

MEASURING EFFECTS OF MODERATOR'S FACTORS OF RELATIONSHIP BETWEEN STRATEGIC MANAGEMENT AND GLOBAL PERFORMANCE: CASE OF TUNISIAN SME'S INVOLVED IN THE UPGRADING PROGRAM

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Abstract

Previous studies suggest that strategic management is beneficial to global performance. This research examines the contribution of strategic management to global performance in a sample of 276 Tunisian SME's involved in the upgrading program. It seeks to measure the moderating effect of moderator's factors (organizational structure, environment and leader skills) on the relationship between strategic management and global performance. The results support no moderating effect of organizational structure and leader skills on the contribution of strategic management and global performance. The effect of strategic management on global performance is moderated only by environment. The more the environment is complex, uncertain, dynamic, or turbulent, the more strategic management improves global performance. These results are not surprising since they all confirm advanced results in the literature that consider any strategic process must be determined by its external context. Specifically they consider that facing the turbulence of the environment, the company has more interest in adopting strategic management if it was in a stable environment.

Keywords: strategic management, global performance, organizational structure, environment, leader skills

INTRODUCTION

The performance of the company has never stop to raise questions and start debates to the academic and professional world. Today, the debate is more open and follows previous research, however with much more pressing new challenges. Globalization, technological revolution in the field of information, new economic, social and environmental requirements make speeches increasingly directed towards strategic management. In this perspective, strategic management determines the success of a business, being intimately linked to business performance. This importance of strategic management led researchers to wonder about the effect of strategic management on global performance. The results of this research were a bit mixed. Some research has shown a negative relationship, others have found a positive relationship, and still others found no relationship. The reasons for this discrepancy are diverse: small sample sizes, ignorance of the role of leadership in strategic management, use of inappropriate or non-robust statistical tests, use of non-homogeneous data, inappropriate measure of performance, and inattention paid to the size of the company and the nature of its environment (Bracker et Pearson, 1988; Schwenk et Shrader, 1993; Shrader et al, 1989; Kargar, 1996). This lack of consensus has led some researchers to explain the conflicting results in the underestimation of contingency parameters in the study of the relationship between strategic management and performance. Therefore, the necessity of taking account of parameters moderators such as the environment seems essential for a better understanding of the relationship between strategic management and business performance (Mintzberg, 1994; Beard et Dess, 1981; Boyd , 1991; Desreumaux, 1993; Calori et al, 1997).

This importance on strategic management challenges any company and specifically Tunisian companies which are confronted in past few years face a high level of competitiveness. Indeed, since the accession of Tunisia to the World Trade Organization and the signing of the free trade agreement with the European Union in 1995, the challenge of international competition and survival of the company is more stated. Thus, Tunisian companies operate in a context of profound and radical changes that require them to break with the culture of protectionism and move towards market culture. This change is radical in so far as at the time of protectionism the concept of strategic management has no meaning at least the majority of Tunisian companies, whereas today it is the guarantor of its competitiveness. Based on this observation, and in line with previous work, this research aims to study the influence of moderator's factors (organizational structure, environment, leader skills) on the contribution of strategic management to global performance. It attempts to answer the following question: "Do organizational structure, environment and leader skills influence the contribution of the strategic management to global performance?". The central motivation of this research is summed up in

our desire to know, explain and measure the impact of strategic management on global performance taking into account the effect of organizational structure, environment and leader skills, precisely in the context of Tunisian companies. The specific objectives of this research are: first, draw a portrait of Tunisian companies that adopt strategic management and those that do not. Second, evaluate the effect of moderator's factors on the contribution of strategic management to global performance of Tunisian companies.

LITERATURE REVIEW

Relationship Between Strategic Management And Global Performance

The company performance is often a topic studied in management science. According to Goodman and Pennings (1977), it is an essential element in the analysis of organizations and we can't have a theory of organizations that did not include this concept. Strategy specialists share the same opinion considering the performance as an essential element of the Charter of strategic management (Carroll et Vogel, 1987; Hambrick, 2004; Chakravarthy et Doz, 1992). In this perspective, researches on the question of the relationship between strategic management and performance, are seeking to identify the success factors or causes of firms failures. In general, all these studies had as a goal to find the right style of management that contribute to the performance of the company.

Most contributions argued that the causes of failure of firms, especially SMEs, are a direct result of the lack of strategic direction. They are more concerned with short-term goals and short-term results rather than long-term goals or long-term results. Very often, activities are daily, which leads to deal with everyday problems and ignore the environment, eclipsing any strategic thinking. However, through the work of famous scientists like Alfred Chandler, Igor Ansoff, Peter Drucker, Michael Porter and Henry Mintzberg, the concept of strategic management has become central in the organization and management in achieving a better performance. It should facilitate the company's growth and enable it to increase its performance and competitiveness (O'Regan et Ghobadian, 2005; Porter, 1996).

In the case of SMEs, the intensification of competition in almost all industries leads SMEs towards strategic management in order to occupy a better competitive position (Larsen et al, 1998). At this level, several researches have shown that companies using thoughtful strategies have better results than those who did not (Berman et al, 1999; Kargar, 1996; Brinckmanna et al, 2010). The essence of strategy development means for a company to provide strategic direction to the company in order that it can achieve its vision and mission. The adoption of a clear strategic growth path then allows companies to ensure consistency, compatibility and strategic continuity changes incurred by the company.

Strategic Management

Since its introduction in the 50s, the concept of strategic management played a vital role in companies. According to Glueck et Jauch (1984), Sharplin (1985), and Hill et Jones (1998) the need for strategic management arises when there is an urge to grow; to fight with competitors and achieve market leadership; to ensure efficient use of available resources (men, materials, money, machinery, markets and information) and to check wastages in fund utilisation. Some authors viewed it as decision-making; while others considered it as the set of activities related to the formulation and implementation of strategies to achieve organizational goals. The early definition of strategic management was provided by the American business historian, Ansoff (1965) who defined strategic management as: develop strategies, organize skills of the company and organize the implementation of these strategies and skills. In the context of construction, Sharplin (1985) defines strategic management as the formulation and implementation of plans and the carrying out of activities relating to the matters which are of vital, pervasive or continuing importance to the total organization. In the other hand, according to Glueck et Jauch (1984), strategic management means a stream of decisions and actions which lead to the development of an effective strategy or strategies to help achieve business goals.

