



Research Article

What are the Links between Societal Piloting Performance, Management Control System and Competitive Advantage in the Tunisian Companies?

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Abstract

This research examines the effects of management control system on corporate societal responsibility and competitive advantage. Through a questionnaire, survey was conducted at 306 Tunisian companies; the data collected are processed using exploratory and confirmatory analysis by the methods of structural equations. The results are that the management control system, developed through an interactive system, has a positive impact on corporate societal performance and competitive advantage. The same societal performance increases competitiveness

Keywords: Management control system, Corporate societal performance, Competitive advantage, Tunisian companies

Introduction

The focus of the current environment shows a complex, changing and uncertain environment. Placed today in such an environment, companies are forced to evaluate their opportunities and threats in terms of constraints. Therefore, they are required to monitor, collect and analyze information to adapt and react to its environment. Similarly, they are encouraged to implement sustainability into their strategy.

In this regard, management control plays a crucial role on the one hand. The control of sustainable management involves developing a control system capable of integrating the complexity and the details of construction, they are guided by the search for sustainability.

Control of modern management constitutes a relevant tool to create a sustainable and

competitive advantage. In this sense, financial performance has largely suffered from deficiencies and disabilities to reflect the true value of firms. He was very urgent to consider other components namely those that exceed the threshold of the company, to give birth to a real focus on the social responsibility of the company vis-à-vis its interested parties that maintain speech relationships with them.

A speech that was manifested by increased corporate commitments to the social side, environmental and ecological, or even society. The latter described as promising and promising wealth concerns have prompted companies to talk about a broader performance.

Our research context will move away from the traditional design of control systems for management to address another more innovative and practical design in managing

the different dimensions of the overall performance. The latter is identified by several authors and researchers namely Dohou and Berland (2010) and Trébucq and Gates (2007).

For Bouquin (2004), financial performance is not enough to appreciate the due performance company. It was during the 20th century that performance expanded to take into account the "social responsibility" or social responsibility of the company with respect to its "stakeholders. The recent emergence of the themes of social responsibility (CSR) is a new challenge for management control. Subsequently, work on CSR took on a new dimension from the 1970s, thanks to the work of Carroll (1979). The work of Bowen (1953), which was the first theoretical construct of the concept of CSR, argues that the large American companies were central to the political and social life, and that their behavior largely influenced the lives of citizens on several aspects.

As part of the stakeholder theory, researchers in this area help understand and define that, in any case, it is discovering all the stakeholders that influence business performance. This function is based on a screening process which corroborates to influence the behavior of managers, based on information provided by line managers.

The theoretical contribution of research beginning with the original investigative approach which, through a deductive approach offers different contribution theoretical approaches in order to understand and solve complex problems of management control systems oriented CSR. In this context, the central research question is: What are the determinants of societal piloting performance in a management control system?

Literature Review and Hypothesis

The concept of corporate social performance is a central concept of research in business management that has evolved to identify the different relationships between the company and its environment. Some authors such as Carroll (1999), Wartick and Cochran (1985) emphasized in their research the ability of the company to properly express their social responsibility through extensions of earlier theoretical work that based on the results

found by Bowen (1964); designed as the founding father of social responsibility.

As part of strategic management control, an issue that has been for long comprised as a major issue for academic and professional researchers and is well cited in the work of Wegmann (2001).

Genesis of societal performance

Management control plays an important role in organizations, from the point of view that it is designed as a tool for performance management. It allows managers to track the process control and evaluate performance. Thus, in recent years, a great debate has emerged in enterprises, in an initiative to understand the control process designed to respond to a changing environment.

Evolution of management control system

Definition of a control system management

The control system of management can be defined as a set of tools and procedures to finalize the phases of management control.

In fact, the system of management control must include the full set of tools for management control whether traditional tools such as cost accounting, budget management, dashboard or skilled modern tools such as for example the dashboard strategic, the balanced scorecard and benchmarking. Despite that, the literature that addresses the subject of management control that focuses on social responsibility is a bit rich, even as we notice some authors who contributed to them.

In particular, these contributions are dated in the American context; whereas in the European context initiatives are still a little shy. The birth of CSR issues is revealed by a large business concern to publish their social information in their reports. This has been the renewed interest of companies that are publicly traded wanting to improve the value of their business.

