

## **Management Control System and the Case of CSR in the Tunisian Industrial Companies: What Findings by the Method of Structural Equation?**

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**ABSTRACT:** This study aims to the behavior of management control; it is providing a model to the behavior of integration of social responsibility in the management control tools. This model was validated with 306 Tunisian companies in the industrial sector. Through a questionnaire, the data collected are processed using exploratory and confirmatory analysis by the methods of structural equations. The results revealed that the management control system in industrial Tunisia is facing economic responsibility. This is in response to emerging pressures of uncertainty related to the environment, and in enrolling a strategy of domination by cost. In addition, the management control system is designed as a guidance tool actions and behaviors.

**Keywords:** Management Control System; Corporate Social Responsibility; societal performance; Strategy; uncertainty environment

**JEL Classifications:** M14; M41

### **1. Introduction**

The control system of management can be defined as a set of tools and procedures to finalize the phases of management control. Strategic management of corporate social responsibility consists of uncommon practice in companies (Germain, 2007). Establishing a system of management control integrating social, environmental and financial action, is not easy for companies (auteur). Management control focuses on indicators to manage performance. Theses indicators can be quantitative or qualitative. These must reflect the characteristics of firms performance defined by the couple effectively and efficiently. In this way, performance indicators should give a picture of the characteristics of companies. This gives an idea of the ability of firms to move towards their goals with good use of its internal resources. The literature on performance management has different typologies of indicators. Through this discussion, Kaplan and Norton (1998) distinguish traditional financial indicators that measure the performance company's past and non-financial indicators (leading indicators). Anthony (1986) has identified management control as a process by which managers ensure that resources were used and obtained effectively and efficiently in the accomplishment of organizational goals. Also, management control is born of the problem from both an environment that makes it useful and necessary tools in the process of management control (Burlaud and Simon, 2006)

Otherwise, management control innovation that comes to define as a sensitive issue, and some insoluble, especially when developing new products or services based on technologies whose business model little is known (Simons ; 1991). Chapman (1997) found significant relationships between many different characteristics of management control systems and the environment. Subsequently, Davila and Foster (2007) marked a relationship between customer information and the uncertainty of the environment.

## **2. Literature Survey**

Strategic thinking and the factors influencing the operation of enterprises have disruptive effects in the assessment and evaluation of performance.

### **2.1. Management control systems: Towards a new approach**

Controllable and uncontrollable factors push companies to adapt their environment and adapt their policies and strategies according to the demands and concerns of environmental landscape. In this context, the system began to operate in an increasingly complex and uncertain, management control can help managers for decision making throughout the strategic and operational process. Thus, management control follows the process control, which should help to drive performance. Evoked by Bouquin (2005), argues that management control is designed as a tool for performance management must act on three situations namely:

- 1) Change the accounting
- 2) Organize the division of labor management
- 3) Regulating behavior

At this point, management control must exceed conventional use of accounting and financial tools, to assume the character of tool advice, mastery of the management and implementation of the Strategy. Beyond this, companies will use modern tools and sophisticated analysis of the various components and performance axes. Similarly, as a tool for control, management control will integrate and exploit not only financial indicators but also non-financial qualitative indicators.