Different contributions highlight significant dimensions of strategic management (Hunger et Wheelen, 2003; Ansoff, 1984; Hussey, 1984). They show that strategic management is concerned with the design, preparation and conduct of collective action by developing strategies to guide the development of the company. The first dimension appears directly, since the term strategy is embedded in the concept of strategic management. Indeed, the strategies can be imposed by the environment, which may condition the management. The management then determines the success of the implementation of strategic choices. The two concepts are inseparable, and the strategy appears both as the result of strategic management and the object of his conduct. Strategic management is therefore a matter of formulation as implementation strategies. It is a process by which strategists formulate, implement and monitor corporate strategies (Coulter, 2002; Hill et Jones, 2001). It includes formulation, implementation, evaluation and control (Hunger et Wheelen, 2003). It also can be defined as the art and science of formulating, implementing, and evaluating cross-functional decisions that enable an organization to achieve its objectives (Epstein et Roy, 2007). Thus, strategic management is a process that helps business strategies to better target the efforts of members of the company towards the achievement of organizational goals.

In the same line, Avenier (1988) provides a fundamental contribution to strategic management by defining it as a process that aims to ensure a tight coupling between strategies

and operations through the decentralization of strategic thinking, by the involvement of people who will be responsible for implementing the developed strategies. Several definitions support this tendency to place the members of the company at the heart of strategy formulation. Illustratively, "*The strategy is a decentralized organizational exercise that involves all employees (or at least the middle and upper management) of the organization and not just the general direction*" (Dobers, 1997, p.38). Chakravarthy (1997) assume that the analysis is too often affair consultants, planners and other experts. The business strategy should be developed by the employees themselves. In this perspective, according to Avenier (1988), strategic management consists of decentralized strategy process that marks the link between formulation and implementation of strategy through the participation of different hierarchical levels in strategic thinking. This definition captures two main elements. First, fixing strategies is concerned with internal organization (on the resources and core competencies of the company) and external environment (relating to transactions between the company and its environment). Second, the essence of strategic management is the integration of individuals of non-equivalent hierarchical status in the formulation of strategies.

Global performance

Several models of performance are widely discussed in the management science literature such as Wright et Rogers (1998), Morin et al (1994), Quinn et Rohrbaugh (1983), Bourgyuignon (1996), Stern et al (1998), and Kaplan et Norton (2003). Each model provides a different view of the performance which leads to a better understanding of this "polysemic" concept (Louart, 1996). However, the Model Kaplan et Norton (1996) called the "Balanced Scorecard (BSC)" seems to be more relevant of the relationship between strategic management and performance. As defined by Kaplan and Norton (1996,p 45), "*The Balanced Scorecard translates an organization's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system*". First, BSC is a globalizing model that unifies several dimensions not limited to a purely accounting or traditional financial vision. Second, it combines the performance measurement to the strategy by the interdependence of all indicators that "it should to balance short-term financial performance with opportunities vectors long-term growth for future financial performance "(Kaplan, 1999). The performance is linked to a mastered balance between short-term concerns and long term and between internal and external concerns. He developed a comprehensive management and cross the performance of the company, as pointed out by several authors (Dixon et al, 1990; McNair et al, 1990; Grapin et Jossaerand 2003; Voyer, 2002).

Moderator's Factors of Relationship Between Strategic Management and Global Performance

The review of literature on contingency theory precise three factors involved in the strategic management of the contribution to global performance: organizational structure, environment and leader skills.

Moderating effect of organizational structure

According to Mintzberg (1978), the literature on organizational structure advances a serie of parameters such as: specialization, formalization, training and education, systems planning and control, standardization, link mechanisms, grouping units, unit size, decentralization, and system decision. However, the most cited and most used in studies focusing on the relationship between organizational structure and business strategy are: formalization, standardization and centralization (Brisson, 1992; Kalika, 1995; Chandler, 1989; Mintzberg, 1978). Given the significant differences in the parameter of the organizational structure from industry to industry and firm to firm, it seems natural to suggest that the relationship between strategic management and global performance may also vary from one organizational structure to another. Therefore, the well established role of organizational structure leads us to the following hypotheses:

H1: Organizational structure moderates the relationship between strategic management and global performance

H1.1: The more the organizational structure is formalized, the more likely is strategic management to have a positive effect on the global performance

H1.2: The more the organizational structure is standardized, the more likely is strategic management to have a positive effect on the global performance

H1.3: The more the organizational structure is centralized, the more likely is strategic management to have a positive effect on the global performance

Moderating effect of the environment

Many studies show several ways of characterizing organizational environments (Lenz et Engledow, 1986; Smircich et Stubbart, 1985, Bracker et al, 1988; Luthans et Stewart, 1977). The dominant approach in organizational sciences focuses on the basic dimensions of the environment. Following Dess et Beard (1984), Gueguen (2001) argued that an organization's environment can be described in terms of the four underlying dimensions of complexity, dynamism, uncertainty, and turbulence. Given the significant differences in the properties of the environment from industry to industry and firm to firm, it seems natural to suggest that the relationship between strategic management and firm performance may also vary from one

environment to another. Thus, the well established role of environment leads us to the following hypotheses.

H2. Environment moderates the relationship between strategic management and global performance

H2.1: The more the environment is complex, the more likely is strategic management to have a positive effect on the global performance

H2.2: The more the environment is dynamic, the more likely is strategic management to have a positive effect on the global performance

H2.3: The more the environment is uncertain, the more likely is strategic management to have a positive effect on the global performance

H2.4: More the environment is turbulent, the more likely is strategic management to have a positive effect on the global performance

Moderating effect of leader skills

In this perspective, many researchers have focused in the relationship between the leader and the development of business through the study of what he does (Verstraete, 1999; Schmitt, 2003; Chandler et Jansen, 1992; Herron et Robinson, 1993). They demonstrate that the leader influences strongly the development and sustainability of the company by his personal traits but also by mobilizing his skills in the exercise of his functions. He uses, according to his psychological profile, skills as resources used in the action. The researches of Bayad et al (2002), and Loué et Baronet (2008) have demonstrated that the leader skills are the best predictors of firms performance. In the same direction, other researches turned to the study skills of the leader, arrived at results which indicate that leader skills are more directly related to the performance of companies (Lorrain et al, 1998; Gartner, 1988). More precisely, technical skills and management sector, leader skills, and entrepreneurial skills seem to be an important factor in the success of any business (Bayad et al, 2002). Given the importance of leader skills in strategy formulation and its implementation, it seems natural to suggest that the relationship between strategic management and firm performance may vary depending on leader skills. Therefore, the well established role of leader skills leads us to the following hypotheses:

H3. Leader skills moderates the relationship between strategic management and global performance

H3.1: The more the technical skills and management sector are mastered by the leader, the more likely is strategic management to have a positive effect on the global performance

