

ISO 9001 under a theoretical approach

Case study: food, construction and media industry

Alcina de Sena Portugal Dias

alcina@iscap.ipp.pt; alcinaportugaldias@gmail.com

Research Centre affiliation: CECEJ (ISCAP), UNIAG (IPP), Europagune (País Basco)

Instituto Superior de Contabilidade e Administração do Porto/ IPP

Rua Jaime Lopes Amorim, s/n

4465-004 S. Mamede de Infesta, telefone: +351 22 9050000

Abstract:

The aim of this research is to analyse the placement and efficiency of ISO 9001 on different sectors of activity under a holistic and integrative theoretical approach based on the Contingency theory, the Institutional theory and the Resources-Based View (RBV). This theoretical perspective was used 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. From the findings put under the referred theoretical frame a framework for the analysis of the efficiency of ISO 9000 revealed to be quite interesting. Some limitations of this study consist in the consideration of just three sectors of activity and in its domestic geographical placement..

Keywords: contingency theory, 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. This paper intends to consider the efficiency of ISO 9001 on management but one should be aware that in spite of this research purpose, many successful companies do not run for ISO 9001, with some good reasons for it.

Besides this study aims to associate ISO 9001 to the organization financial performance under a holistic theoretical approach. To do so the paper is organized as follows: a holistic theoretical framework based on literature review (1), the methodology steps concerning data observation and discussion of results (2) and the conclusion of the study (3).

1. Theoretical framework upon literature review

From the literature many theoretical trends were found in order to frame the issue of this work. Powell (1995) has used mainly the theory of resources on different theoretical perspectives (theory of innovation and environmental organization) and suggested that the subject of quality management has to be embedded in multiple theoretical frameworks. Somsuk (2010) claims that the research efforts in this area should be focused, not just on a single theory of organization, but according to the multiple complexity of the subject and should address diverse approaches. Heras *et al.* (2010) reported that the implementation of any metastandard (the authors refer to ISO 9001 and ISO 14001 as metasatandards) must be analyzed, considering issues like operations management, strategic management, international economics and organizational sociology. The level of analysis of this research should include an empirical study interpreted under a theoretical framework created from multiple perspectives. It was under this scope of analysis that the designed framework for this particular study considered the Contingency, the Institutional and the Resources-Based View (RBV) theories. A brief explanation of each will be done next.

Contingency

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 the standards of behavior as meaning some power. Somsuk (2010) says that it is a mix of ideas about the environment of the organizations which is permanently in adjustment to its subsystems.

Institutional

Adversely to the contingency and inside the organization lies the institutional theory. This one considers the norms, rules, regulations, procedures and routines that make the structure of the organization (Scott 1995). Legitimacy, many times is sought by Companies through processes of isomorphism. This way it is almost a kind of benchmarking (O'Connor *et al.* 2004). The 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 and Nass 1989; Chua and Petty 1999; Lowrey 2005; Leiter 2005).

RBV

Under an efficiency inspiration RBV theory suggests that the organizations use specialized resources (Wernerfelt 1984). These are based on knowledge (knowledge based) or on power (competence based from Hamel and Prahalad 1994). Somsuk (2010) considered it on a double perspective: explicit knowledge (information) and tacit knowledge (expertise). Teece *et al.* (1994) and Dirickx and Cool (1989) mentioned the dynamic capacity for change. It seems that the business strategy of any organization depends on the resources that may be skills (Oliver 1997) and the ability to keep routine production over time (Wernerfelt 1984).

Under the shadow 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.

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2. Methodology

The methodological approach will consist in a qualitative perspective and its approach is a case study (Yin 2009). The starting research questions motivated and oriented the literature review. Some propositions (named as assertions) were constructed. Their relation and interconnection led to a theoretical model of analysis. A criteria for results interpretation was also considered. An interview guide was constructed based on ISO 9001 lay out. Data for this analysis concerns the information got from semi structured

interviews achieved in the defined sample (units of analysis). The results to be obtained will enable interesting conclusions.

2.1 Research questions, issues and assertions

The initial research questions motivated the literature review considered per paper index issues. The assertions constructed from the research questions are a1 to a10. (see table 1)

Table 1. Main issues and related assertions

<i>ISSUES</i>	<i>ASSERTIONS</i>
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 (<i>Immediate</i>) a8 - costs related to quality may be significant a9 - good practices of management may create conditions for a good management performance (<i>Mediate</i>) a10 - a good management performance can lead to a good financial result

Assertions relation (from a1 to a10)

a1...a2 organisations with a lean structure (Kanter 1989) are more ready to implement a quality management system. Organizations having an ISO 9001 have associated procedures. For Dale (1999) and Wiiio (1993) this means something very institutional. So, ISO 9001 certification helps organisations to have a more defined and clear structure – a1 (Schein, 1992). Kotter and Heskett (1992) and Lindby *et al.* (1999) say that organisations culturally more open are better hosts for quality and so it is expected to get a reinforcement of quality culture - a2.

