

ISO 9001 IN PORTUGAL: ITS IMPLEMENTATION UNDER A HOLISTIC THEORETICAL APPROACH

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Abstract

The aim of this research is to analyse the placement and efficiency of ISO 9001 on different sectors of activity under a holistic an integrative theoretical approach based on the Contingency theory, the Institutional theory and the Resources-Based View (RBV). This perspective was used in a broad empirical study, under a qualitative methodology, concerning Portuguese companies from different sectors of activity. This study used ISO 9001 structure for the interviews what revealed quite useful for the organizations. According to the findings, a ranked combination of the theoretical frame was constructed and the analysis of the efficiency of ISO 9000 revealed quite interesting. As to some limitations of this study they consist in: the consideration of just three sectors of activity and its domestic geographical placement. Finally, a relevant contribution to the state of art was achieved following some relevant literature suggestions.

Key words: *contingency theory, efficiency, institutional theory, ISO 9001, performance, RBV.*

Introduction

Under the Quality Management (QM) paradigm, ISO 9001 is arguably the most influential contribution there has been to date. The purpose of this paper aims to consider the efficiency of ISO 9001 on management but one should bear in mind that in spite of this research purpose many successful companies do not run for ISO 9001.

This paper one intends to associate ISO 9001 with the organization financial performance, under a holistic theoretical approach. To achieve this goal the paper is arranged as follows: a holistic theoretical framework based on literature review (1) will be considered then, the methodology steps concerning data observation and discussion of results will be described (2) and at last the conclusion will emerge (3).

Theoretical Framework upon Literature Review

The holistic theoretical framework considered names the Contingency, the Institutional and the Resources-Based View (RBV) theories.

Contingency theory argues that there is no ideal or optimal way to manage. Wiio and Golhaber (1993) refer that contingency has to do with leadership and Fiedler (1992) says that it is connected to the human resources. Vroom (1988) selects the motivation and involvement of the employees but Smith (1984) refers that the standards of behavior translate some power. In brief, Somsuk (2010) says that it is a combination of ideas about the environment of the organizations which is permanently in adjustment to its subsystems. Adversely to the contingency and inside the organization lies the institutional theory. This perspective considers

the norms, rules, regulations, procedures and routines that make the structure of the organization (Scott, 1995). Companies many times seek legitimacy through processes of isomorphism thus becoming a kind of benchmarking (O'Connor *et al.* 2004). Coercive isomorphism is a form of coercion by a third party (State, Trade Unions, clients or suppliers) while the normative relates to the standards across the classes of professionals (Levitt & Nass, 1989; Chua & Petty, 1999; Lowrey, 2005; Leiter, 2005). Under an efficiency inspiration RBV theory suggests that the organizations use specialized resources (Wernerfelt, 1984) based on knowledge (knowledge based) or on power (competence based from Hamel & Prahalad, 1994). Somsuk (2010) considered it on a twofold perspective explicit knowledge (information) and tacit knowledge (expertise). Teece *et al.* (1994) and Dirickx and Cool (1989) about this matter mentioned the dynamic capacity for change. Thus, business strategy of any organization depends on the resources that are skills (Oliver, 1997) and its ability to keep routine production over time (Wernerfelt, 1984).

Under the umbrella of these theoretical perspectives this paper intends to reinforce the state of art as to quality and performance following Haversjo (2000), Heras *et al.* (2002), Furtado (2002), Chong and Rundus (2004), Pereira (2005), Ribeiro (2007), Casadesus *et al.* (2008), Martinez and Jimenez (2008) and Sampaio (2008) authors who considered that there is some kind of relation between quality and performance.

Methodology of Research

The methodological approach will consist of a qualitative perspective and its approach is a case study (Yin 2009). The starting research questions motivated and oriented a literature review. From this, some propositions (named as assertions) were constructed. Their relation and interconnection led to a theoretical model of analysis. Associated to this model a criterion for result interpretation was also considered. Data for this analysis concerns the information got from semi structured interviews achieved in the defined sample (units of analysis). The results will be evaluated according to the defined theoretical criteria further enabling conclusions.

Research Questions, Issues and Assertions

The initial research questions motivated the literature review here defined per issues (Table 1). From them propositions arise which contribute to the construction of assertions (a1-a10).

Table 1. Main issues and related assertions.