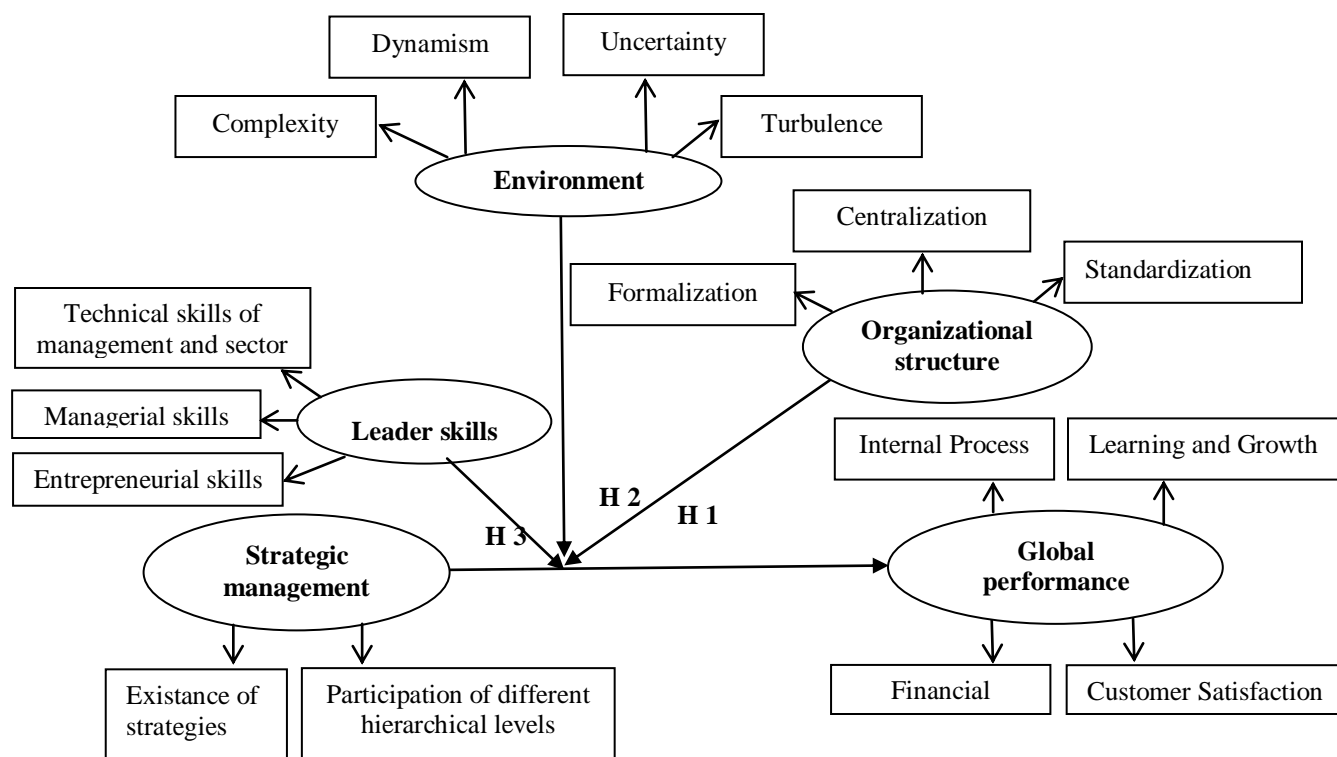
H3.2: The more the managerial skills are mastered by the leader, the more likely is strategic management to have a positive effect on the global performance

H3.3: The more the entrepreneurial skills are mastered by the leader, the more likely is strategic management to have a positive effect on the global performance

Conceptual model

In order to apprehend the reality of adoption by companies of strategic management, we propose a conceptual model that focuses on relations between five variables: strategic management, organizational structure, environment, leader skills and global performance. Precisely, we wish to test the causal link between the achievement of global performance and strategic management, taking into consideration the organizational structure, environment and leader skills.

Figure 1: conceptual model



METHODOLOGY

In order to test the proposed model and hypotheses, it is important to pay attention to the choice of the sample, data collection, measures of the concepts used, and methods of hypotheses test.

Sample of research

To test the research hypotheses, a quantitative data collection was conducted among a representative sample of 276 Tunisian SMEs involved in the upgrading program. The sample is

stratified by industry using stratified random sampling as sampling method (see Table 1). Some precisions must be mentioned. First, according to the classification adopted by the PMN, the SME is a company with a total investment of less than 3 million Tunisian Dinars. Second, to build a representative sample we applied the law of Bernoulli: $n = (1.96)^2 \times N / (1.96)^2 + L^2 \times (N-1)$, with $L=10\%$. Third, because of the absolute refusal or incomplete or unsuccessful promises of questionnaires, we excluded from the sample companies from the following sectors: Leather and Footwear Industry (LFI), Chemical Industry (CHI), and Materials Construction Ceramics and Glass Industry (MCCGI).

Table 1: Research sample

	AFI	VI	MI	TCI	Total
Population (SME)	300	329	326	1143	2098
	n_1	n_2	n_3	n_4	N
Percentage n_i / N	14,30%	15,68%	15,53%	54,48%	100%
Sample ($n / N = 13,16 \%$)	40	43	43	150	276
	n_1	n_2	n_3	n_4	n
Percentage n_i / n	14,49%	15,60%	15,60%	54,35%	100%

Data collection

The conceptual model and the hypotheses developed were empirically tested in a survey research; a pre-test questionnaire was performed to validate its content. Following the suggestions and comments received from participants, some changes and adjustments were made. The final questionnaire was addressed to Directors of SMEs.

Measurement of variables

For each variable, we use Likert scales of items ranging from 1 to 5 : (1= Strongly Disagree), (2= Somewhat Disagree), (3= Neither Disagree or Agree), (4= Somewhat Agree), (5= Strongly Agree).

Measurement of strategic management

With reference to the definition of strategic management that was adopted in this research, two key variables were used that constituted its essence: the existence of strategies, and strategic thinking shared between individuals of non-equivalent hierarchical status. Participation is defined as the usually sense of taking part, the work of making together, act together, to cooperate in an action requiring multiple actors. In this sense, strategic management is measured through three dimensions according to Calori (1989): Information, Consultation and Initiation. Information means that the decision is made by the leader. Subordinates are informed

of the reasons, after taking decision by the leader. Consultation means that the decision is taken by the leader after consulting one or more subordinate. Initiation means that the decision is the result of a consensus between leader and one or more subordinate.

Measurement of organizational structure

Organizational structure is measured through three dimensions according to Brisson (1992), Kalika (1995), Desreumaux (1993), Chandler (1989) and Mintzberg (1978): Formalization, Centralization and Standardization. Formalization means the high amount of written documentation in the organization. Centralization means that the top hierarchical level has authority to make a decision and gives little discretion to lower level employees. Standardization includes high number and control of procedures, job descriptions, regulations, and policy manuals.

