



GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: A
ADMINISTRATION AND MANAGEMENT
Volume 18 Issue 9 Version 1.0 Year 2018
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Contribution to the Analysis of the Interface Strategy - Quality Approach of Moroccan Companies Certified ISO 9001: The Mediating Role of Performance

By Mohamed Amine M'barki & Sara Rbili

Abdel Malek Essaâdi University

Abstract- The purpose of this paper is to analyze the strategy-quality relationship through a detailed evaluation of the contributions of these two fields. Initially, it is a question of describing the process of strategic reflection, as well as the quality processes in a specific context which is the ISO 9001 certified Moroccan companies, to eventually examine and understand the interference mechanisms between the two functions.

Based on the organizational theories, the strategic schools, the key concepts of the TQM, and the contributions of the 2015 version of the ISO 9001 standards we have proposed a performance-based unified theoretical integrative framework. From a methodological point of view, the coherence between the problematic and the data to which we have access and the nature of the studied phenomenon has led us to prioritize a multi-method research approach.

Keywords: *quality approach, business strategy, relationship, model, quality behavior, QMS, competitive advantage, performance, process, structural equation modeling.*

GJMBR-A Classification: *JEL Code: M19*



Strictly as per the compliance and regulations of:



Contribution to the Analysis of the Interface Strategy - Quality Approach of Moroccan Companies Certified ISO 9001: The Mediating Role of Performance

Mohamed Amine M'barki ^α & Sara Rbili ^σ

Abstract- The purpose of this paper is to analyze the strategy-quality relationship through a detailed evaluation of the contributions of these two fields. Initially, it is a question of describing the process of strategic reflection, as well as the quality processes in a specific context which is the ISO 9001 certified Moroccan companies, to eventually examine and understand the interference mechanisms between the two functions.

Based on the organizational theories, the strategic schools, the key concepts of the TQM, and the contributions of the 2015 version of the ISO 9001 standards we have proposed a performance-based unified theoretical integrative framework. From a methodological point of view, the coherence between the problematic and the data to which we have access and the nature of the studied phenomenon has led us to prioritize a multi-method research approach.

Beginning with an empirical exploration of an exploratory qualitative study that was conducted by an interview guide delivered to a sample of 19 experts and Strategy and quality consultants. The results of the study were subjected to tests by using structural equations as a part of the second empirical phase with quantitative dominance which were conducted on a sample of 97 ISO 9001 certified Moroccan companies.

The research has shed light on the emergence of a well-differentiated typology of quality related behavior and a quite elaborated strategic reflection process among We have also confirmed the existence of a crucial bilateral relationship between strategy and quality, by an iterative process combining other factors (internal and external) that influence their transformation and their consequences. Moroccan companies. We have also highlighted the partial nature of the mediator role in the improvement of the performance concerning the alignment of the two disciplines. To conclude, some possible interpretations have been improved and put forward as a result of this research, to enhance the initial theoretical framework by proposing a general model of the strategy-quality interface.

Keywords: quality approach, business strategy, relationship, model, quality behavior, QMS, competitive advantage, performance, process, structural equation modeling.

Author α: Ph.D, National School of Management-Tangier, Abdel Malek Essaâdi University, Morocco. e-mail: sara.rbili@gmail.com

Author σ: Ph.D, Student, National School of Management-Tangier, Abdel Malek Essaâdi University, Morocco.

I. INTRODUCTION

The business world has undergone profound changes in recent years. The accelerated pace of change has led to a form of uncertainty that forces companies to develop a higher capacity for innovation and adaptation to an increasingly turbulent economic environment. This has become noticeable as competition and product diversification increases between companies.

Businesses have been called upon to master and improve the performance of all their processes to ensure their sustainability, by setting more advanced strategies regarding quality, innovation, and flexibility. Which requires substantial organizational and technological skills. In this sense, all companies recognize quality as an essential vector of competitiveness and a strategic variable for survival.

Quality is becoming increasingly important, even at the highest level of management within the organization: corporate strategy. Of course, strategic thinking has significantly evolved taking into account new needs.

However, the process of strategy has yet to be sufficiently influenced by potential attributions, which can be provided by better integration of quality.

The nature of the quality- strategy interface is not well known and relatively new. Some complex links found during the survey and multiple contextual variables that could affect them. Which, in my point of view, shows the requirement of the use of a multi-method approach. For this reason, this study started with a research phase that is both theoretical and empirical: the theoretical research has made it possible to link strategic currents with contributions regarding quality systems. Empirical research has allowed having a better understanding of the reality of the two practices as well as the modalities of their intersections within a Moroccan context. The results of this double exploration led to the more precise expression of the problem by limiting our field of investigation to companies with a quality management system and introducing the improvement of performance as a mediating variable within this relationship. The research model developed

after this first qualitative phase was tested and validated through a second quantitative empirical step

a) *Theoretical framework: A renewal of approaches*

Over time, strategy and quality have evolved incessantly and sometimes dramatically since appearing. This development draws parallelism between the two practices since they have attempted to answer problems that marked the period in question. However, only recently a theoretical approach between strategy and quality as a single corpus has been noticed.

Nevertheless, studying the interface of the two practices still presents many ambiguities both at the theoretical level and at the managerial level. On the one hand, quality and strategy are two distinct multidimensional field, and the study of their relationship requires simultaneous consideration of the relationships between the processes as well as the actions that form them. On the other hand, organizing the quality approach in an efficient way and harmony with the general strategy requires reconciling numerous and often contradictory perspectives. The strategy being the result of a process of inter-functional negotiations, while the quality approach meets requirements set by standards.

b) *The quality and corporate strategy approach: A controversial relationship*

The problem of the quality-strategy interface still arouses the enthusiasm of researchers and practitioners, because, despite contributions to organizational thinking, the quality approach is gradually losing its consecration within companies. Due to its inability to integrate a strategic perspective.

This failure to meet the full potential of quality is because, among other things, the increase in the costs generated by the function, which does not necessarily translate into a proportional increase in profits. Quality practitioners are more concerned with business performance and do not have enough time to measure the financial impact of their decisions. Indeed, in the pursuit of competitive advantage, the customer focus can no longer dominate the strategic thinking alone; special attention must also be paid to other stakeholders. This includes shareholders who are more interested in the short term and financial performance. In this sense, quality plays only a peripheral role in the strategic analysis.

With the emergence of strategic management, as well as the fact that the role of quality was more of a support function and a short-term vision. Two of the many factors contributing to the suppression of the practice to the background before this period. The strategic interest in the quality function is because quality has made a lot of practical contributions, but few theoretical contributions. Also, quality materializes mainly in the solution of the parallels pursued, while the

orientations of the qualitative policy can be as valuable as the level of strategic formulation.

There are in some cases an inconsistency between the aims of the company, and the objectives outlined in its quality policy; something that prevents the quality approach from becoming a dominant outlook for the company.

These potential overlaps between quality and strategy can leave misconceptions about possible competition between the two practices to improve the company's performance. Even if it is true that strategy dominates all the other functions of the company even that of quality. However, it is necessary to grant the quality approach as being part of the driving force of the strategy.

II. QUALITY APPROACH AND CORPORATE STRATEGY: A HISTORICAL AND CONCEPTUAL PARALLELS

Tracing the evolutions of quality and strategy leads us to position ourselves more in perspective of chronological reconciliation and to trace the exchanges between the two processes.