Issues	Assertions
Organisation and quality	a1 - the structure of ISO 9001 certified organisations may be more enhanced a2 - ISO 9001 may contribute to a culture reinforcement
ISO 9001 implementation process	a3 - after ISO 9001 certification organisations may develop better management practices a4 - with quality certification organisations may register a more motivated human structure a5 - with ISO 9001 quality there is a greater customer loyalty
The effects of ISO 9001 implementation	Non-financial a6 - a large part of quality certifications is driven by the market a7 - the focus of quality must come from top management
The effects of ISO 9001 implementation	Financial (Immediate) a8 - costs related to quality may be significant a9 - good practices of management may create conditions for a good management performance (Mediate) a - 10 a good management performance can lead to a good financial result

Assertions Relation (from a1 to a10)

a1 and a2 organisations with a lean structure (Kanter, 1989) are more ready to implement a quality management system. Dale (1999) argues that these organizations having an ISO 9001 have procedures and Wiio (1993) says that this means something very institutional. So, ISO 9001 certification helps organisations to have a defined and clear structure – a1 (Schein, 1992). Kotter and Heskett (1992) and Lindby *et al.* (1999) suggest that organisations culturally more open are better hosts for quality. It seems that afterwards there is a reinforcement of a quality culture - a2.

a3 to a5 top management should know how to involve the human resources of the organisation (Mac Adam & Oneill, 1999; Kaplan & Norton, 1992). Employees working for quality should have a prior knowledge about it and ability for change (Dillard & Tinker, 1996). Quality process effects result in expenses which should be considered an intangible asset (Kaplan & Norton, 2001; Heskett *et al.* 1994). Best management practices should emerge in order to better manage these assets - a3. Quality certified organisations may show a more motivated human structure and the continuous improvement perspective is a natural event - a4. From this quality process (Crosby, 1979; Feigenbaum, 1991; Dean & Bowen, 1994) greater customer loyalty will emerge - a5.

a6 to a10 some authors argue ISO 9001, as a competitive advantage (Porter, 1987; Senge, 1994; Basu, 1997; Stern, 2001), as a market requirement (Oakland & Tanna, 2007) or as a customer demand (Zairi, 1996), leading to -a6. But quality must come from the top - a7. Expenditure on quality should be handled carefully (Yang, 2008; Shirley, 1997) - a8. Good quality management practices may create conditions for a good management performance - a9; after all the motivation and involvement of the top of the hierarchy (Zairi, 1996; Weldeghiorgis, 2004; Kaplan & Norton, 1992; Walsh, 2006) may contribute to a good financial result - a10.

Assertions Inter Relation under a Theoretical Scope

According to the above referred management theories - institutional, contingency and resources based view (RBV) – and considering the logical connection of the literature review assertions the following Figure 1 gathers all of them.

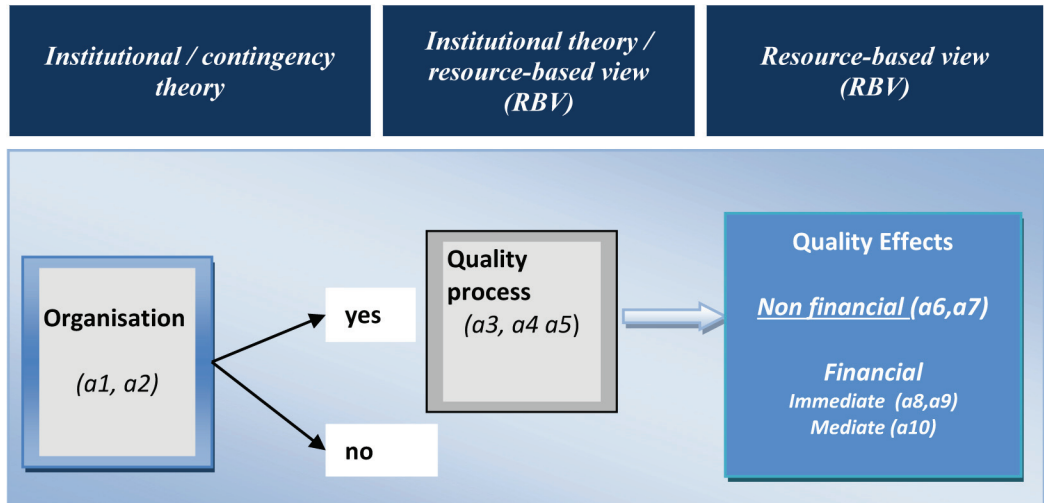


Figure 1: Theoretical approach of the Model of Analysis.