Measurement of leader skills

Leader skills are measured through three dimensions according to Bayad et al (2002): Technical skills of management and sector, managerial skills, and entrepreneurial skills. Technical skills of management and sector include abilities to manage the operations, finance, human resources, marketing and sales, and the laws and government regulations. Managerial skills include ability to develop a business strategy, coordinate and organize the activities of the company, manage staff, solve problems, control the activities, and negotiate. Entrepreneurial skills include abilities to identify business opportunities, develop a business vision, create and manage business network, and manage work.

Measurement of environment

Environment is measured through four dimensions according to Gueguen (2001): complexity, uncertainty; dynamism and turbulence. Complexity means multiplicity and heterogeneity of environmental factors. Uncertainty means a lack of information from the environment, a lack of knowledge about the outcome of a decision, and the ability to give a probability of occurrence of events for a given factor. Dynamism means extent of change, power change and speed of change. Turbulence means the speed of change in the speed corresponding to the sequence of changes, the unpredictability of the change relating to the impossibility of predicting changes, renewal of the corresponding change in the probability of a single change, and the significance of the change relating to the importance of the impact of change.

Measurement of global performance

Global performance in this study is schematized by the balanced scorecard (Kaplan et Norton, 1996). As a model of strategic performance management, the characteristic of the balanced scorecard and its derivatives are a mixture of financial and non-financial measures. In its simplest form, the balanced scorecard breaks performance monitoring into four interconnected perspectives: Financial, Customer Satisfaction, Internal Process, and Learning and Growth. Financial perspective covers the financial objectives of an organization and allows managers to track financial success and shareholder value. Customer perspective covers the customer objectives such as customer satisfaction market. Internal process perspective covers internal operational goals and outlines the key processes necessary to deliver the customer objectives. Learning and Growth perspective covers the intangible drivers of future success such as human capital, organizational capital and information, capital including skills, training, leadership, organizational culture, system and databases.

ANALYSIS

Preliminary analysis

Before discussing the results of the preparatory work of the database, it is essential to conduct a cluster analysis to classify the firms in our sample according to the degree of adoption of strategic management. The second step discusses the results of the validation phase of our measuring instruments. It consists to present the results of the analysis in two stages (exploratory and confirmatory), performed in SPSS 18.0 and AMOS 8.0 software. The first is exploratory without a priori specification of the relationship between latent variables and their indicators, in order to test a predetermined structure.

Cluster analysis

To measure the degree of adoption of strategic management by the companies surveyed, a hierarchical cluster analysis was conducted by using the method "Two-Step Cluster" SPSS 18.0. The likelihood distance and the optimization criterion BIC (Bayesian Information Criterion) were used as criteria groupings.

The results identified two classes which characteristics are shown in Table 2. Class 1 named "strong adoption of strategic management" is the largest (170 companies) representing 61.6 % of the sample. The other one named the "low adoption of strategic management" class 2 is smaller (106 companies) which represents 38.4% of the sample. These two classes are distinguished by 10 criteria in order of importance (see Table 2).

Table 2: Results of the cluster analysis method "Two-Step Cluster"

Criteria in order of importance	Class 1 (n = 170)	Class 2 (n = 106)
1. Existence of financial strategy	100%	77,4%
2. Participation of middle managers	100%	15,3%
3. Participation of senior managers	31,2%	100%
4. Form of participation of senior managers: Consultation/Initiation	18,2%	84%
5. Form of participation of middle managers: Consultation	73,6%	12,8%
6. Existence of personnel strategy	100%	36,8%
7. Existence of commercial strategy	100%	36,8%
8. Form of participation of middle managers: Information	26,4%	87,2%
9. Existence of production strategy	100%	22,6%
10. Existence of supply strategy	31,2%	61,3%

In Class 1, all companies have strategies (financial, personnel, sales, and production) and only 31.2 % of companies have supply strategy. 31.2% of companies refer to senior managers, and all companies refer to middle managers for formulation of these strategies. These companies are therefore appealing to middle managers as senior managers. The participation of senior managers for 18.2% of companies focuses on both the consultation and initiation. While the participation of middle managers is limited to consultation for 73.6 % of companies and to information for 26.4 % of companies. Per consequent, companies are open for the integration of middle managers in strategy formulation. These are associated with strategic choices, being consulted. Their role is not limited to providing their superiors the information needed to strategy formulation.

In Class 2, companies have strategies in different proportions (77.4 % for the financial strategy, 61.3 % for the supply strategy, 36.8 % for personnel strategy, 36.8 % for commercial strategy, and 22.6 % for the production strategy). This shows the lack of strategies for most of these companies. 15.3 % of companies refer to middle managers and all companies refer to senior managers for strategy formulation. Therefore these companies refer more to senior managers than middle managers. Senior managers' participation of 84% of companies is focused on both the consultation and initiation. However, the participation of middle managers on the consultation is 12.8% of the companies, and on the information is 87.2% of companies. In these companies, the strategy is primarily for senior managers with a low willingness to involve middle managers. Indeed, senior managers participate by being consulted and having a opinion in strategic choices. While middle managers primarily play as a source of information and they are less consulted in the formulation of strategies.

Testing of the measurement model

The validation of measuring instruments includes studying the dimensionality of scales and the mobilized internal consistency, convergent and discriminated validity.

Exploratory Factor Analysis

The examination of the dimensionality of the scales is performed by an exploratory factor analysis (EFA) carried out with SPSS 18.0 software. It is performed on the sample of research (276 SMEs). The reliability of the scales, which is to study their internal consistency, was assessed by Cronbach's alpha and Jöreskog's Rho. Table 3 summarizes the results obtained following the procedures to purify our scales. Only two scales measuring technical skills of management and sector, and entrepreneurial skills proved to be sufficiently homogeneous to match our initial expectations. However, two items have been eliminated from the measurement scale of the managerial skills.

Table 3: Reliability test of variables

Symbol	Dimensions	Number of items	Cronbach Alpha	Rh� de J�reskog
FORMAOS	Formalization of an Organizational Structure	3	0,862	0,897
STANDOS	Standardization of an Organizational Structure	6 ; (4)	0,673 ; 0,845	0,859
SOCENTR	Centralization of an Organizational Structure	4	0,916	0,928
ENVTCOMP	Environmental complexity	6	0,900	0,905
ENVTUNCT	Environmental uncertainty	6 ; (4)	0,880 ; 0,901	0,911
ENVTDYNA	Environmental dynamism	6	0,901	0,914
ENVTTURB	Environmental turbulence	6	0,899	0,936
TECHSKIL	Technical skills of management and sector	5	0,903	0,923
MANASKIL	Managerial skills	6 ; (4)	0,683 ; 0,863	0,857
ENTRSKIL	Entrepreneurial skills	4	0,908	0,927

Confirmatory factor analysis

The examination of the dimensionality of the scales is also done by a confirmatory factor analysis (CFA) which has been dealt with through AMOS 8.0 software. It covers only the 170 SMEs in class 1 "strong adoption of strategic management". The criteria for convergent and discriminant validity are applied to mobilized scales. The results show that for each construct, all absolute index, incremental and parsimony meet the standards of good fit and show an acceptable fit of the model (see Table 4).