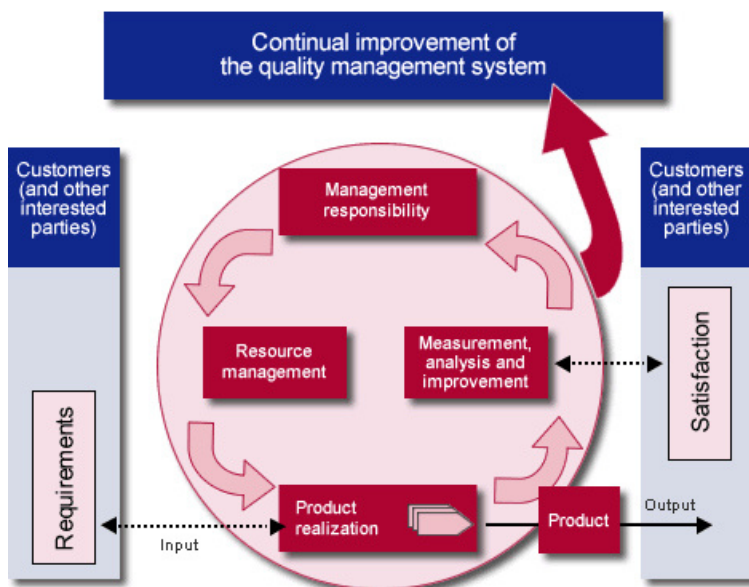
a3...a5 top management should know how to involve people within the organisation (Mac Adam and Oneill 1999; Kaplan and Norton 1992). Employees working for quality should have a prior knowledge about it and an ability for change (Dillard and Tinker, 1996). Quality process effects result in expenses which should be considered as an intangible assets (Kaplan and 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 should be a natural event - a4. From this quality process (Crosby 1979; Feigenbaum 1991; Dean and Bowen 1994) customer loyalty will emerge - a5.

a6...a10 some authors say that ISO 9001 is a competitive advantage (Porter 1987; Senge 1994; Basu 1997; Stern 2001), a market requirement (Oakland and Tanna, 2007) or a customer demand (Zairi 1996), leading to - a6. But for sure quality must come from the top management - 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 and Norton 1992; Walsh 2006) may contribute to a good financial result - a10.

Some notes about ISO 9001

It is a standard that fits in the scope of the WTO (World Trade Organization – *Agreement about Technical Barriers to Trade*) and from the II World War had a huge development and improvement. In short and putting it in a figure, one may say that it is about a norm that includes the following procedures conducting to the improvement of the quality management system.



Source: ISO 9001 Principles (Camison *et al.*, 2006).

Anyway, it should be referred that ISO 9001 has the aim of implementing good practices in the management of any organization. It has to do with written procedures translating

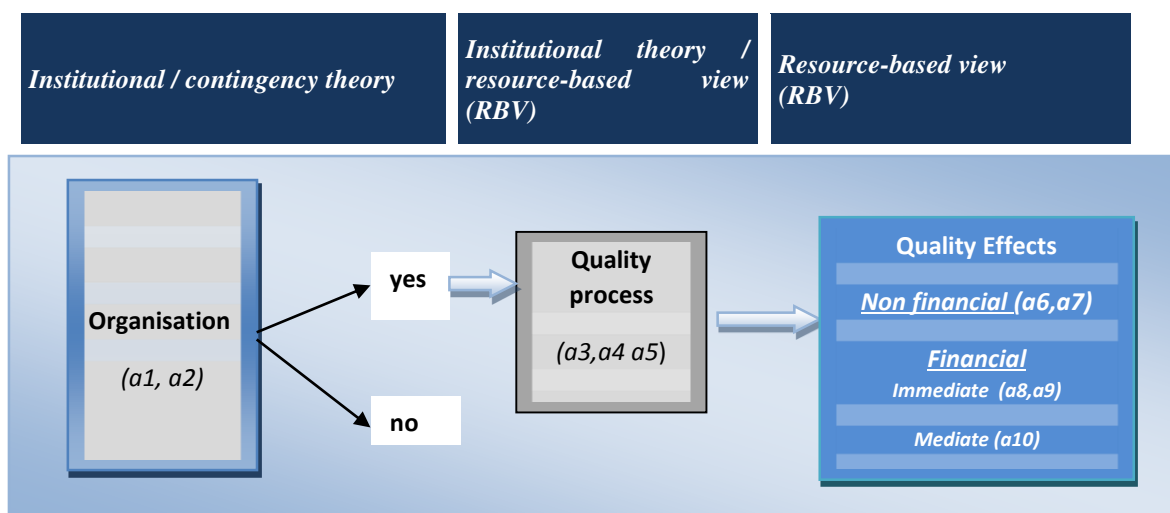
the operational process of the product/service which is systematically audited and evaluated contributing to a better performance. Cole (1999), in a study development, found a manager who clearly answered him about this quality management process in a very peculiar way: “document what you do, do what you document and verify that you are doing”. As Braun (2005) refers, these standards formalize a company’s processes into procedures and define what is best to do.