For Germain and Gates (2007) "the strategic management of CSR is an uncommon practice in business". And they add in this regard that "this finding argues for the idea that CSR issues today remains confined to external communications objectives." Meysonnier and

Rasoloflo (2008) discussed the characteristics of a system of control; they are able to conclude that companies integrate corporate social responsibility objectives in their control systems by taking into account financial goals. Finally, Simons (1987) argued renewed control systems definition. He describes as all "procedures and formalized systems based on the information that managers use to maintain or change some settings of the activities of the organization." By extension to the initial definition of Simons (1987), we postulate that the control systems of CSR represent all procedures and formalized systems based on non-financial, environmental and societal information that managers use to maintain or change some settings of the activities of the organization seeking to improve the overall business performance.

They have the advantage of providing a dichotomous view of the control based on its use by managers. In other words, this framework is more interested in how the tool is used by managers to achieve their goals, rather than how to compose and articulate these systems.

Capelliti et al. (2007) use the concept of management control. It helps in this context to define management control as follows; "Management control as a set of devices supporting the manager, who has two dimensions: an economic and strategic importance of choosing the operating rules to achieve the goals and organizational and psychosocial dimension leading to encourage individuals to act in accordance with the operating rules". Berland and Persiaux (2008) talk of management control innovation that reaches the set as "a sensitive issue" especially when developing new products or services is based on technologies.

Thereafter, Burlaud and Simon (2008) define management control as a system of regulating the behavior of man in the exercise of his profession, and more specifically when it is exercised within the framework of the organization.

Finally, Chapman (1997) managed to find a very significant relationship between the different characteristics of management control systems and the environment. Some authors such as Carroll (1999), Wartick and Cochran (1985) emphasized in their research

the ability of the company to properly express their social responsibility through extensions of earlier theoretical work that was based on the results found by Bowen (1964); designed as the founding father of social responsibility.

Piloting societal performance

Piloting is a way of organizing the control needed when the environment becomes uncertain and in which the evaluation of performance is based on organizational learning. It is based on a control system that provides various functions.

Since the early 1990s, performance measurement systems have not ceased to evolve. This is reflected by the many contributions that do not stop growing to adapt the strategies of the organization with the development of the overall business environment.

The concept of social responsibility refers to the nature of the interactions between business and society, and formalizes the idea that the company, in that it acts in an environment that is both social, political and ecological, must assume a set of responsibilities beyond the purely legal and economic obligations. Including Kaplan and Norton (1992), "the dashboard dials defined as an aircraft that gives managers complex information at a glance". A little further, this approach is part of the strategic management control, an issue that has for long been comprised as a major challenge for academic and professional researchers and is well cited in the work of Wegmann (2001). For Wegmann (2001), "A system of strategic management control expanded version requires a hedging of the financial value of strategic value".

Quairel (2006) called "Control system's overall performance". From a theoretical point of view, it represents a new form of control system which can then be compared to other innovations. Indeed, research on control systems has been a source of theoretical and empirical research by academic researchers who have long sought an understanding of the functions of management control systems with changing social, ecological, economic, and environmental demands.

Several approaches have been developed in the field of accounting and management control to mainstream CSR in control systems businesses, as well as environmental

accounting. Based on the work of Simons (1987), a qualified modern or renewed control systems definition expresses that control systems are formalized procedures and systems based on the information used by managers for operation of the organization and to make changes in case the results are not consistent with the objectives or a little less felt. Simons (1987) made a renewed control systems definition. He describes them as all "Procedures and formalized systems based on the information that managers use to maintain or change some settings of the activities of the organization".

In 2007, Berland and Dohou define the overall performance as a result of the combination of three dimensions of sustainable development. As mentioned in the works of Clarkson in 1995 that although businesses are directly affected by the different stakeholders, they do not fit into their strategies or approaches.