Table 4: Confirmatory factor analysis test

	χ^2/ddl	GFI	AGFI	RMR	RMSEA	NFI	CFI	\square vc
FORMAOS	2,74	0,98	0,97	0,011	0,078	0,98	0,98	0,745
STANDOS	3,41	0,95	0,93	0,012	0,082	0,96	0,97	0,607
SOCENTR	3,71	0,96	0,91	0,019	0,088	0,97	0,98	0,766
ENVTCOMP	2,52	0,98	0,95	0,050	0,074	0,96	0,98	0,619
ENVTUNCT	2,51	0,95	0,90	0,048	0,064	0,89	0,92	0,726
ENVTDYNA	2,26	0,97	0,96	0,041	0,030	0,97	0,98	0,644
ENVTTURB	2,58	0,97	0,92	0,052	0,076	0,96	0,97	0,711
TECHSKIL	2,87	0,95	0,89	0,039	0,062	0,97	0,98	0,708
MANASKIL	2,24	0,97	0,93	0,038	0,073	0,97	0,99	0,608
ENTRSKIL	2,17	0,99	0,98	0,049	0,024	0,99	0,98	0,763
Thresholds (Roussel et al, 2002)								
	<2 see <5	>0.9	>0.8	→ 0	<0.08	>0.9	>0.9	>0.5

Discriminant validity

The study of discriminant validity is the last stage of testing validity and reliability of measurement instruments. The result of comparison between the two models is summarized in Table 5. The difference test of chi-square is significant. Indeed, the difference between the two values is NMIC 931.741 for a difference of degree of freedom of 91. This difference is significant according to the test of Chi-square. Also, it was noticed that the fit of the model (Mu) is significantly better than the model (Mc). It can be concluded that the discriminant validity of the different latent variables included in the overall model is established.

Table 5: Difference test of Chi-square for discriminant validity

Unconstrained model (Mu)		
$\chi^2 = 2197,508$	ddl = 1339	RMSEA = 0,048
Constrained model (Mc)		
$\chi^2 = 3129,249$	ddl = 1430	RMSEA = 0,065
Comparison Mc-Mu		
$\Delta\chi^2 = 931,741$	Δ ddl = 91	P < 0,001

The internal construct validity (convergent and discriminant) and reliability have been established, it is possible to approach the test of the conceptual model (Roussel et al, 2002).

Hypothesis testing

All hypothesis H1, H2 and H3 envisage a moderating effect of organizational structure, environment, leader skills on the relationship between strategic management and global performance. It covers an indirect causal link between strategic management (independent variable) and global performance (dependent variable) which depend on organizational

structure, environment and leader skills (moderating variables). To test the moderating effect of moderating variable, the process of Ping (1995) is the best known and recommended approach for its simplicity and robustness (Cortina et al, 2001; Moulder et Algina, 2002). It is to perform hierarchical regressions incorporating new variables created by multiplying the scores of the independent variables and scores of moderating variables (Cohen et al, 2003; El Akremi, 2005).

EMPIRICAL FINDINGS

After having validated measurement instruments, the research hypotheses are confronted with the survey data.

Adjustment of the structural model

Analysis of adjustment indices presented in Table 6 shows that the structural model fits the empirical data perfectly. In addition, analysis of modification indices and the residue matrix indicates no changes can substantially improve the adjustment. In addition, the model explains a significant part of the variance of most endogenous variables (see Table 6). This part even reaches 82% for the entrepreneurial skills dimension, and above 70% for the remaining variables in the model. These results allow accepting the model in its initial specification and turning to the interpretation of the estimated parameters to check its consistency with the hypotheses of the research.

Table 6: Adjustment of the structural model

Adjustment indices								
χ^2	ddl	χ^2/ddl	GFI	AGFI	RMR	RMSEA	NFI	CFI
225,986	88	2,56	0,98	0,83	0,068	0,059	0,89	0,91
Thresholds								
-	-	<2 voir <5	>0,9	>0,8	→ 0	<0,08	>0,9	>0,9

Testing of moderating effect of the organizational structure on the relationship between strategic management and global performance (H1)

Following the application of the approach Ping (1995), testing the moderating effects of the three dimensions of the organizational structure on the relationship between strategic management and global performance are summarized in Table 7. The results show the absence of moderating effect of different dimensions of the organizational structure in the relationship between strategic management and global performance. Indeed, on the one hand , each dimension "formalization", "standardization" and "Centralization" has no effect on the global performance ($\gamma = - 0.071$, Student's $t = - 0.897$) , ($\gamma = - 0.152$, Student's $t = - 1.931$) , (γ

= - 0.081 ; Student's t = - 1.078). Only the strategic management has a positive effect on the global performance ($\gamma = 0.187$, Student's t = 2.582). On the other hand, the products (strategic management x formalization) (strategic management x standardization) and (strategic management x centralization) does not appear to have a significant effect ($\gamma = - 0.021$, Student's t = - 0.507), ($\gamma = - 0.051$; Student's t = - 0.258), ($\gamma = - 0.138$, Student's t = - 0.702). The coefficient of determination for the global performance is equal to 41.78%. It is considered good. These results show that the dimensions "formalization", "standardization" and "centralization" have no direct or indirect effects on the global performance. That's when all the sub-hypotheses H1.1, H1.2, and H1.3 are rejected, and therefore H1 is rejected.

Table 7: Moderator effect of the organizational structure

Dependent variable	Independent and moderating variables, and interaction effects	Regression coefficients	Student's t-test	Significance
GLOBPERF (Adjusted R ² = 41,78%)	SM	0,187	2,582	S
	FORMAOS	-0,071	-0,897	NS
	SM x FORMAOS	-0,021	-0,507	NS
	STANDOS	-0,152	-1,931	NS
	SM x STANDOS	-0,051	-0,258	NS
	CENTROS	-0,081	-1,078	NS
	SM x CENTROS	-0,138	-0,702	NS

Testing of moderating effect of the environment on the relationship between strategic management and global performance (H2)