Table 1: The development of strategic thinking and quality approaches in the face of changes in the business environment

Period	Environmental Characteristics	Quality Approach	Business Strategy
Before 1900	Market shortage Very high Demand	Unit Control	Implicit Appearance
1900-1950	Era of Industrialization Development of Standardization Progress of Household Demand,	Statistical Quality Control	
1950- 1970	High Increase, Business Diversification, Arrival of the Consumerism Society	Quality Assurance	Strategic Planning
1970-1990	Period of Recession, Petrol Crisis, Refocusing Business Activities	Total Quality Control	Strategic Positioning
1990-2000	Globalization, Exacerbated Competition Market in Saturation	Quality Management Total Quality Management Total Quality Learning	Strategic Management
Recently	Well informed Customers Era of New Technologies and Innovations		Model of Resources and Skills

The dominant models that characterize the quality approach and the strategy of companies evolve in response to the successive transformations of the environment in which they operate. In each period, a turning point occurs in each part that it can integrate new approaches by adapting and giving birth to a new paradigm and thus mark a new break. This retrospective examination of the history of the two practices confirms in the hypothesis, of a certain determinism of the evolution of strategy and quality as well as a contingency to the economic and social environment. Also, perhaps the fact that strategy and quality are born almost at the same time is not fortuitous. The two practices seek to reaffirm their legitimacy in the company but also in the academic field. The first signs of a possible proximity between the two practices are apparent.

Moreover, the types of evolution of the two practices are almost identical; Regarding quality and strategy, there is no unifying paradigm. In strategy, Mintzberg and Lampel¹ count, for example, ten different schools of thought representing different processes of strategic questioning, but also different parts of the same strategic thinking.

Although for some researchers these ideas may be confusing, Mintzberg and Lampel believe that it is, on the contrary, an enrichment and broadening of the perspective of the practice. Regarding quality, there is no integrative vision of the whole field, quality assurance, quality management system, total quality management, etc. are all disciplinary fields, without encompassing the entire quality approach. In addition to this comparison, there are numerous conceptual proximities between quality and strategy. First, quality and strategy are at the confluence of several practices.

Although they have an identified field of research, other human and social sciences have inspired these processes. Also, strategy and quality are at a crossroads of managerial practice and academic research. Finally, both strategy and quality share common interests and convergent goals.

Indeed, from their earliest beginnings to the present day, the quality and strategy approach tend to widen their spectrum of research not to be locked in a category of very particular problems. Initially, the majority of researchers in quality and strategy adopted language, economic and industrial logic. Economics and engineering are disciplines that are known to have had the most influence on the construction and evolution of both fields. In this sense, a large part of the researchers of quality and strategy come from the fields of economics, management or engineering. Also, regarding method, analytical tools and theories developed in the economic and engineering fields have played a crucial role in quality and strategy (transaction cost theory, signal theory, scheduling, etc.).

Various influences between the strategy, the quality approach and other fields within human and social sciences has created a constant search for diversity and adaption in an increasingly complex environment.

The final conceptual bridge between quality and strategy are the shared interests and common goals. Also, a subject that puts them in competition. From this point of view, the proximities are numerous, but we mainly evoke those relating to the adaptation of the environment and the search for performance.

Although they have not had a leading role in their construction, psychology and sociology have also enriched ideas in these two fields.

The human sciences have contributed to the clarification of essential questions about individual

¹ MINTZBERG H., LAMPEL J. "Reflecting on the Strategy Process", Sloan Management Review, vol. 40, no. 3, 1999.

behavior, group behavior or corporate culture to explain managerial decision-making processes, individual or collective learning, or even leadership.

Quality and strategy, perhaps more than any other, are at the interface between practice and theory. Combining the optics of action and with that of academics. They have a singular success among managers, students and even neophytes in management. The problems within the fields have attracted increasing interest, testified by the number of conferences and publications that are still growing. The postulates of considerable contributions in quality or strategy published within well-known books, intended for a very wide audience.

The final conceptual bridge between quality and strategy is their shared interests and common goals. Also, a factor that puts them in competition. From this point of view, the proximities are numerous, but we mainly evoke those relating to adaptation to the environment and the search for enhanced performance.

III. QUALITY AND STRATEGY APPROACH: A CONSENSUAL RELATIONSHIP

The interest raised by the problem of the quality - strategy link is at the origin of numerous research. Especially since the subject is quite arbitrary as much as its managerial implications are not so obvious at first glance.

Unfortunately, however, most of this is the work of the Anglo-Saxon. It is only recently that we are aware of the strategic role played by quality. We are gradually moving towards a conceptualization of the quality - strategy link, but many obscure points remain unrevoked. There are also some inconsistencies in the definition of hierarchical levels where a strategic approach is considered, and furthermore where quality can have a significant contribution. The clarification of these points constitutes a necessary step in the conceptualization of the quality- strategy link and 117 the emergence of a consensual definition of this interface. Thus, the plethora of strategic models, some of which are relatively complex, has created confusion regarding the implementation of quality that benefits from the contribution of standards. Especially since quality through these eminently strategic dimensions, possessed some tools that may prove relevant to develop a simple implementation, but not such a simplistic strategy.

The presence of a quality management system within a company represents an opportunity to develop a more productive approach to its strategy. It can then rely on a real strategic management system. This observation becomes even more important when the firm has grasped the strategic dimensions of quality.

Also, quality can become an instrument for developing a competitive advantage, when it creates a

certain satisfaction for the client² and when it constitutes a key criterion of purchasing. Quality is then a means of differentiation that can be assessed according to consumer³ expectations and existing proposals on the market⁴.

Considering that strategic thinking is now moving towards notions such as organizational learning, it calls for a more resource-based approach. In other words, Strategy is accepted as a rule to make decisions relating to the coupling of the company and its environment. Moreover, it is at this level, that qualitative and purely strategic thinking come together. This presupposes that managers are sufficiently open to accept strategy and quality as vectors of cultural integration of their company. To this end, one of the offerings of the quality approach to strategy is to move from diagnostic to prescriptive. This particularly delicate step defines the choice of strategic movements.

These relate to activities (Strategic Business Areas), which make up the company's business portfolio, and even to new commitments, regarding product (s), market (s) and technology (s).

In this sense, strategic thinking is enriched, at least from an operational point of view, by the components of the quality approach. By meeting the requirements of the quality standards, those provided for the existence and maintenance of elements universally recognized as strategic. Two of them, the segmentation and the strategic loop are of particular importance.

Also, the effectiveness of a QMS is primarily a quality policy that must not only be compatible with the company's strategy but also instilled and driven by management Norme ISO 9001⁵. From a practical point of view, this coherence should take into account the orientations and the system of objectives that guided the development of the strategy. The formulation of the quality policy, therefore, represents an eminently strategic act.

IV. GRADUAL ASSIMILATION OF THE STRATEGIC ORIENTATION OF THE QUALITY APPROACH WITH THE NEW VERSION OF ISO 9001 VERSION 2015

Awareness of the limits of the quality approach, progressively confined to the classic issues, marks the beginning of a phase of renewal of the practice. The approach now has a set of distinctive strengths and

² MÜLLER W. « Gaining competitive advantage through customer satisfaction », European Management Journal, V9 n°2, Juin. 1991.

³ KOTLER P. & DUBOIS B. « Différencier et positionner l'offre », Harvard' Expansion, n°65, 1992.

⁴ HOROVITZ L. « La non qualité tue », Harvard l'Expansion, Eté, 1986.

⁵ Norme ISO 9001, chap. 5.1, Responsabilité et engagement de la direction.

competencies that can contribute to the recurrence and development of a strategic direction for quality.

The context, risks, and opportunities approach in the new ISO 9001 standard show a slip up in the methodology. If we analyze and manage the risks of the company through quality management to sustain the continuity of its activities, then we raise the approach to a strategic level. This desire stipulated in the new standard, aims to place quality as a central element of internal control and risk apprehension⁶.

The approach initially refers to the identification, evaluation, rating, and classification of risks. In a second step, corrective actions are taken to prevent the identified risks. Also, improving the recognition of opportunities can for example, rely on strategic diagnostic models such as SWOT analysis.

Also, the notion of "interested party" introduced in the new version of ISO 9001 is closely related and provides an important foundation for strategic thinking. In the 2008 version, the quality system is focused on the customer, whereas in the new standard, all the factors that contribute to providing quality to the customer are, "interested parties", 162 also the suppliers, the legislator, the sub-contractors, shareholders, etc.

a) *Analysis of the Theoretical tracks of the strategy-quality interface: The mediating role of the performance*

The main aspiration of any company is to have the optimal allocation of the necessary resources for the realization of its products to make a profit. To achieve this, it uses several management methods, including quality management, which is not without consequences in the organization.

