255.
- Narver, J.C. and Slater, S.F. (1990), "The Effect of a Market Orientation on Business Profitability", *Journal of Marketing*, Vol. 54, N° 4, pp.20-35.
- Naudé, P. and Desai, J. (2003), "Identifying the Determinants of Internal Marketing Orientation", *European Journal of Marketing*, Vol.37, N°9, pp.1205-1220.

- O'Reilly, C. (1989), "Corporations, culture, and commitment: Motivation and social control in organizations", *California Management Review*, Vol. 314, pp.9-25.
- Pettigrew, Andrew (1979). "On studying organizational cultures". *Administrative Science Quarterly* Vol.24 N.4, pp.570-581.
- Piercy, N.F. Harris, L.C. and Lane, N. (2002), "Market Orientation and Retail Operatives' Expectations", *Journal of Business Research*, Vol. 55, pp.261-273.
- Podsakoff, P., MacKenzie, S. Lee, Jeong-Yeon. and Podsakoff, N. (2003), "Common method biases in Behavioral Research: A critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88, N° 5, pp. 879-903.
- Pulendran, S. Speed, R. and Widing, R.E. (2000), "The Antecedents and Consequences of Market Orientation in Australia", *Australian Journal of Management*, Vol.25, N°2, pp.119-143.
- Raju, P., Lonial, S., Gupta Y., Ziegler, C. (2000), "The relationship between market orientation and performance in the hospital industry: a structural equations modeling approach", *Health Care Manag Sci.* 2000 Jun; Vol. 3, No.3, pp.237-47.
- Rashid, Z., Sambasivan, M. and Johari, J. (2003), "The influence of corporate culture and organisational commitment on performance", *The Journal of Management Development*, Vol. 22, N° 7/8, pp.708-728.
- Rathert, C. Ishqaidef, G. and May, D. (2009), "Improving work environments in health care: test of a theoretical framework", *Health Care Management Review*, Vol. 34, pp.334-43.
- Richard, O.C. McMillan-Capehart, A. Bhuian, S.N. and Taylor, E.C. (2009), "Antecedents and consequences of psychological contracts: Does organizational culture really matter?", *Journal of Business Research*, Vol. 62, pp.818-825.
- Rodrigues, A.P. and Pinho, J.C. (2010), "Market orientation, job satisfaction, commitment and organisational performance: the specific case of local public sector", *Transforming Government: People, Process and Policy*, Vol. 4, N° 2, pp.172-192.
- Rose, R.C.; Kumar, N.; Abdullah, H. and Ling, G.Y. (2008), "Organizational Culture as a Root of Performance Improvement: Research and Recommendations", *Contemporary Management Research*, Vol. 4, No. 1, March, Pages 43-56.
- Ryan, A.M, Schmit, M.J. and Johnson, R. (1996), "Attitudes and effectiveness: examining relations at an organizational level", *Personnel Psychology*, Vol. 49, pp.853-882.

- Schneider, B. and Rentsch, J. (1988), *Managing climates and cultures: A futures perspective*. In Hage, J. (Ed.), *Futures of organizations*, Lexington Books, Lexington, MA.
- Schneider, B. Hanges, P.J., Smith, D.B. and Salvaggio, A.N. (2003), "Which Comes First: Employee Attitudes or organisational Financial and Market Performance?", *Journal of Psychology*, Vol. 88, N° 5, pp.836-851.
- Scott T. Mannion R., Marshall, M., & Davies, H. (2003b), "Does organizational culture influence health care performance? A review of the evidence", *Journal of Health Services Research and Policy*. Vol. 8, N. 2, pp. 105-117.
- Scott, T. Mannion, R. Davis, H. and Marshall, M. (2003c), "The quantitative measurement of organizational culture in health care: A review of the available instruments", *Health Services Research*", Vol. 38, N° 3, pp. 923-945.
- Scott, T. Mannion, R., Davies, H. & Marshall, M.I. (2003a). 'Implementing Culture change in health care: theory and practice', *International Journal for Quality in Health Care*, Vol. 15, N. 2, pp. 111-118.
- Siguaw, J.A. Brown, G. and Widing, R.E. (1994), "The Influence of the Market Orientation of the Firm on Sales Force Behaviour and Attitudes", *Journal of Marketing Research*, Vol. 31, N° 1, pp.106-116.
- Slater, S.F. and Narver, J.C. (1995), "Market orientation and the learning organization", *Journal of Marketing*, Vol. 59, N° 3, pp. 63-74
- Smircich, Linda (1983), "Concepts of culture and organizational analysis", *Administrative Science Quarterly* Vol.28 N.3, pp. 339-358.
- Steers, R. (1977), "Antecedents and outcomes of organisational commitment", *Administrative Science Quarterly*, Vol. 22, N° 1, pp. 46-56.
- Venkatraman, N. and Ramanujam, V. (1987), "Measurement of business economic performance: an examination of method convergence", *Journal of Management*, Vol. 13, N° 1, pp.109-123.
- Wallach, E.J. (1983), "Individuals and organizations: the cultural match", *Training & Development Journal*, Vol. 37, No. 2, pp. 29-36.
- Wilson, A.M. (2001), "Understanding organisational culture and the implications for corporate marketing", *European Journal of Marketing*, Vol. 35, N°3/4, pp.353 – 367.
- Wood, V.R., Bhuian, S. and Kiecker, P. (2000), "Market Orientation and Organizational Performance in Not-for-Profit Hospitals", *Journal of Business Research* 48, 213–226.

Yiing, L. Ahmad, Z. (2009), "The moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance, Leadership & Organization Development Journal, Vol. 30, N° 1.