Following the application of the approach Ping (1995), testing the moderating effects of the four dimensions of the environment on the relationship between strategic management and global performance are summarized in Table 8. The test results show moderator's roles of different dimensions of the environment in the relationship between strategic management and global performance. The moderator's role of turbulence is stronger than the other dimensions. Indeed, strategic management has a positive effect on the global performance ($\gamma = 0.187$, Student's t-test = 2.582). Turbulence also has a direct effect on the global performance ($\gamma = 0.334$, Student's t-test = 3.628). The product (strategic management x turbulence) has a strong positive effect on the global performance ($\gamma = 0.570$, Student's t-test = 7.202). The test results also show moderators roles of complexity, dynamism, and uncertainty in the relationship between strategic management and global performance are also checked. Indeed, the direct effects of dynamism, uncertainty and turbulence of the environment on the global performance are checked ($\gamma = 0.189$, Student's t-test = 2.428), ($\gamma = 0.239$, Student's t-test = 2.974), ($\gamma = 0.149$, Student's t-test

= 2.146). Interactions between successively dynamism, uncertainty and turbulence of the environment with strategic management, are also checked ($\gamma = 0.129$, Student's t-test = 2.287), ($\gamma = 0.104$, Student's t-test = 2.317), ($\gamma = 0.241$, Student's t-test = 2.667). The coefficient of determination for the global performance is equal to 62.81%. It is considered very well. That's when all the sub-hypotheses H2.1, H2.2, H2.3, and H2.4 are all confirmed, and therefore H2 is confirmed.

Table 8: Moderator effect of the environment

Dependent variable	Independent and moderating variables, and interaction effects	Regression coefficients	Student's t-test	Significance
GLOBPERF (Adjusted R ² = 59,71%)	SM	0,187	2,582	S
	ENVTCOMP	0,149	2,146	S
	SM x ENVTCOMP	0,241	2,667	S
	ENVTDYNA	0,239	2,974	S
	SM x ENVTDYNA	0,104	2,317	S
	ENVTUNCT	0,189	2,528	S
	SM x ENVTUNCT	0,129	2,287	S
	ENVTTURB	0,334	3,628	S
	SM x ENVTTURB	0,570	7,202	S

Testing of moderating effect of the environment on the relationship between strategic management and global performance (H3)

Following the application of the approach Ping (1995), testing the moderating effects of the three dimensions of the leader skills on the relationship between strategic management and global performance are summarized in Table 9. The results show the absence of moderating effect of different dimensions of the organizational structure in the relationship between strategic management and global performance. Indeed, on the one hand , each dimension " technical skills of management and sector ", " managerial skills " and " entrepreneurial skills " has no effect on the global performance ($\gamma = 0.129$, Student's t = 2.023) , ($\gamma = 0.289$, Student's t = 3.547) , ($\gamma = 0.461$; Student's t = 5.027). Only the strategic management has a positive effect on the global performance ($\gamma = 0.187$, Student's t = 2.582).

On the other hand, the products (strategic management x technical skills of management and sector) (strategic management x managerial skills) and (strategic management x entrepreneurial skills) does not appear to have a significant effect ($\gamma = 0.136$, Student's t = 0.276), ($\gamma = 0.095$; Student's t = 0.813), ($\gamma = 0.065$, Student's t = 1.012). The coefficient of determination for the global performance is equal to 52.44%. It is considered good. These results show that the dimensions "technical skills of management and sector",

"managerial skills" and "entrepreneurial skills" have no direct or indirect effects on the global performance. That's when all the sub-hypotheses H3.1, H3.2, and H3.3 are rejected, and therefore H3 is rejected.

Table 9: Moderator effect of leader skills

Dependent variable	Independent and moderating variables, and interaction effects	Regression coefficients	Student's t-test	Significance
GLOBPERF (Adjusted R ² = 52,44%)	SM	0,187	2,582	S
	TECHSKIL	0,129	2,023	S
	SM x TECHSKIL	0,136	0,276	NS
	MANASKIL	0,289	3,547	S
	SM x MANASKIL	0,095	0,813	NS
	ENTRSKIL	0,461	5,027	S
	SM x ENTRSKIL	0,065	1,012	NS

DISCUSSION AND IMPLICATIONS

First, results do not support a moderator effect of organizational structure on the relationship between strategic management and global performance. Strategic management does not explain the variation of the global performance for given organizational structure attribute (formalization, standardization, and centralization). On the one hand, this result is explained by the absence of effects previously observed between each of the dimensions of organizational structure (formalization, standardization, and centralization) with strategic management. On the other hand, results show that only strategic management has a direct effect on the global performance. In this case, it is possible that the strategies developed by the company, which are the product of strategic management, are winning strategies. Their creative or realistic kind could be the causes of global performance, whether the organizational structure is formalized, standardized or centralized.

Second, the results support the effect of strategic management on global performance that is moderated by the environment. These results suggest that the ability of strategic management to explain the global performance will depend on levels of complexity, dynamism, uncertainty and even greater environmental turbulence. More the environment is complex, dynamic, and uncertain or even it is turbulent, more strategic management will have a significant positive effect on global performance. In other words, the global performance can only be achieved by the interactive effect of strategic management and the environment. In fact, the environment variable will change the relationship between strategic management and global performance. In fact, the environment variable will change the relationship between strategic

management and global performance. It is complex, dynamic, uncertain or turbulent environment determines the contribution of strategic management has global performance. Therefore, the choice of adoption of strategic management based on a particular state of the environment is a necessity for the company: its global performance level will vary significantly. It is more crucial when the environment is turbulent. Based on these elements, we argue that strategic management is a prerequisite for achieving better global performance, and that this occurs only when certain preconditions are met, including the alignment of strategic management at the environment in which the company and especially the turbulent environment. This result is consistent with our theoretical development. More the environment is complex, dynamic, uncertain or turbulent, the more necessary, even essential, to adopt strategic management. Indeed, the strategic management which refers to the participation of organizational actors of different hierarchical levels in the formulation of corporate strategy, facilitates, in space and time, the formulation and implementation of successful strategies (Koenig 1990). This could be explained by three main reasons. First, the high degree of creativity and realism formulated strategies (Mintzberg, 1994, Bradford, 1995; Calori and Atamer 1989; G linier, 1990). Second, the involvement of operational actors in the formulation of the strategy increases the degree of motivation (Avenier 1988; Calori and Atamer 1989; Mintzberg, 1994). Third, by high degrees of learning and development of skills in strategic thinking (Koenig, 1990; Werther and Kerr, 1995). Following these findings, it seems that the choice of adoption of strategic management does not occur outside the environmental context and influences the achievement of the global performance Strategic management and the environment interaction produce the global performance. Therefore, companies wishing to adopt strategic management should not overshadow the importance of the environment. However, the moderating role of the environment on the relationship between strategic management and global performance provides strong support for the classical approach that suggests that context influence the choice of adoption of strategic management and the global performance.