### **2.2. Societal Performance**

It was very interesting to review the various aspects and relationships between organizations with its partners. What makes companies more accountable to society, they must in all cases, exceed their obligations other than legal and economic to take into account other social considerations (e.g. Carroll; 1999), Wartick and Cochran; 1985). These authors emphasized in their research on the company's ability to adequately express their social responsibility through extensions of previous theoretical work which builds on the results recorded by Bowen (1953); conceived as the founding father of social responsibility. Consequently, research on control systems have been a source of theoretical and empirical research by academic researchers who have long sought an understanding of the functions of management control systems in applications with changing social, environmental, economic and environmental. Yet, the choice of strategic firms influences the behavior of managers and accordingly controls systems. Which promotes dialogue and organizational learning in companies that blend or interested in social voluntary approach? The work of Simons (1987), qualified definition of modern control systems, which expresses that the control systems are formalized procedures and systems which are based on the information used by managers to operate their organization. As mentioned in the work of Clarkson (1995), companies do not include in their strategies or approaches the issues and concerns of their stakeholders with them. In this context, companies must speak with a broader performance; more comprehensive, as economic appreciate the continuous changes of the environment. Operatively, the quality of the partnership management can be assessed by indicators informing about the level of satisfaction of key stakeholders (employees, shareholders, customers, suppliers, the environment, civil society). To control the overall performance of the company, the balanced scorecard or scorecard, the browser Skandia and triple bottom line are the tools most relevant to take into account the different axes of the measurement and control of performance expanded incorporating the issue of social performance. The scorecard looks like a combination of financial types grouped into four main operational analyses. These areas include the following dimensions:

- Axis Financial
- Axis Customer Satisfaction
- Axis internal processes
- Axe organizational learning.

This concept of Balanced Scorecard is attributed to the work of Kaplan and Norton (1998), who tried to link business activities with the strategy in a different initiative include changes in overall corporate performance. The basic assumption consists of the existence of a universal model of performance which can satisfy different business objectives companies can ensure a better competitive position, that is to say, or even the possibility of holding an advantage sustainable competitive.

### **2.3. Societal performance steering and management control system**

Companies are accountable for their actions in a wider sphere than just the economic sphere (Bowen; 1953). Thus, it has defined corporate social responsibility as an obligation by the businessmen to make policy decisions and to follow the guidelines to meet the goals and values that are considered desirable in our society. So, social responsibility refers to decisions and actions taken by businessmen due, at least partially, considerations that transcend those directly related to the technical and economic interests (e.g. Carroll (1979) defined the social performance of the company in order to insert different categories, "social responsibility", "social response" and "social issues" under the same concept. The model is illustrated by a three-dimensional cubic form with one axis represents the expectations of the company to the company, the other different managerial philosophy, and the third, the social individuals. Wattrick and Cochran (1985), support the idea that the three dimensions of accountability, responsiveness and social response are related and form a system he calls "corporate social involvement" (Corporate Social Involvement). This model differs Wattrick and Cochran (1985) to that of Carroll (1991) is that they develop in the third category and there a simple identification of issues. With Wattrick and Cochran (1985), the third dimension is that of "managing social issues" (social issues management). The issues management aims to minimize the surprises that may come from the turbulent environment of firms. Therefore, the meaning of social responsibility can be understood that through the interplay of three principles: legitimacy, public responsibility and managerial discretion, these principles resulting from the distinction between three levels of analysis, institutional, organizational and individual (Wood; 1991). The model of this author (Wood; 1991) integrates in a single model most of the writings of the last thirty years about Corporate Social Responsibility. What distinguishes this model from previous is that the third dimension is much more focused on concrete actions and results related to CSR. Through the evaluation of these models, the concept of corporate social responsibility is clarified; it is the way of conceiving the relationship business and society.

### **2.4. To a renewed vision of performance**

The control is a control mode of organization necessary when the environment is uncertain and in which the evaluation of performance based on organizational learning. It is based on a control system that provides various functions necessary to operate. Journeault and Henri (2006) gave the name of eco-control management control of society, which is an adaptation of the traditional components of management accounting. Indeed, eco-control is a control system that includes an axis societal important for corporate accountability opposite environmental issues and see far into account sustainable development in companies. Therefore, management control exceeds the thresholds classical approaches to introduce financial indicators varied meet societal expectations and sustainable development. In this case, a control system oriented management corporate social responsibility promotes sustainable development and provides companies with a dominant competitive position. More specifically, sustainable development can be a balance between economic, social and environmental.