In this sense, the majority of research in quality is especially concerned with the issue of performance. Any quality approach is based on the concept of continuous improvement (as stipulated in the new version of the ISO 9001 v 2015 standard).

Although quality performance has been measured through numerous indices (cost of non-quality, customer satisfaction rate, etc.), for decades, there are still areas in need of investigation of its performance. Crucial interest since the reason for quality lies in its perspective of improving the overall performance of the company, and it is precisely this observation that brings it closer to strategic management because the very essence of any strategy is the performance research. Even the issues of key factors of success, competitive advantage, the performance of decisions, and contribution to overall performance are as good as the quality as well as the strategy. The knowledge of the environment is the second point of a juxtaposition of the concerns of

the quality approach and the strategy in particular in the last update of the 9001 version 2015 standard. Their position in the company and their knowledge of the competitors, the Market and consumers are a source of amalgamation of roles, but also of apparent conceptual proximity.

b) *The quality strategy: A performance lever*

There is numerous research that has emphasized the positive contribution of quality to the performance of organizations. In this sense, Chan and QUAZICHAN⁷ stress that the development of a quality approach including TQM type always leads to an improvement in performance. According to the authors, the latter touches different dimensions namely: customers, suppliers, products and services as well as processes. The contribution of Chan and Qazi's work consisted in identifying a set of performance indicators that have undergone improvements, in particular: competitiveness, continuous development of products and services, reduction of costs, improvement of productivity, customer satisfaction.

Furthermore, Terziovski and Samson⁸ Survey of 1,300 companies led to the following conclusions:

- Quality initiatives have a significant and positive effect on the company's performance.
- The existence of differences between business sectors and the size of business concerning this relationship.

Rahman⁹ has shown that quality certification improves customer satisfaction. Thus, it creates a competitive advantage and therefore increases profitability.

Starting from the motivations of the companies for the implementation of a quality approach notably: the increase of the market share; satisfaction of customer requirements and improving process efficiency. Withers & Ebrahimpour¹⁰ conducted an investigation of 362 certified companies. They conclude that:

- Quality certification is a source that allows the company to have a competitive advantage.
- Quality practices correlate positively with performance measures and especially financial performance.

⁷ CHAN, T. H., & QUAZI, H. A. "Overview of quality management practices in selected Asian countries". Quality Management Journal, 2002.

⁸ TERZIOVSKI, M. AND SAMSON, D. "The link between total quality management practice and organizational performance". International Journal of Quality & Reliability Management, 16 (3), 1999.

⁹ RAHMAN, S. "A comparative study of TQM practice and organizational performance of SMEs with and without ISO 9000 certification", International Journal of Quality and Reliability Management, Vol. 18, 2001.

¹⁰ WITHERS, B. & EBRAHIMPOUR, M. "Does ISO 9000 certification affect the dimensions of quality used for competitive advantage?" European Management Journal 18(4), 2000.

⁶ CHEMANGUI, M. « Proposition d'une métrique de la qualité de l'audit: Expérimentation dans le cadre des relations d'agence internes ». Comptabilité - Contrôle - Audit1: 2009.

- Certification has a powerful impact on the financial and operational performance of the company.
 - A remarkable difference in performance between certified and non-certified companies.
- c) *The mechanisms for creating value of a quality strategy*

The quality approach is either triggered by environmental forces or is the result of the manager's own will to enhance the value of their organization. In both cases, the quality approach creates values of different natures and consequences.

Therefore, when the environment dictates the quality strategy, the manager opts for strategic choices compatible with the commercial requirements and regulation opportunities. The purpose of the action is

mainly an external need seeking to satisfy a need or to respect a constraint (a norm or a law¹¹).

The Economic value when such reasoning leads to favoring the creation of commercial and societal value is not fulfilled.

On the other hand, if the manager opts for a quality approach to add value to their resources and skills, they will then have economic value but not systematically commercial value.

It seems that these two situations can only be intermediate and that the system is in constant readjustment, as shown in the figure above. In both of these cases, quality research brings out some form of value, which in the long run would be accompanied by global value creation.

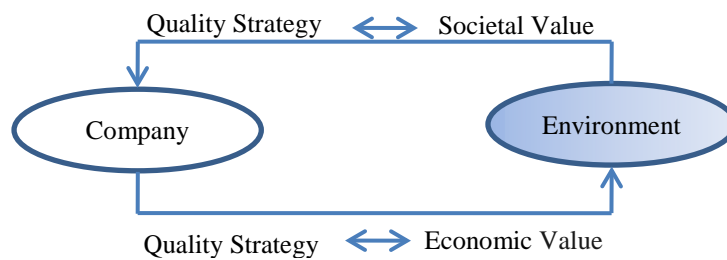


Figure 1: Quality approach and value creation

- *Quality approach and operational performance:* Initially introduced for the internal control of production, quality procedures aim at improving the internal functioning of the company and meeting new imperatives of the production systems, hence the role of quality initiatives in the efficiency of the company's business processes. A commercial

approach can be perceived as a signal in the market of Certification.

- *ISO 9001 certification and economic performance:* The implementation of a quality approach improves the financial performance, through several mechanisms represented in the figure below:

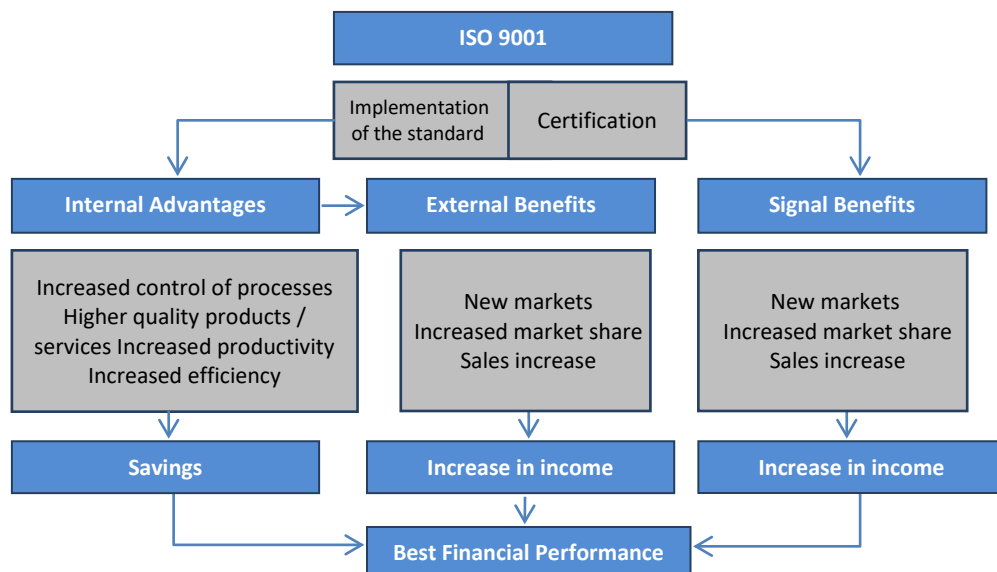


Figure 2: Relationship between ISO 9001 and financial performance

Firstly, companies can generate a large economy through, for example, reduced costs of production. On the one hand, through the reduction

¹¹ ABRAHAM J. « Rank Xerox et la reconquête du leadership par la qualité », Gestion 2000, V 2, 1994.

of waste and control of the process, also, as a result of a scale of the economy driven by high productivity. Savings can also come from better inventory management and lower quality costs.

Secondly, certification can facilitate the company's access to new and more demanding markets. Also contributing to the increase in its market share thanks to a rise in the sales following the increasing satisfaction of the customers and their loyalty. As a result, the quality strategy can lead to the creation of short-term competitive advantage.

Thirdly, and according to signal¹² theory, markets are characterized by information asymmetry, in the sense that customers do not have perfect knowledge of the characteristics of a product and its supplier. As a result, quality certification helps to solve this asymmetric problem by ensuring the quality of the company's products and services. In this sense, certification alone can be an advantage for the company.