Third, the empirical results support that there is no moderating effect of leader skills on the contribution of strategic management to global performance. These results lead to relativize the importance of skills of the leader on the relationship between strategic management and global performance. However, the empirical results demonstrate the existence of direct effects of each dimension of the leader skills on the global performance. This result is quite consistent with the literature on entrepreneurship. Indeed, it is well established that the leader skills prove predictors of performance (Bayad et al, 2006), and the performance differences between firms are due to the different skills of heads of business (Rented et al, 2008). Specifically, technical,

managerial and entrepreneurial corporate chef is an important factor in the future success of the company (Lorrain et al, 1991).

CONCLUSION

This research aims to measure the moderating effect of the organizational structure, environment and leader skills, on the relationship between strategic management and global performance. Using a sample of 276 Tunisian SMEs involved in the upgrading program results indicate an absence of organizational structure and leader skills on the relationship between strategic management and global performance. Neither organizational structure nor environment moderates the relation between strategic management and global performance. This relation is moderated only by environment. So the contribution of strategic management to global performance is conditioned only by the environment. The more the environment is complex, uncertain, dynamic or turbulent, the more likely is strategic management to have a positive effect on the global performance. Therefore, our research contributes on one hand, to address the lack of research reported at this level and secondly, to enrich and deepen our knowledge on the problem studied. However, this research represents an attempt to treat an area of research quite fruitful and important for companies that evolve especially in globalization, which requires more empirical research in the future.

Therefore, our research contributes to address the lack of research presented at this level and to enrich and deepen our understanding of the problem studied, it has some limitations. The first limitation concerns the nature of the measures used to understand the variables in the conceptual model. In fact, we used subjective measures by which the respondent who is the entrepreneur himself evaluates the behavior of its business and reported in the questionnaire. There may be a gap between what is said and reality, linked to the risk of bias affecting the desirability responses provided by the participants in our survey. That is why it would be desirable to re-test our research model using objective measures and subsequently capture the variation between results from subjective measures and those from objective measures. The second limitation concerns the external validity of this research. Indeed, although the sample was carefully taken to be representative of the population, it is not possible to generalize the findings of this research on all Tunisian companies involved in the upgrading program, and this because of the absence of the three sectors of the final sample (LFI, CHI, and MCCGI). Therefore, these findings can be generalized only to the four sectors surveyed (AFI, VI, MI, and TCI). It would therefore be very useful to repeat this research, by integrating the three areas that are lacking.

These limitations represent opportunities to advance in our efforts to understand the relationship between strategic management and global performance. On the whole, our results are informative and encouraging, and we hope they will stimulate further research at the interface of strategic management and global performance. The first avenue for future research that may be proposed regarding improving the explanation of the adoption of strategic management. In fact, our conceptual model integrates a single explanatory factor that is the organizational structure. To improve the explanation of this behavior, it would be interesting to enrich our validated model by incorporating other causal variables such as the skills of the entrepreneur and the environment, which, according to several researchers, to determine the behavior and development of companies. The second avenue for future research concerns the external validity of this research. Indeed, it should, in the context of further work to re-test our model in different contexts, to check whether our results are generalizable or not. Thus, the use as research field of international companies operating in Tunisia or public companies would conclude on the generalizability of our results. The third promising avenue of research relates to the methodology. It is to study the explanatory framework of strategic management using a comparative approach between firms that adopt strategic management and those that do not adopt. This approach would deepen the understanding of the adoption of the practice of strategic management, and to identify other explanatory factors. The fourth line of research concerns the participatory approach in strategy formulation. Indeed, the validated model does not specify the process or the process adopted by companies for the participation of hierarchical levels in strategy formulation. Issues such as the skills of participants, number of participants, selection of participants, conditions of participation are required. Thus our research will stimulate reflection on all these points, followed by empirical investigations to measure their impact on the practice of strategic management, and therefore improve our understanding of the contribution of strategic management to global performance.

REFERENCES

- Ansoff H. I. (1984), *Implanting strategic management*, Ney York, Prentice Hall.
- Ansoff, H. I. (1965). *Corporate Strategy*. New York: McGraw-Hill.
- Avenier M.J. (1988), *Le pilotage stratégique de l'entreprise*, Presses du CNRS, Paris.
- Bayad, M. Arcand, M., Arcand, G., (2002) « Le regroupement stratégique des pratiques mobilisatrices de gestion des ressources humaines », *gestion*, juillet/août, n°. 2, p. 121-137.
- Beard, D.W. ; G.G. Dess (1981). « Corporate-level strategy, business-level, and firm performance. » *Academy of Management Journal* 24:663-688
- Berman S.L., Wicks A.C., Kotha S.; Jones T.M. (1999), « Does Stakeholder Orientation Matter ? The Relationship Between Stakeholder Management Models and Firm Financial Performance», *Academy of Management Journal*, 42(3): 488-506.

- Boyd. R.L. (1991). « A contextual analysis of black self-employment in large metropolitan areas.1970-1980 », *Social Forces*, n°10.409-429.
- Bracker J., Heats B., Pearson J. (1988), « Planning and financial performance among small firms in growth industry », *Strategic Management Journal*, vol 9, n° 6, pp. 591-603.
- Brisson, G. (1992), *L'influence de la Relation Structure-Turbulence sur la Performance des Organisations: Le cas des Municipalités Québécoises*, Thèse de doctorat, Université d'Aix-Marseille, France.
- Calori R., Atamer T. (1989), *L'action stratégique. Le management transformateur*, Les Editions d'Organisation, Paris.
- Calori R., Very P., Arregle J. L. (1997), « Les PMI face à la planification stratégique » ,*Revue Française de Gestion*, pp. 11-23. Paris.
- Carroll A B, Vogel, H (1987), « A three dimensional conceptual model of corporate social performance » , *Academy of Management Review*, Vol 4, n°3, pp 345-377.
- Chakravarty B.S (1997), « A New Strategy Framework for Coping with Turbulence » ,*Sloan Management Review*, pp. 69-82.
- CHAKRAVARTHY, B.S. (1986), « Measuring strategic performance » , *Strategic Management Journal*, vol. 7, n°5, pp. 437-459.
- Chandler, A. D. (1989). *La main visible des managers. Une analyse historique*. Paris : Economica.
- Chandler, G. N. , JANSEN, E. (1992), « The founder's self-assessed competence and venture Performance » , *Journal of Business Venturing*, n° 7, pp. 223-236.
- Charles W.L.Hill and Gareth R.Jones(1998) : *Strategic Management Theory An integrated Approach* ; Houghton Mifflin Co., Boston.
- Cohen M. D., March J. G., Olsen J. P. (1972), « A garbage can model organizational choice » , *Administrative Science Quarterly*, vol 17, pp. 1-25.
- Cortina J.M, Chen G., Dunlap W.P (2001), « Testing Interaction Effects in LISREL : Examination and Illustration of available procedures » , *Organizational Research Methods*, vol 4, n°4, pp. 324-360.
- Coulter, M. K. (2002), *Strategic Management in Action*, Prentice Hall, Upper Saddle River, New Jersey.
- Desreumaux A. (1993), *Stratégie*, Dalloz,
- Dixon J.R., Nanni A.J., Vollmann T.E. (1990), *The new performance challenge : measuring manufacturing for world class competition*, Dow-Jones-Irwin.Donaldson,.
- Epstein M. ,Manzoni J.F (1997), « The Balanced Scorecard and Tableau de Bord : Translating strategy into action » , *Management Accounting*, vol. 79, n° 2, p. 28-37.
- Gartner W.B. (1988), « Who is an Entrepreneur? Is the Wrong Question » , *American Journal of Small Business*, vol 12, n°4, pp. 11-32.
- Glueck W. F., Jauch L. R. (1984), *Business policy and strategic management*, Mc Graw-Hill.
- Goodman, P.S. Pennings J.M., (1977), *New Perspectives on Organizational Effectiveness*, San Francisco, Jossey-Bass.
- Grabin M, Josserand E (2003), Réussir son tableau de bord prospectif, *L'expansion Management Review*, Mars.
- Gueguen G. (2001), « Orientations stratégiques de la PME et influence de l'environnement: entre déterminisme et volontarisme » , *10ème Conférence Internationale de l'AIMS*, Québec, 13-15 juin.
- Hambrick D. C. (1983) « Somme tests of the effectiveness and fonctionnal attributes of Miles and Snow's strategic types » , *Academy of Management journal*, vol 26, pp. 5-25.
- Herron L A., Robinson R B. (1993), « A structural model of the effects of entrepreneurial characteristics on venture performance » , *Journal of Business Venturing*, n°8, pp. 281-294.