Chiapello and Delmond (1994) conclude the importance of incorporating non-financial information in the systems of performance management; see further adding a qualitative representation. Pesqueux (2004) and Simons (2000) find that environmental control systems are designed as management control systems including their primary role which is to monitor environmental performance through the tools provided by the management control. Which advance that the importance of social responsibility indicators in the tools of management control system designed to control and express a more meaningful performance. In this context, Chiapello, Delmond (1994) proposed a qualitative representation, they propose to incorporate non-financial information in the systems of performance management. These authors share the same thoughts as those mentioned by Kaplan and Norton in 1998, which involve the integration of non-financial indicators in measuring systems business performance namely: Internal processes, organizational learning, customer satisfaction and shareholder in the Scorecard. Henry and Journeault (2006) gave the name of eco-control control of societal management, which is an adaptation of the traditional components of management accounting. Indeed, eco-control is a control system that includes an important societal axis for corporate accountability vis-à-vis environmental issues.

Therefore, management control, beyond traditional approaches to financial thresholds, introduces various indicators and meets societal expectations and sustainable development. In particular, for management control is a tool consisting of steering the overall performance, we have to define the objectives of companies in societal, environmental and social matters.

This depends on the definition of the overall performance that has remained until now a multidisciplinary and ambiguous concept by researchers, and depends also on the definition of interest or stakeholders that business is in direct relationship with the groups. In this case, a system of management control oriented CSR promotes sustainable development and allows companies to take a dominant competitive position. More concretely, sustainable development can be an appropriate balance between economic, social and environmental side.

***Corporate social performance,
management control system and
competitive advantage***

Corporate social performance widens; it is no longer limited only to shareholders, but incorporates other stakeholders (associations, unions, customers, suppliers ...). These new players demand to be heard, and listening becomes a vital target for the performance and sustainability of companies. It is in this context that the concept of overall performance appears. It is in this long tradition of reflection on the social responsibility that the concept of corporate social performance emerges. We noticed that in the literature there is no clear and specific definition of corporate social performance.

Thus, according to the research from Carroll (1979), social performance is the intersection of three dimensions: the principles of corporate social responsibility (economic, legal, ethical and discretionary), philosophies of answers to societal problems that arise (from denial in advance), and societal areas in which the company is involved. In line with this, the work of Carroll and Wood (1991) considers the social performance to be "an organizational configuration of principles of social responsibility, processes of social sensitivity and program policies and observable results that are related to relationships societal enterprise".

But another researcher, Clarkson (1995), is based on the more pragmatic recognition of the difficulty in using the above definitions for understanding the social performance and proposes to adopt an approach based on the effective operation of businesses. Thus, mobilizing as part of the stakeholder theory to model social performance, he defines it as the ability to manage and meet the stakeholders (Gond, 2004). Hence, our hypotheses are as follow:

H1: The management control system has a direct positive impact on corporate societal performance.

H2: The management control system has a direct positive impact on competitive advantage.

H3: Corporate societal performance promotes competitive advantage.

Data and Methodology

We conducted a field survey, adopting the technique of investigation of a direct interview based on a questionnaire. Our sample is 306 Tunisian industrial companies employing between 50 and 500 employees and operating in various sectors. This study examines secondary data. These are collected from a questionnaire as part of a research project established in a thesis to understand the relationship between management control systems and the degree of integration indicators of social responsibility in Tunisian industrial companies.

Research model

This model is particularly interested in the behavior of management control systems through the relationship with the corporate social responsibility and the competitive advantage.

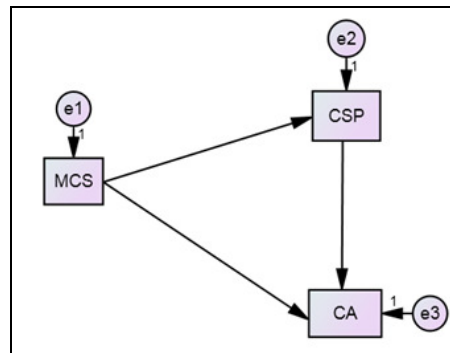


Figure 1. Structurel Modèle

Source: Author

Measures of model variables

Measurement system management control

Measuring Christophe Germain and Stephen Gates (2010)

In their studies Germain and Gates (2010) used a Likert scale to 5 points from 1 (very low) to 5 (very high), the degree of presence of financial indicators and non-financial indicators for key variables management (cost, quality, productivity, time, etc ...), the market (customer satisfaction, market share, etc ...), intangible elements (human resources,

information systems, innovation, etc...). They tried to give respondents many examples for each category of indicators provided in the questionnaire in order to increase the readability of the question.