The quality management system is sensitive to the communication actions carried out by companies and can be seen as a signal of information on the stock market within.

- *ISO 9001 Certification and Organizational Performance:* In an economy where there is uncertainty, the only source of sustainable competitive advantage is knowledge. Therefore the organizational contribution of the quality approach lies in the management of this knowledge.

Thus, one of the most important benefits of implementing a quality approach is the impact of the process of writing quality documents on the dynamics of organizational learning¹³.

Certification is also seen as an organizational learning device, and more broadly as a tool for knowledge management¹⁴, but also as a mechanism for rectification of the organization through the codification of the know-how of the company in working procedures¹⁵.

In summary, we can say somewhat schematically that quality approaches organize and manage the creation and flow of knowledge while characterizing two complementary steps and necessary knowledge management.

V. METHODOLOGY

Given the specific nature of our previously developed research system, two sizable findings emerge. Firstly, the phenomenon still presents certain ambiguities, hence the interest in an exploratory study. It must then be verified and modeled (to the extent that that would highlight the correlation between two variables), to later be described and argued. Also, each step of the empirical study must enable validation or refute the research question.

To achieve our goal, we conducted three separate studies: An exploratory qualitative study and two quantitative studies with two data collections. If certain methodological choices are common to both, others will only use it for one of the three studies. Our methodological reflection, therefore, requires a thorough examination of each data analysis procedure.

a) *Explore the terms of the quality-strategy link*

The validity of our research question was assessed according to the particularities of the field of study, particularly that of Moroccan companies (a sector rarely explored until now), of the relevance of the results obtained, but especially of the degree of validity and reliability of the approach pursued.

In this sense, because of the complexity of accurately describing the nature of the relationship between strategy and quality in Moroccan companies, it is necessary to carry out a preliminary study beforehand to increase understanding of our issue, as much as possible. As the review of the literature, provided little information on the nature of the relationship between strategy formulation and the quality approach. For this reason, we took a survey conducted from an interview guide administered to 19 experts and consultants in the areas of strategy and quality into consideration.

The thematic content analysis carried out on the corpus of corresponding oral narratives collected within an interview guide, which its main ideas have been transcribed, using the NVivo software (version 11) has led to the more precise expression of the problem. By limiting our field of investigation to companies with a quality management system and introducing the improvement of performance as a mediating variable in this relationship. It has also enabled the generation of statements in a perspective of the creation of measurement scales relating to the modalities of interference between strategy and quality that may not be found in texts. Thus, in addition to the variables resulting from the analysis of the literature, we have identified 13 measurement scales including five relating to the strategic process, two relating to the quality behavior of companies and seven scales of measurement describing the quality-strategy interface. To enrich the initial model we used these different scales of measurement.

¹² SPENCE M., "Job Market Signaling." Quarterly Journal of Economics, Vol. 87, n° 3, 1973.

¹³ BENEZECH D., LOOS-BAROIN J., « Le processus de certification ISO 9000 comme outil d'apprentissage organisationnel », Revue Sciences de gestion, n° 36, 2003.

¹⁴ LAMBERT G., LOOS-BAROIN J., « Certification ISO 9000 et création de connaissances opérationnelles ou conceptuelles: Une étude de cas », Revue Finance - contrôle - stratégie, Vol. 7, n°1. 2004.

¹⁵ MISPELBLOM F., « Au-delà de la qualité: démarches qualité, conditions de travail et politiques du bonheur », Paris: Syros.1995.

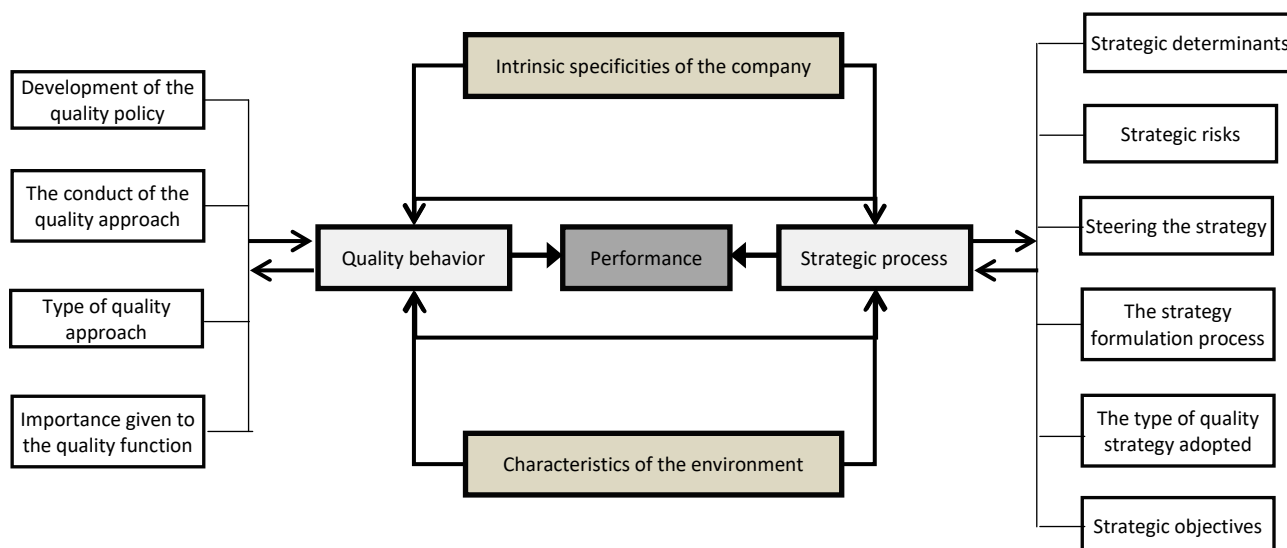


Figure 3: Enriched research Model

b) *Validate the statements of the measures of the strategy / quality link*

While the purpose of the preliminary analysis is to contribute to the generation of statements from the perspective of creating scales of measurement that would not exist in Literature, the second empirical step consists in organizing these instruments of measurement. The measures in a questionnaire and then the mobilization of a survey among Moroccan companies to verify the reliability and the validity of these calculations and finally, to test the enriched research model.

The use of a questionnaire survey results from a reflection on how to carry out the quantitative phase of our research. When creating measurement scales, our goal was to minimize systematic errors (bias from the instrumental design) and random errors (bias due to study circumstances). For this, CHURCHILL¹⁶ proposes a qualified methodological paradigm for developing scales of attitudes. In this perspective, the conduct of a study of the dimensionality of the constructs through a factorial analysis on a sample of 46 Moroccan companies ISO 9001 certified allowed us to highlight the essential dimensions to the understanding of the phenomenon and to purify the instruments of measurement as defined in the Churchill paradigm.

To establish the factor structure of the scales, we used principal component analyzes (PCA). The results of this PCA were subject to a validation procedure using structural equation methods. According to Churchill, this approach requires a new collection of data, this time from 97 Moroccan ISO 9001 certified companies.

c) *Identify the nature and determinants of the strategy - quality relationship*

This empirical step is the foundation of our research. It consists of testing previously established models. Thus, the models were first checked based on the importance of the intrinsic characteristics of the company and the traits of its environment by the definition of these strategic choices and its quality behavior. In a second place, we test the models of the direct causal relationship between strategy and quality. Finally, validation of the mediating role of performance explaining the relationship between strategy and quality. To do this, the method of a structural equation for testing these different models is used again to give us a view from a different angle.

VI. MAIN RESULTS OF THE EMPIRICAL STUDY

To date, the nature of the strategy-quality interface is little known and relatively new. As stated earlier, there are very few studies on the subject in the review of the literature. As a result, we had to start from observed reality and then build knowledge and reasoning. The complexity of the links made during the survey and the multiple contextual variables that could affect them required the use of a multi-method approach.