### **2.5. Stakeholder theory**

The stakeholder theory is frequently used as a framework for analysis of CSR (Clarkson; 1995). According, Pesqueux (2003) distinguishes stakeholders "contractual" stakeholder "diffuse. The Stakeholder theory is used to interpret the function of organizations in the identification of moral or philosophical guidelines governing the management of organizations. Thus, stakeholders are defined as individuals or groups with legitimate interests in procedural and substantive aspects of the activity of the organization. This shows that the stakeholder theory is objective viewpoints satisfy the interests of each group and not as a means to achieve other goals. To Kaplan and Norton (1998), translate the mission and business strategy into a set of performance indicators that form the basis of a control system of the strategy. The control systems and corporate social responsibility are interested in social performance, which is now considered an integral part of organizational performance (Essid; 2007). Chiapello and Delmond (1994) conclude the importance of incorporation of non-financial information systems performance management; see further adding a qualitative representation. The finding of Pesqueux (2003) and Simons (2001) show that that management control systems are designed as environmental control systems, whose primary role is the monitoring of environmental performance through the tools provided by the management and control, are capable of declining environmental strategies. This finding advances the importance of indicators of social responsibility in the

## *Management Control System and the Case of CSR in the Tunisian Industrial Companies: What Findings by the Method of Structural Equation?*

management control tool, designed in pilot systems to better express end performance more significantly. Hence, our first hypothesis is:

**H1: Corporate social responsibility influence management control system.**

### **2.6. Perceived environmental uncertainty**

Among the studies that have analyzed the relationship between the uncertainty of the environment and management control systems, some of them are particularly interested in the influence of this factor on the content of contingency management control tools. Especially the finding of Hussain (2006) Increasing the perceived uncertainty of the environment leads to a greater use of external information and non-financial. A high level of uncertainty use more non-financial performance measures (e.g. McWilliams and Siegle; (2001)). Hence, our second hypothesis underlying:

**H2: Corporate social responsibility influence control system management companies who perceive their environment as uncertain.**

### **2.7. Strategy**

The link between strategy and management control systems based on the idea given to greater or lesser importance face different aspects of performance, which are closely linked to the strategic direction of the business (Shank, 1989). Companies are moving towards domination strategies for cost control focus systems management focus on costs and financial information (Govindarajan, 1989). These findings were reflected in the works of Shank and Govindarajan (1989) who found that non-financial indicators are more present in firms that adopt differentiation strategies; when these strategies are based on innovation and new product development. Companies opted for these strategies are likely more sensitive to external influences, consumer needs and trends of the society in general. Hence, in our third hypothesis;

**H3: Corporate social responsibility influence control system management firms adopting a differentiation strategy.**

## **3. Methods**

The author adopted a quantitative approach to causal type. So 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.

### **3.1. Research model**

This model is particularly interested in the behavior of management control systems in turbulent environments characterized by uncertainty. Through this, the author proposed the inclusion of indicators of social responsibility in the management control tool (figure 1). Thus the evaluation of the model may come from the co-variation between the four constructs which compose namely: strategy, environmental uncertainty, control system management and social responsibility as it is shown above.

### **3.2. Description and data processing**

#### **3.2.1. Sampling**

This research was carried out on a sample of 306 Tunisian industrial companies employing between 50 and 500 employees and operating in various sectors.