Hence, the respondents are required to answer a question rated on a Likert scale to 5 points from 1 (very low) to 5 (very much), the extent to which the five types of indicators are linked to the strategic objectives of the company. In fact, this proposed Germain and Gates (2010) scale distinction between non-financial and financial indicators in corporate piloting tools based on different axes whether financial axis customers, internal business process, and

learning, innovation center and finally an axis dedicated to social responsibility (CSR).

Measuring Villarmois and Tondeur (2005)

Villarmois and Tondeur (2005) used 26 items to describe the control system of business management based on a Likert scale with 7 points. To characterize the control system, the question was: How important is your management control system grants the following?

Including the proposed scale included 7 points, the two extremes being weak and strong. This measurement scale is based on the work of Kaplan (1984). The proposed Villarmois and Tondeur (2005) scale is an adequate scale to our research objectives and so it is like a ladder of recent measure reused by Germain and Gates (2010). The design of control systems in three dimensions scale is qualified multidimensional and involves ; The first design of control systems considers the control systems oriented management actions and behavior of the actors; the second includes systems management control versus modeling relationships between resources and objectives; and finally the third dimension focuses on system management control oriented interconnection strategy.

Scales for measuring social performance

Kaplan and Norton (1992) proposed a model of performance measurement that takes into account all aspects of the business. The set of indicators used to measure performance on several dimensions grouped in the Balanced Scorecard (Balanced Scorecard). Therefore, to achieve a balanced performance measurement, Kaplan and Norton (1996) suggested using a variety of indicators grouped into four broad categories:

- Financial indicator (cash flow, profitability, turnover, etc ...);
- Indicators of customers (satisfaction, market share, return rates of products, etc...);
- Indicators of customers (satisfaction, market share, return rates of products, etc...);

- Oriented development of innovation and organizational learning (satisfaction, loyalty, motivation and training of employees, quality of information systems, etc ...) indicators.

In this context, the survey allows respondents by using a semantic differential five-point scale ranging from "a low level of integration" to "a high degree of integration." The developed measurement tool allows both to assess the degree of presence of each component indicators: customers, internal processes, innovation and learning. For Germain (2007), the evaluation of measurement systems companies was made through an issue that allows respondents to indicate on a Likert scale ranging from 1 Very low (1) to 5 Very high (5), the degree of presence indicators on the four perspectives of balanced scorecard.

Finally, the degree of decentralization of systems performance measurement is a feature to consider.

Measure of competitive advantage

To measure the competitive advantage, it was very urgent to make an overview of the literature review to fully choice the adequate scale. Initially, in a recent work considered, Zghal et al. (2007) manages to provide a measurement scale from the work of Roth and Morrison (1992). In this context, Roth and Morrison (1992) used, to describe the competitive advantage on the basis of a measurement range of 5 points, a measurement scale of 10 dimensions.

Estimation of model parameters

This estimation is performed iteratively with the method of maximum likelihood. This method, advocated by default, is the best of the methods tested. The level of fit of the model is evaluated by the chi-square statistic (χ^2). The model fit to the data is considered adequate when the p-value associated with (χ^2) is greater than 5%. This condition is satisfying for our model measure, p-value associated (χ^2) obtained is equal to (0,065). The χ^2 is often supplemented by various ad hoc fit indices that are more practical and robust to indicate how well the model explains the data. In this perspective, the author can use statistical indicators proposed by Joreskog and

Sorbom (1982), the GFI (Goodness of Fit), the RMR (Root Mean Square Residual), as well as other comparators such as AIC (Akaike Information Criterion).

Results

Exploratory and confirmatory factor analysis

Using SPSS, we first tested the reliability and validity of the scales measures by adopting an exploratory factor analysis. In this context, we

repeat the principal component analysis where the communalities are lower (0.5). Similarly, the Cronbach's alpha of (0.60) was used as the threshold to decide whether or not to include an item in a scale. As an additional tool for evaluating reliability, inter-item correlations were calculated for each dimension. This allowed through the KMO index and Cronbach's alpha to purify the different scales of measurement object variables of our empirical study. Thus, our results are presented in the table below:

Table 1: Results of the exploratory factor analysis

Indices of goodness of fit	MCS	CSP	CA
KMO Index	0,770	0,733	0,500
Cronbach Alpha	0,887	0,789	0,899
Significance of Bartlett	0,000	0,000	0,000
Number of items selected	16	4	8

Once the exploratory analysis is completed, we move to confirm the internal validity of the scales, where a confirmatory factor analysis is required. We have adopted in this case the

different indices of adjustment provided by the AMOS software namely index RMSEA, RMR, CFI, GFI, CAIC, etc.