Secondly, the principle quantitative empirical step led to the construction of the measurement of scales by applying the Churchill paradigm. It is now time to test the enriched model using the structural equation model with a sample of 97 ISO 9001 certified companies.

a) *Constitution of the sample for the enriched model test*

The constitution of a representative sample is not a conclusion. Ideally, the results from the statistical processing of the sample can be "extrapolated" by the

¹⁶ CHURCHILL G. A, « A paradigm for developing better measures of marketing constructs », Journal of Marketing Research, Vol. a16, 1979.

population. Therefore, the results achieved are expected to be more "representative"¹⁷.

In this case, we have registered with the International Organization for Standardization 969 ISO 9001 certified Moroccan companies that represent our study population. However, the absence of a single exhaustive list of Moroccan companies certified ISO 9001 has made it difficult to identify precisely these companies. A cross-reference of several sources of information was required:

- The directory of the provincial delegation of industry, investment, commerce, and the digital economy;
- The client portfolio of certain certification firms (SGS- Morocco and Bureau Véritas);
- The lists published on the internet relating to certified Moroccan companies.

Random sampling of the companies surveyed conducted from these different databases. In the end, 97 questionnaires by certified ISO 9001 Moroccan companies.

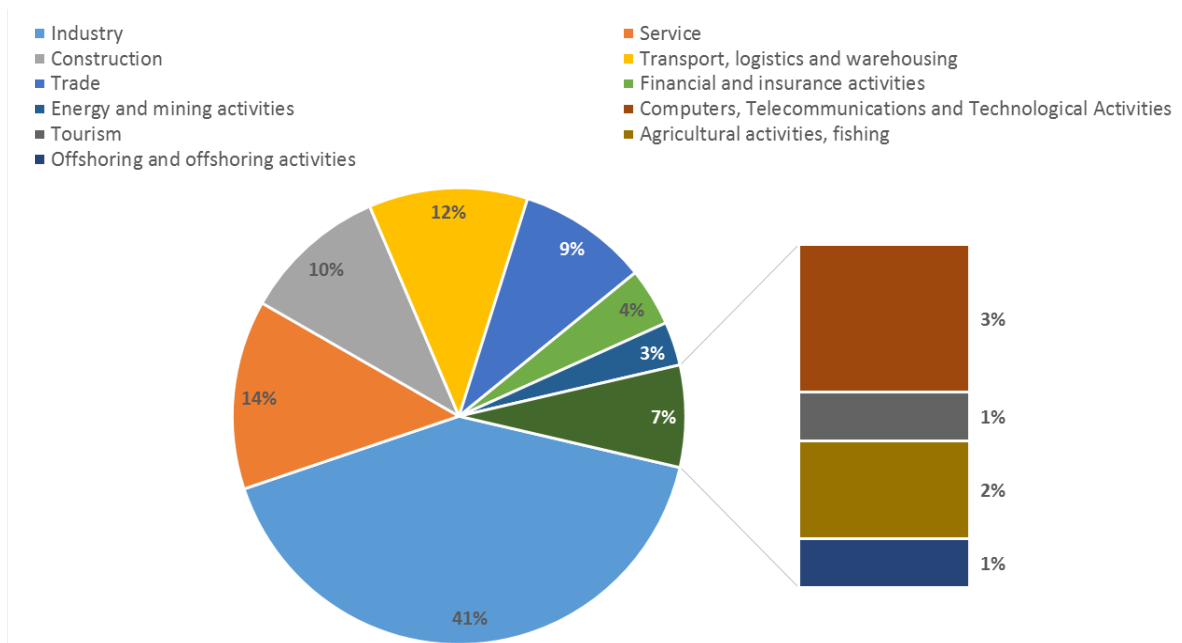


Chart 1: Company Breakdown by Line of Business

b) A Global model of the quality-strategy interface for Moroccan companies

Beginning the process by validating the general model by auditing the reciprocal impact of strategic thinking on quality practices in companies before examining the role of business characteristics and the environment defining the relationship.

At first, the results of the output derived from the models verification is centered on the absence of adverse variants and standardized coefficients higher than 1. These minimal conditions attained by the edition of the results by the AMOS software.

After checking the significance of the relationships between the different dimensions of our model, the examination of the quality fitting the model, asserts the substantial quality of the different derivative models¹⁸. On the other hand, the other indices (GFI, AGFI, CFI) do not reach acceptable thresholds.

Therefore, given its complexity the model is considered acceptable in its entirety and that it fits well enough to the data observed. Finally, the following figure shows the model achieved.

¹⁷ DÉPELLEAU, F. «La démarche d'une recherche en sciences humaine », presse de l'Université de laval, Bruxelles, De Boeck Université, 2000.

¹⁸ χ^2/ddl est inférieur au seuil de 5; le RMSEA est faible (=0,08) et le CAIC est inférieur à celui du modèle saturé.

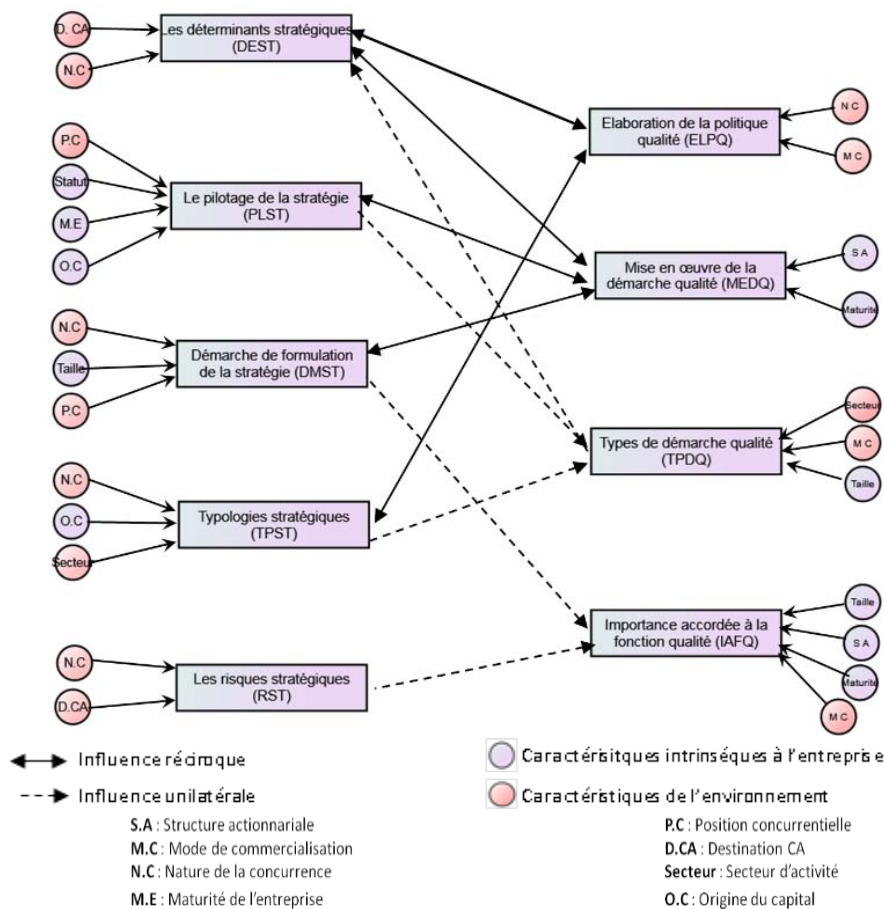


Figure 4: Global model of the quality-strategy interface for Moroccan companies

The results of the structural equations applied to the models of the quality-strategy interface are within their satisfactory sets.

Thus, the strategic process of Moroccan companies is determined by "the maturity of the company," "its size," "its status," and "the origin of its capital." It is also conditioned by certain characteristics of the environment, namely: "business sector," "nature of competition," "competitive position," and "turnover destination."

For the most part, the quality behavior depends on "the maturity of the company," "its size" and its "shareholder structure." Also influenced by the characteristics of the "business sector," the "nature of the competition," and the "type of marketing."