So from the theoretical umbrella and taking into account ISO 9001 requirements the assertions above defined will be therein considered.

2.2 Assertions inter relation under a theoretical scope

Considering the above referred management theories - institutional, contingency and resources based view (RBV) – and registering the logical connection of the assertions, figure 1 intends to construct an umbrella for 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 culture and these elements may be of an institutional or of a contingent nature.

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

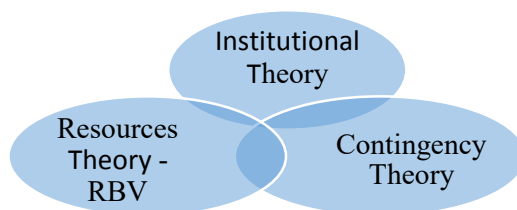
Resources View - RBV (a6 - a10): a large part of the quality process implementation is driven by the market. Inside the organization quality should come from its top

management and for sure the financial effects will be a consequence. It is well known that these quality resources represent costs that by the end, will become the financial effects. These may be seen as a consequence of the good practices associated to the quality management process what may create conditions for a successful performance. Embedded in this model of analysis the following criteria of findings evaluation was considered.

2.3 Criteria for results comprehension

Basis for it: the institutional (Scott 1995; Oliver 1997) theory, the contingency (Wiio 1993) and the resources-based view RBV (Wernerfelt 1984) theories. Some circles were constructed according to the degree of frequency a specific term connected to the theory and the data got was verified (figure 2).

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.

2.4 Means of analysis and profile of the units of analysis

From the Portuguese website of stock exchange companies CMVM, 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. The following sectors were considered: ICB 2350 – Construction and ICB 5330 – Food and retail. In addition, it was also considered a sector without ISO 9001 certification – ICB 5550, concerning “media”.

Interviews were developed according to a guide in two versions - one for quality certified companies and the other for not quality certified companies. It was prepared according to the logical sequence of the items of ISO 9001 and related to the framework of assertions (a1: a10) created upon literature propositions. The key points of ISO 9001, identified as

from issues 4.5.6.7.8.¹ of the Norm contents and related case study assertions were the basis for the interviews.

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 to be applied in the following companies.

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 – Media - 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%.

2. 5 Research Findings

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

¹From 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.

Table 3. Findings from qualitative analysis

<i>Initial research questions</i>	<i>Findings</i>
<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

2.6 Discussion of results

According to the above defined criteria the cross case analysis of results was inserted in the theoretical scope. Resources theory (RBV) is the more relevant one: the market was reason number one for the interviewees; Knowledge based (Prahalad and Hamel 1990) and dynamic capability models (Teece *et al.* 1994; Dirickx and 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 and Nass 1989; Chua and Petty 1999; Lowrey 2005; Leiter 2005) meaning that to be well managed it must be measured (Shellhorn, 2007). Yet it seems that organizations do not pay too much attention to the quality costs that sometimes may be relevant. It is somehow controversial 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, and this means that ISO 9001 may be considered an institutional artefact (Oliver, 1997). Yet one must bear in mind that the rules and procedures belonging to 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 the ones

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. It seems that organizations defend their point of view through the opposite choice of evaluation. Confirming the literature one could say that when ISO 9001 efficiency is relevant for the organizations it means that these companies have a devoted belief in/on quality.

3. Conclusions

The purpose of the research was to consider the efficiency of ISO 9001 on management under a diverse theoretical approach. From the findings a major conclusion puts forward a need for ISO 9001 certification, as a resource for companies in order to persist in the market (RBV, Wernerfelt 1984). As to its efficiency one can say that it is a consequence of this process of implementation and it is a very institutional one 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. Yet, it may be changed at any time by unforeseen events included in the contingent of the present times. Considering Somsuk (2010), Wiio and Golhaber (1993) it means that everything may be changed at any time through unexpected 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) study which 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 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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