Institutional and/or contingency theory (a1- a2): the organisation structure is connected to the cultural factor but these elements may be of an institutional or of a contingent nature.

Institutional theory/RBV (a3 - a5): after ISO 9001 certification, organisations can develop better management practices and a more motivated human structure which will result in greater customer loyalty. These facilities may result from an institutional or a resource based perspective.

Resources View - RBV (a6 - a10): a large part of quality certification is driven by the market. Yet the focus of quality should come from top management. The financial effects will be a consequence. Although it is well known that costs related to quality may be significant, the financial effects will be a consequence once the good practices associated to a quality management system may create conditions for a successful management performance. This model of analysis granted the following criteria of evaluation for the findings.

Criteria for Results Comprehension

The combination of the three management theories was considered: from the institutional (Scott, 1995; Oliver, 1997) considering the contingency (Wiio, 1993) or the resources-based view RBV (Wernerfelt, 1984). In Figure 2, the different circles intend to interpret the findings got. The circles greater or lesser highlighted in extent will mean the degree of frequency in which the specific term is used.

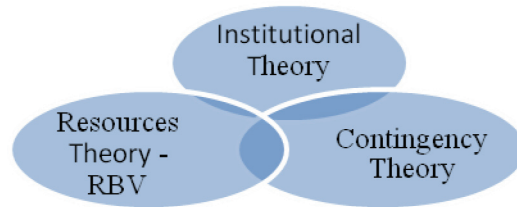


Figure 2: Criteria for interpreting results.

This will allow fitting the results of the analysis in the sequential positioning of theories thus displaying the size of the representative image. The intersection of theories means a double or triple simultaneous theoretical interpretation.

Profile of the Units of Analysis and Means of Analysis

From the Portuguese website of stock exchange companies CMVM (accessed on February 25, 2010) the financial elements relating to listed companies, ISO 9001 certified, were taken. These organisations belong also to Euronext being classified by an ICB acronym meaning – Industry Classification Benchmark. ICB is a detailed and comprehensive structure for the sectors and respective industry, facilitating the comparison across companies through the economic activity classification. The following sectors will be considered: ICB 2350 – Construction (where two companies will be selected) and ICB 5330 – Food and retail (where two companies will be selected). In addition, it was also considered a sector without ISO 9001 certification – ICB 5550, concerning “media” where two companies were also selected.

Interviews were developed according to a guide. This guide was written in two versions – one for quality certified companies and the other for not quality certified companies – and was prepared according to the logical sequence of subjects formatted in the ISO 9001 structure. Its topics contents were the result of the framework of assertions (a1: a10) created upon literature propositions.

Therefore, it is essential to address ISO 9001 key points, identified by 4.5.6.7.8.¹ parts of the Norm contents and related case study assertions:

Table 2. ISO 9001 contents and related assertions.

Quality Management System (4)	QMS	a1; a5
Management Commitment (5)	MC	a2; a3; a7
Resource Management (6)	RM	a4; a8
Product Realisation (7)	P/S	a6
Measurement, analysis and improvement (8)	MAI	a9; a10

All the assertions listed from one to ninth, concern nonfinancial performance and the tenth assertion concerns financial performance. From these, the questions for the interview emerged enabling the construction of the guide that was specifically applied in the following companies of which the characterization follows.

¹ From ISO 9001 standard points 1 to 3 of the ISO 9001 Standard are respectively: 1. Fundamental concepts of its application, 2. Regulatory framework and 3. Terms and definitions that are not relevant or fundamental for the present research aim.

ISO 9001 certified Companies

Company 1 and Company 2

ICB 5330 - Food and Retail: Food and retail: this ICB in Euronext list, obtained in May 2010, reaches a global value of 12,247,000 Euros, where Company 1 contributes with an income of 6,894,000 Euros, representing 56% of that value, and Company 2 with 5,353,000 Euros, representing the remaining 44%.

Company 3 and Company 4

ICB 2350 - Construction: Company 3 and Company 4 - In the construction sector, which, (from *Euronext*, May 2010) recorded a global value of 7,524,000 Euros in 2008, Company 3, with a turnover of 1,868,000 Euros, represents about 25% and Company 4, with 835,000,000 Euros, represents about 11%.

ISO 9001 not certified companies

In these companies, because they are not ISO 9001 certified some questions concerning quality certification were not considered.