Moreover, concerning the reciprocal influence of the strategy and the quality approach, the regression analyzes carried out using the structural equation models reveal that all the dimensions of the strategy significantly influence at least one of the components of the quality behavior in companies. On the other hand, the other meaning of the relationship (Quality approach à Strategy), the structural equation tests have affirmed the significant influence of three aspects of the quality behavior of the company on the conduct of its strategy (Quality policy, the implementation of the quality project and the type of quality approach implemented). These

results deserve further attention. First, the findings show that the overall quality of the regressions is quite high. However, if the strategy of the company justifies 64% of the variance of its quality behavior, while reciprocally, it construes only 47% of the strategy. These results are satisfactory. They indicate that the relationships highlighted between strategy and quality approach, despite their differences, are significant. Also, we have shown that the strategy's development determinants focusing on "customers, the environmental and societal context, competitors and shareholders" seem to inspire the content of the quality policy as well as the extent of the actions implemented. Especially companies quality project (risk management, customer satisfaction studies, staff satisfaction survey). Also, the strategic risks, manifested in the scarcity of the MOD, the changes in customer trends and tastes, the difficulty of supply and competition, highly determine the place and weight of the quality function in the company.

The more the company is confronted with a turbulent environment, the more it tends to give importance and heed to the quality function within the company structure (size, nature of the structure, position in the organization chart.).

In other words, these companies have a risk management tool. Also, the management of the strategy (by the parent company, or internally) significantly

determines both the type of quality approach adopted (SQM, SME, OHSAS, TQM ...) and the quality actions implemented. As for the approach to formulate the strategy, it influences the implementation of the quality approach and the role of the quality function within the company.

Finally, the tests indicated that the type of strategy adopted guides the choice of the type of quality approach implemented as well as the content of the quality policy

c) *Study of the mediating role of performance in the definition of the Quality-Strategy interface*

Both in the literature and in the empirical work, there are various debates raised about the possible impact of strategic actions, especially those related to the implementation of a quality approach to improve business performance. This research consists of confirming or invalidating this relationship in the context of certified Moroccan companies. Moreover, and given the polysemy of the notion of accomplishments, we developed during this research a scale of measurement specific to the sample studied.

The edition of the results by the AMOS software indicates the absence of negative variance and standardized coefficients higher than 1. Fulfilling the accepted minimum conditions of the model.

The particular scales were removed to improve the quality. Student tests are generally significant except for particular scales. Which we removed to improve the quality of our model.

Concerning the quality fit, the χ^2 / dd and the CAIC have satisfactory values. The other indices (GFI, AGFI, RMSEA, CFI) do not reach the acceptable thresholds. However, they are sufficient about the criteria developed for complex models.

From the tests carried out, it turns out that the performance is a mediating variable in the relationship between strategy and quality approach in the company. However, this mediating effect is only partial, insofar as the regression coefficients between certain scales of the strategy and quality on the one hand and performance, on the other hand, it remains insignificant.

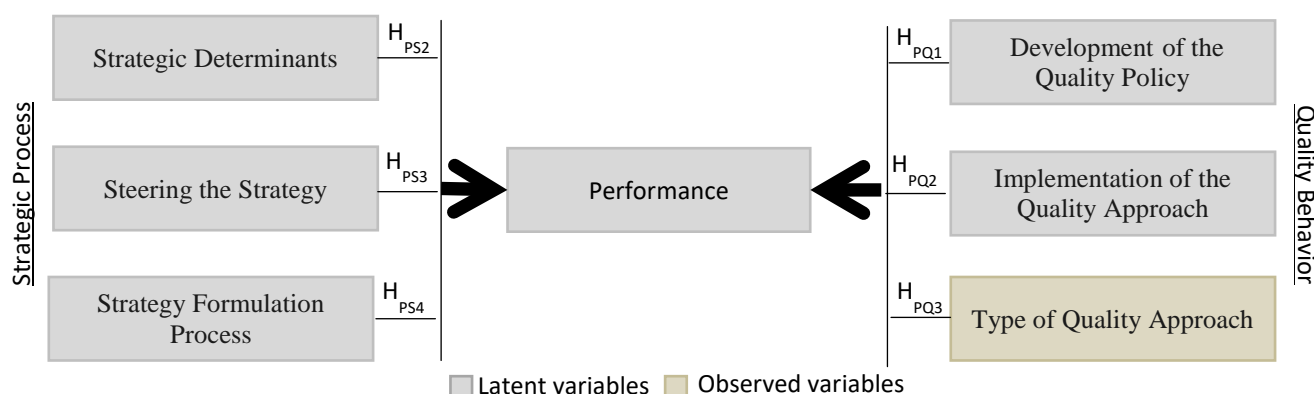


Figure 5: Model of the mediating role of the performance in the approach of the strategy and the quality approach in the company

The strategy and quality then allow the company to ensure a particular mastery and take advantage of its environment by creating a competitive advantage allowing it to generate value given these capabilities.

The increased importance of gaining a competitive advantage can be the starting point for the process of bringing the strategy and the quality approach closer together. In this context, according to Caby, Hirigoyen¹⁹. "Three types of levers of strategic essence are at the origin of the competitive advantage source of value creation: the strategic levers strict sense, financial levers, and levers of governance of business. Therefore, the quality approach as a strategic choice or even as a lever of governance can constitute a competitive advantage for the company.

¹⁹ Caby J. et HIRIGOYEN G., « La création de valeur de l'entreprise », Economica, Paris, 2001.

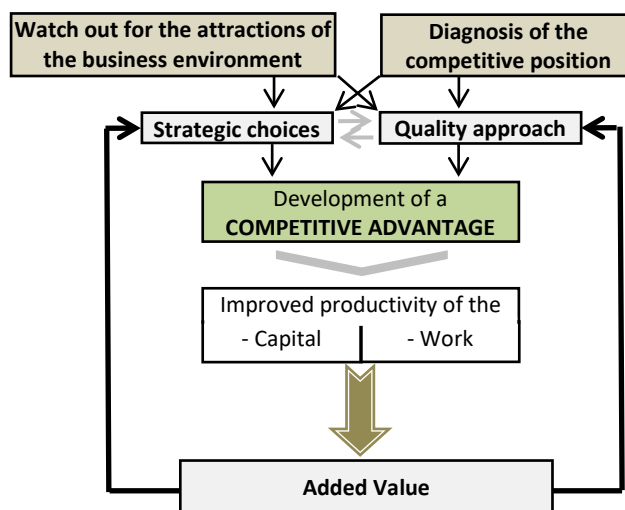


Figure 6: Role of the quality approach in obtaining a competitive advantage

Two crucial conceptions are then at the origin of the contribution of the quality approach to the competitive advantage of the company. A classic approach from Porter's work described as "distributive." According to which, the certified company develops key factors of success in reassurance or modeling its environment and which will enable it to exploit the trust of the customers against other actors.

These success factors relate to the company's strengths regarding resources and skills that give it a competitive advantage that is not imitable in the short term. Distinguished by Five broad categories of criteria: market position, cost structure, image, technical skills, and innovation.

The second so-called "contributive" concept, developed from the 1970's, assumes that thanks to the implementation of a quality approach, the company could create more wealth by making better use of its resources. It gives the company a dynamic capacity for its development.

These two points of view are by no means exclusive but complementary to justify the diversity of different types of quality approaches observed amongst the companies in our example.

VII. INTERPRETATION TRACKS ENTIRELY CONSISTENT WITH THE FRAMEWORK OF OUR RESEARCH

The results obtained in the context of our empirical study are broadly in line with the theoretical contributions and the empirical work presented in the first part of this thesis. Allowing the deduction of the relevant interpretations.

Initially the perspective, in the relationship between strategy and the quality approach based on the role of the quality approach as a vector of transformation, a management and risk management tool for the company. Secondly, considering the quality as a variation of the strategy.

From another perspective, the success of the interface stems from the company obtaining a competitive advantage through the development of a number of key success factors and dynamic capabilities. These contribute to the improvement of the business performance.

In addition, the inefficiency of a quality strategy by extrapolating lessons from the "strategic alignment" model to the quality strategy interface has been justified.