- Hill C.W.L. Jones T.M. (1992) « Stakeholder-agency Theory », *Journal of Management Studies*, vol. 29, n°2, pp. 131-154.
- Hussey D. E. (1984), « Strategic Management : Lessons from Success and Failure » , *Long Range Planning*, vol 17, n° 1, pp. 43-53.
- Kalika M. (1995), *Structures d'Entreprises. Réalités, déterminants, performance*. Economica, 436 p.
- Kaplan, R.S. ; Norton, D.P. (1996), *The Balanced Scorecard*, The Harvard Business School Press.
- Kaplan, R.S. ; Norton, D.P. (2003). Managing Regulatory and Societal Processes. *Balanced Scorecard Report*. July-August: 3-6.
- Kargar, J (1996): « Strategic planning emphasis and planning satisfaction in small firms: An empirical investigation ». In: *Journal of Business Strategies*, n° 1, pp. 42–64.
- Larsen H. H., M. London, M. Weinstein, S. Raghuram, (1998), High flyer management development program – organizational rhetoric or self-fulfilling prophecy ?, *International Studies of Management and Organization*, vol. 28, n°1, pp. 64-90.
- Lenz R.T., Lyles, M.A., (1986), « Managing human problems in strategic planning systems » , *Journal of Business Strategy*, Spring, pp. 57-66
- Lorrain J., Belley A., Dussault L. (1998), Les compétences des entrepreneurs : élaboration et validation d'un questionnaire (QCE) » , *CIFEPME*, Nancy-Metz.
- Louart P (1997)., « Motivation » , in Y. Simon, P. Joffre, *Encyclopédie de gestion*, Paris Economica (2° édition),.
- Luthans, F., Stewart, T., (1977), « A general contingency theory of management » , *Academy of Management Review*, April, pp. 181-195
- McNair C.J., Lynch R.L. Cross K.F. (1990), « Do Financial and Non-Financial Performance Measures Have to Agree ? » , *Management Accounting*, November, p. 28-36.
- Mintzberg H. (1978), « Patterns in Strategy Formation » , *Management Science*, n° 24, pp. 934-948.
- Mintzberg H. (1994), *Grandeur et décadence de la planification stratégique*, Dunod, Paris.
- Mintzberg H., Ahlstrand B., Lappel J. (1999), *Safari en pays stratégie*, Editions Village Mondial, Paris.
- Morin E., Savoie A. Beaudin G. (1994), *L'efficacité de l'organisation. Théories, Représentations et Mesures*, Chicotimi: Gaëtan Morin, Montréal, 158 p.
- Moulder B.C., Algina J. (2002), « ComParison of Methods for Estimating and Testing Latent Variable Interactions » , *Structural Equation modeling*, vol 9, n°1, pp. 1-19.
- O'regan, N. , Ghobadian A, (2005), « Innovation in SMEs: the impact of strategic orientation and environmental perceptions » , *International Journal of Productivity and Performance Management*, vol. 54, n° 1/2, pp. 81-97.
- Ping R. (1995), « A Parsimonious Estimating Technique for Interaction and Quadratic Latent Variables » . *The Journal of Marketing Research*, 32, pp. 336-347.
- Porter M. E. (1996), « *What Is Strategy?* » , *Harvard Business Review*, November-December.
- Quinn R. E., Rohrbaugh J. (1983), « A Spatial Model of Effectiveness Criteria » , *Management Science*, Vol.29, n°3, pp.363-377
- Roussel P., Durrieu F., Campoy E., El Akremi A., (2002), *Méthodes d'équations structurelles : recherches et application en gestion*, Economica, Paris, Collection Recherche en gestion.
- Schmitt C, (2003), « La science allemande du droit dans sa lutte contre l'esprit juif » , *Cités*, n°14, pp. 173-180.
- Schwenk CR, Shrader CB. 1993. Effects of Formal Strategic Planning on Financial Performance in Small Firms: A Metaanalysis. *Entrepreneurship Theory and Practice* 17 (3): 53-64.
- Sharplin A. (1985) ; *Strategic Management* ; MC Graw t-lill, New York.

Shrader C., Mulford C., Blackburn V. (1989), « Strategic and operational planning, uncertainty, and performance », *Journal of small business Management*, pp. 45-60.

Smircich L., Stubbart C. (1985), « Strategic Management in an enacted world », *Academy of Management Review*, vol. 10, n°4, pp. 724-736.

Osi, H., Slocum, J.W. (1984), « Contingency Theory: Some Suggested Directions », *Journal of Management*, vol 10, n°1, pp. 9-26.

Verstraete T. (1999), *Entrepreneuriat : connaître l'entrepreneur, comprendre ses actes*, L'Harmattan, Collection Economie et Innovation.

Voyer, P. (2002), « Tableau de bord de gestion et indicateurs de performance », *Presse de l'Université du Québec*, Sainte-Foy, Québec.

Wright M., Rogers E.W. (1998), « Measuring Organizational Performance in Strategic Human Resource Management: Problems, Prospects, and Performance Information Markets », *Human Resource Management Review*, vol 8, n°3, pp. 311-331.