Table 2: Results of the confirmatory factor analysis

Indices of goodness of fit	MCS	CSP	CA
χ^2 (associated p-value) χ^2 /ddl	0,838	3,773	1,524
GFI	0,989	0,992	0,994
TLI	1,007	0,957	0,958
CFI	1,000	0,986	0,987
RMR	0,033	0,048	0,054
CAIC (tested model)	0,000	0,095	0,041
CAIC (saturated model)	12,638 18,000	11,000 12,563	17,573 23,000

Testing the structural model

To test the structural model, we transformed model measures containing items retained in

the factor scores by adopting the method of Anderson Rubin. Thus, the following table shows the test results of the structural model which shows a very good fit judged by indices.

Table 3: Test results of the structural model

Indices of goodness of fit	MCS
χ^2 (p associate) χ^2 /ddl	0,197
GFI	1,000
TLI	1,006
CFI	1,000
RMR	0,009
CAIC tested model	18,197
CAIC saturated model	20,000

Analysis of the significance of the model parameters

The results of the analysis of the structural model of table 4 all the coefficients are significant at the 5% level. Indeed, the results express a strong and significant relationship between management control system and corporate societal performance evidenced by a positive regression coefficient equal to (1.028). This confirms our first hypothesis. These results confirm those found by Simons (1991, 2000) and Pesqueux (2004), which are able to conclude that the management control systems stimulate corporate societal

performance. Subsequently, the same results suggest a significant positive relation at the 5% level between the management control system and the competitive advantage related to environment. These findings confirm those found in previous work, including Chia (1995) and Gosselin and Dubé (2002).

Finally, a positive and significant relationship between corporate societal performance and competitive advantage evidenced by a regression coefficient equal to (0.773) shows that the corporate societal performance positively influences competitive advantage. This will confirm our second hypothesis.

Table 4: Analysis of the significance of the model parameters

Regression coefficient			Estimate	S.E.	R.C.	P
MCS	<---	CSP	1,028	0,052	5,143	***
MCS	<---	CA	0,773	0,052	6,303	***
CSP	<---	CA	-0,277	0,019	-14,448	***

Discussion

The objective of this paper is to understand the behavior of system management control against the societal component defined in societal performance. For this, we discussed an empirical study with reference to the research methodology. Our sample includes 306 of selected Tunisian industrial companies. Our results confirm those found in previous studies, including Chia (1995), Gosselin and Dubé (2002) and Simons (1991, 1994). Indeed, management control has a direct positive impact on corporate performance that can interact and foster a competitive advantage.

Therefore, societal performance encourages companies to promote a competitive advantage.

It is a fact confirmed more especially with the emergence of new virtual economy. Bollecker and Mathieu (2004), Simons (1991) and Langfiels and Smith (2004) have defined management control as a system that can influence the behavior of individuals at the end of the goals of the company.

Conclusion

The aim of our study is manifested in the understanding of the relationship between the

systems of management control, with societal performance and competitive advantage. The phenomenon studied is fairly new and does not represent a management practice for less than a decade; researchers and practitioners do not stop focusing on this research axis.

The particular context is the theme of CSR. Several scholars have tried to propose the incorporation of environmental responsibility in the concerns of companies.

We conducted a survey of 306 companies belonging to the industrial sector in the Tunisian context. The choice of this area was designed as the pillar of Tunisia's economy, which is increasingly full mutation and characterized by high competitiveness. Indeed, a system for collecting data through the distribution of a questionnaire was done by adopting the technique of direct interview. The results show the existence of a positive relationship between the system of management control and corporate social performance. That encourages companies to promote a dominant concurrent instead. This system will not be able to drive a social performance, and it will be help to stimulate competitiveness.

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