Indeed, only a harmonious and coherent relationship between the general strategy of the company and the quality approach implemented and having sufficient resources to achieve the desired goals would generate better performance. Thus, and as we have already mentioned above, using a quality strategy provides the company with new success factors and strengthens its dynamic capacity, generates competitive advantage and therefore creates value.

However, these benefits are not automatic. This observation, therefore, leads us to refine our thinking to understand the operating mechanism of the strategy and the quality approach enabling the company to create value. In this sense, we refer to the "strategic alignment" model to answer our question.

Inspiration drawn from Henderson and Venkatraman²⁰ Information technology theory, which assumes that there are links between the technologies and the resources available to the company. Concerning the "strategic alignment" of information technologies in the company. According to this model, the performance of the integration of information technologies depends on a dual process:

- A strategic process that seeks to align external strategies with organizational infrastructure.

²⁰ HENDERSON J. C. et VENKATRAMAN N., «Strategic alignment: Leveraging information technology for transforming organizations», IBM System journal, 1993.

- A functional process related to the concordance between information technologies and the general policy of the company.

The transposition of this model seems to carry relevant explanations for the reading of the various possible interfaces of the strategy-quality approach.

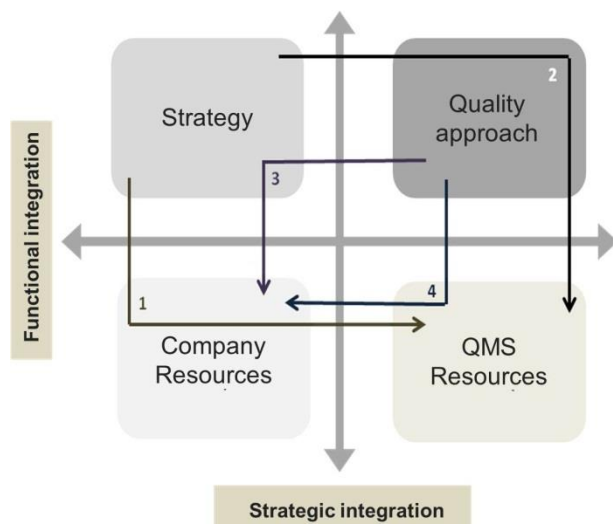


Figure 7: Strategic alignment diagram adapted to the quality-strategy interface

This adapted model proposes four distinct forms of the strategy-quality approach.

a) *The quality approach as a variation of the strategy*

Primarily, the general management or the parent company are at the origin of the quality approach. A strategy dictated to ensure the operational execution of the activities according to predefined and persistent management rules. In this case, the quality project adapts to the existing processes, and its task comes down to trying to satisfy them. This type of relationship is usually done in the case of a relatively rigid company in which the quality function does not intervene, or only slightly, in this type of organization.

b) *The quality approach as a vector of transformation*

In the second form, the general management defines a new strategy that will trigger a redefinition of the quality policy. In other words, the latter is called to concretize a will expressed by the general direction. Once redefined the quality policy, one must think about the resources needed to implement it. Evaluating the quality approach in this case by its ability to meet the needs of top management.

The importance of the actions carried out in the framework of the QMS is a key differentiating factor in this type of quality approach.

c) *Quality approach source of competitive advantage*

The outcome of the quality approach is an initiator of the overall strategy of the company. As a result, business strategy and business processes do not

exist at first glance but arise from the opportunities offered by the quality management system. The conduct of a quality approach then offers the company a competitive advantage.

d) *The quality approach as a provider of operational services*

In this latter mode of alignment, the focus is on the relation of the quality approach to the line of business. The quality function contributes to the development of a resource organization strategy to provide excellent results. The processes of the company are questioned to optimize performance.

It should be noted that the same company may have to follow different types of alignment depending on the activity and the desired positioning. Nevertheless, for a quality-strategy relationship to be the basis of competitive advantage and thus a creator of value, it depends on a double integration::

1. The quality approach must be consistent with the general strategy of the company, must go in the direction defined by the company's management (it is the functional integration of the two fields).
2. The resources and general skills of the company. As well as those made available to QMS must adapt to its objectives (it is ultimately the functional integration between the resources of the company and quality resources then integration between the quality policy and the resources to be made available). This second form of alignment conditions the ability of quality to achieve the goals of the company at a lower cost.

An ideal situation for implementing a quality project. The latter, led by resources adapted to the company's objectives, will be able to feed the strategy regarding opportunities, innovative projects, organization and risk management. These favorable changes will allow the company to acquire key success factors or dynamic capabilities. Creating a competitive advantage and therefore value creation for the company.

1. The quality approach must be consistent with the general strategy of the company, it must go in the direction defined by the company's management (it is the functional integration of the two fields).
2. The resources and general skills of the company as well as those made available to the QMS must be adapted to its objectives (it is ultimately the functional integration between the resources of the company and quality resources then integration between the quality policy and the resources to be made available). This second form of alignment conditions the ability of quality to achieve the goals of the company at lower cost.

This is an ideal situation for implementing a quality project. The latter, led by resources adapted to the company's objectives, will be able to feed the

strategy in terms of opportunities, innovative projects, organization and risk management. These favorable changes will allow the company to acquire key success

factors or dynamic capabilities. This creates a competitive advantage and therefore value creation for the company

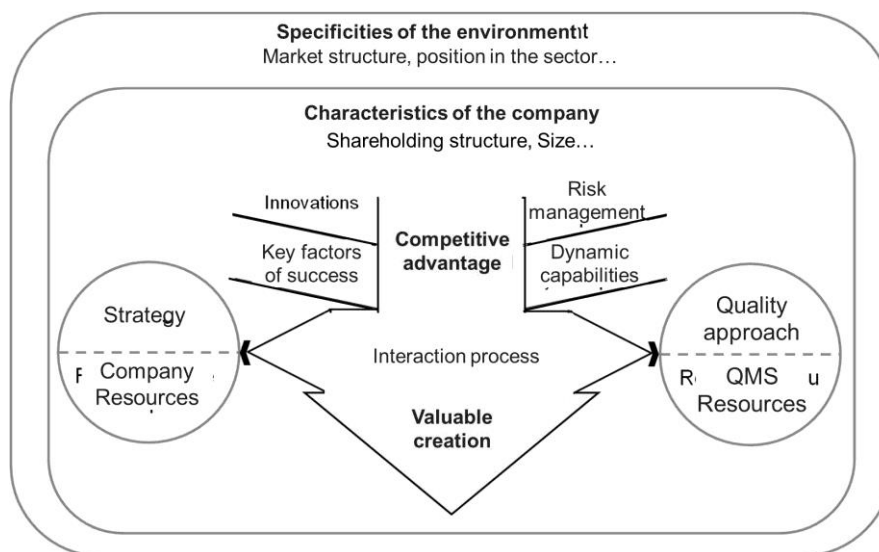


Figure 8: Value creation mechanisms following better strategy-quality integration

More explicitly, it should be taken into consideration in a broader perspective of quality management, a central element of internal control and risk apprehension.

Therefore, based on the central concept of continuous improvement, the quality project must promote risk management to prevent undesirable

outcomes. The first step is to identify, evaluate and classify risks according to their natures. In a second step, actions must be taken to face or prevent the identified risks. This sequence is possible due to the construction of a risk map, allowing to formulate adapted answers. The following figure shows the four types of possible decisions.