Company 5 and Company 6

ICB 5550 - In 2008 the media industry (from *Euronext*, May 2010) totalled 1,439,000 Euros, where Company 5 records 270,000 Euros income and represents 19% of that amount, and Company 6, with 122,000 Euros, represents 8%.

Research Results

From the achieved interviews the results were positioned face to the initial research questions and enabled interesting findings as Table 3 summarizes.

Table 3. Findings from qualitative analysis.

Initial research questions	Findings
<i>Characteristics and reasons that explain the choice of ISO 9001 quality in the organizations</i>	The market and the size of organization as well as culture are good and steady reasons
<i>Income and expenses associated to the quality process</i>	Usually accounting department of companies can identify them but they are not used as a management tool
<i>The register of costs related to quality certification as an intangible assets</i>	No interviewee considered this as somehow important for management
<i>Effects of ISO 9001 implementation on management</i>	If organizations do not possess and ISO 9001 they will not be in market, so, no competitiveness for them
<i>Quality management performance</i>	Usually the policy and objectives of quality help the management through the establishment of good practices

Discussion

The cross case analysis of results was inserted in the theoretical scope according to the above defined criteria. The resources theory (RBV) is the more relevant one: the market was reason number one for the interviewees; Knowledge based (Prahalad & Hamel, 1990) and dynamic capability models (Teece *et al.* 1994; Dirickx & Cool, 1989) are to be elected because organizations need skilled and dynamic people but sometimes they do not take advantage of

them. When we compare the organizations' performance we call for the institutional theory as to its mimetic perspective. Opinions confirm that the control tools across the functioning of the organisation are mostly associated to the quality process (Levitt & Nass, 1989; Chua & Petty, 1999; Lowrey, 2005; Leiter, 2005) meaning to be managed anything should be measured (Shellhorn, 2007). Yet it seems that organizations do not pay too much attention to the quality costs which sometimes may be relevant. It is somehow anacronic when organizations say that the objectives of quality process may help management through their best practices. It seems that, when organizations are compelled (by the market) to use a standard they do it, what means that ISO 9001 may be considered as an institutional artefact as to Oliver (1997). Yet one must bear in mind that all the rules and procedures overcoming an institutional process may be changed due to unexpectable events like the contingency of the market. As a final sum up discussion of these results one could mention: - as to *Companies not having ISO 9001*: it was interesting to note, that not-certified ISO 9001 companies, were those advocating more strongly the connection about quality and performance (perhaps because they did not start such a process and did not know what it was needed to implement it); - as to *Companies having ISO 9001*: the explanation of their choice was *ad contrario* saying that a non quality certification would become a competitive disadvantage. This comes out to be quite opposite: the organizations defend their point of view through the opposite choice evaluation.

By the end and confirming literature one could say that when ISO 9001 efficiency is relevant for the organizations it means that companies have a devoted belief in/on quality and for sure they are quite well placed in the market.

Conclusions

The purpose of the research was to consider the efficiency of ISO 9001 on management under a diverse theoretical approach. From RBV (Wernerfelt, 1984) and as literature suggests, one could say that from findings a major conclusion puts forward a need for ISO 9001 certification, as a resource for companies in order to persist in the market. As to its efficiency one can say that it is a consequence of the implementation of this process and it is a very institutional process as Oliver (1997) and Scott (1995) would consider it. Thus, ISO 9001 is placed in the organizations' environment, under the scope of a theoretical holistic umbrella made up of resources inserted under an institutional perspective, which may be changed at any time by unforeseen events included in the contingent of the present times. And this last contingent event as Somsuk (2010) after Wiio and Golhaber (1993) would consider it means that everything may be changed at any time through unexpectable events. The fact of a large global company not being quality certified is an evidence of a potential competitive disadvantage. This research gave life to Somsuk (2010) work that was only a theoretical approach about ISO 9001 implementation.

As a personal final conclusion one might say that ISO itself can be considered as a resource (RBV) that implies the good use of many other resources in the organizations (human and material) providing for some rules and procedures about management (institutional) in order to face a dynamic market (contingent).

A limitation of this study is the consideration of just three different sectors of activity – construction, food and media – and a future path of investigation would be to enlarge this scope of analysis including other types of activity. Besides, this study was achieved in Portugal – just one country – and it would be very nice to consider different countries in order to get some global conclusions.

Another suggestion for future research would be to consider successful companies that do not want to run for an ISO 9001 and try to explain their reasons for this choice.

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