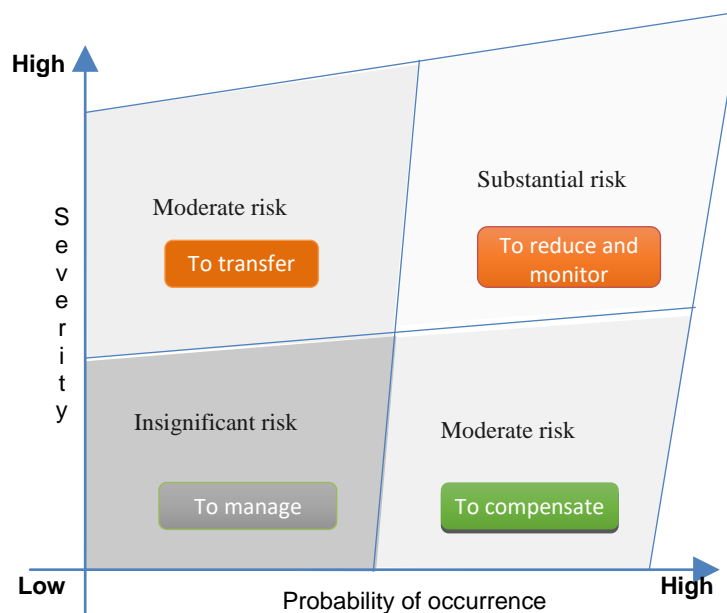


Figure 9: Risk Management Matrix

Insignificant Risk to Manage: The company rarely meets this type of risk, the impact of which is minimal. It is sufficient for the company to take appropriate corrective actions to overcome them.

Moderate Risk to Transfer: This is the outsourcing of risk to companies with the necessary capacities to take charge of them.

Substantial Risk: It must be systematically reduced and put under control thanks to preventive actions and by allocating the required means,

Moderate Risk to Compensate: generally through insurance contracts.

The implementation of the various solutions would be planned and administered within the usual framework of the overall management of the company.

VIII. CONCLUSION

At the end of this research, an efficient model of the strategy-quality interface by the theoretical and empirical information obtained can be drawn up.

Thus, and as Mr. Porter points out, an analysis of the environment in which the company operates leads it to develop, first and foremost, its strategy from which the strategic objectives flow. Subsequently, policies specify the way in which the strategic aims will be operationalized including those part of the quality approaches to be implemented. Choices made through, for example, the Porter chain and then

defined (e.g. process mapping) so that appropriate performances indicators can subsequently be incorporated. These performance indicators will reflect both the customer requirements process and the expectations for the initial strategic objectives.

This global scheme will help managers of companies that have opted for a quality approach to defining their business process, identify their performance indicators and then integrate them into methods.

If the global approach is well implemented, all the performance conditions are met. In summary, we can schematize the quality approach - business strategy interface according to a sequential process backed by the PDCA cycle (figure 10)

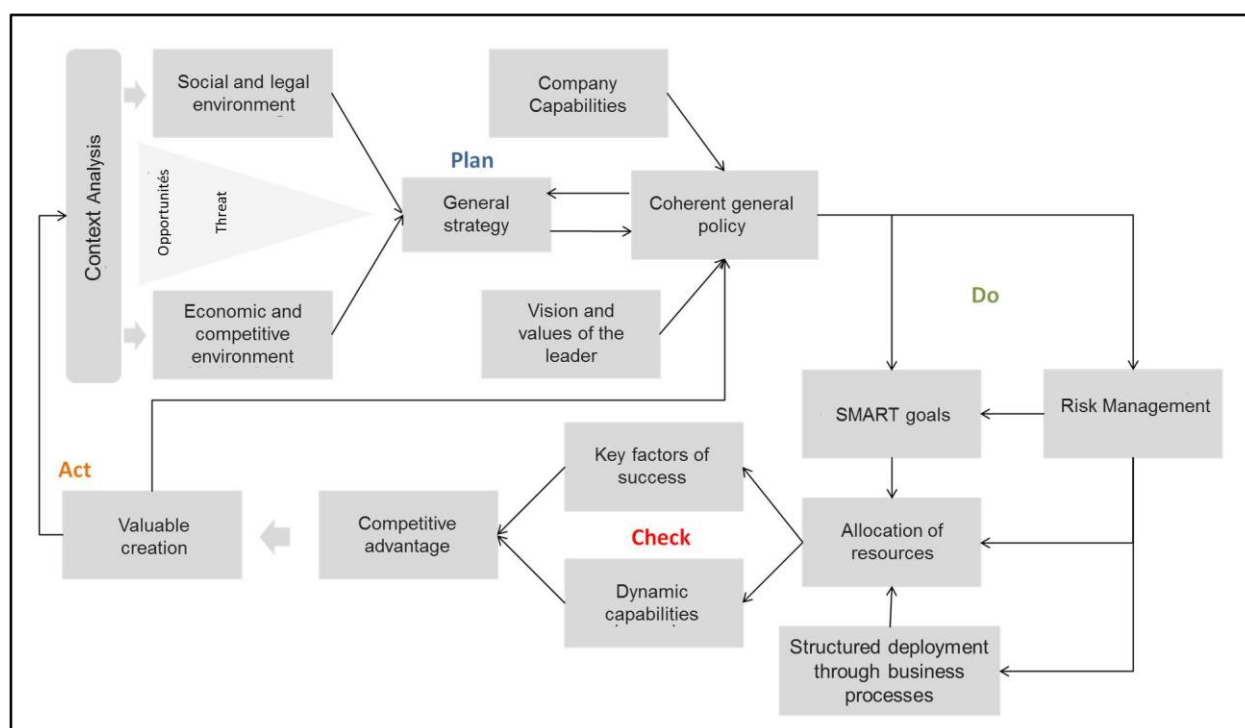


Figure 10: General Model of the Quality-Policy Interface

REFERENCES RÉFÉRENCES REFERENCIAS

1. Benezech D., & Loos - Baroin J., (2003), Le processus de certification ISO 9000 comme outil d'apprentissage organisationnel, Revue Sciences de gestion, n°36.
2. Caby J. et Hirigoyen G. (1997), La création de valeur de l'entreprise, Economica, 2^{ème} édition, 2001.
3. CHAN, T. H., QUAZI, H. A. (2002), Overview of quality management practices in selected Asian countries. Quality Management Journal, 9 (1).
4. Churchill G. A. (1979), A paradigm for developing better measures of marketing constructs », Journal of Marketing Research, Vol. 16.
5. Chemangui, M. (2009) « Proposition d'une métrique de la qualité de l'audit: Expérimentation dans le cadre des relations d'agence internes ». Comptabilité, Contrôle Audit Vol. 1, 15.
6. Dépelteau, F. (2000), La démarche d'une recherche en sciences humaine, Bruxelles, Éditions De Boeck Université.
7. Evans, J. R., (2014) An exploratory study of performance measurement systems and relationships with performance results. Journal of Operations Management.
8. Henderson J. C. & Venkatraman N., (1993), « Strategic alignment: Leveraging information technology for transforming organizations», IBM System journal.
9. Lambert G., Loos-Baroin J., (2004), Certification ISO 9000 et création de connaissances opérationnelles

ou conceptuelles: Une étude de cas, Revue Finance contrôle - stratégie, Vol. 7, n°1.

10. Mintzberg H. & Lampel J. (1999) "Reflecting on the Strategy Process", Sloan Management Review, Vol. 40, no. 3.
11. Mispelblom Beyer F., (1999), Au-delà de la qualité : démarches qualité, conditions de travail et politiques du bonheur, 2^{ème} éd., Paris, Syros,
12. Müller W. (1991). Gaining competitive advantage through customer satisfaction, European Management Journal, V9 n°2, Juin.
13. Nonaka I. (1999) « L'entreprise créatrice de savoir », In Knowledge management, Paris: Editions d'organisation.
14. Porter M. E. (1980), Competitive strategy, Free Press, New York.
15. Rahman, S. (2001), A comparative study of TQM practice and organizational performance of SMEs with and without ISO 9000 certification, International Journal of Quality and Reliability Management, Vol. 18.
16. Spence M., (1973), Job Market Signaling, Quarterly Journal of Economics, Vol. 87, n° 3.
17. Terziovski, M. & Samson, D. (1999) The link between total quality management practice and organizational performance. International Journal of Quality & Reliability Management, 16 (3).
18. Withers, B., Ebrahimpour, M. "Does ISO 9000 certification affect the dimensions of quality used for competitive advantage?" European Management Journal Vol. 18, N° 4, 2000.