#### **3.2.2. Measures of model variables**

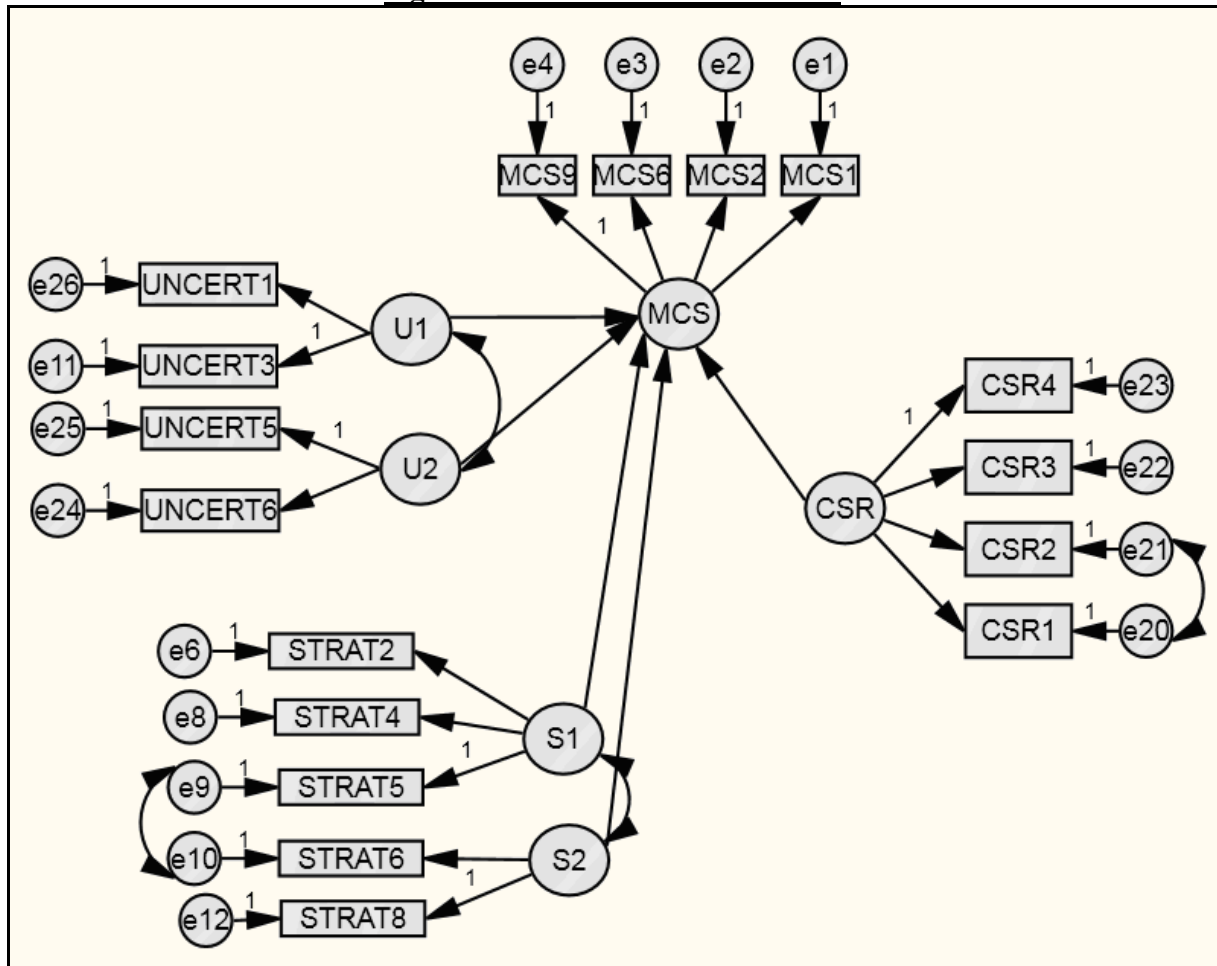
Variables in the research model are four in number: the management control system, social responsibility, strategy and environmental uncertainty. These variables can be operationalized with various items, formulated as questions. They are collected on Likert scales 5 points (ranging from "disagree" to "strongly agree"). The quality of the measurement scales used is provided by two successive optimizations. First, a factor analysis of type PCA (Principal Component Analysis) was performed to verify the validity of the scales and thus confirm the sought after factors. The second phase of optimization scales is a confirmatory structural analysis performed with the AMOS software. The structural equations modeling are used to test the research proposal.

### **3.3. 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 ( $\chi^2$ ). The model fit to the data is considered adequate when the p-value associated with ( $\chi^2$ ) is greater than 5%. This condition is satisfied for our model measure, p-value associated to

( $\chi^2$ ) obtained is equal to (0,065). The  $\chi^2$  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)

**Figure 1. Structural research model**



#### 4. Results

After testing the model using structural equations, it appears that the conditions tested model fit the data are generally observed: The associated p-value equals (0.065), which is greater than (0.005). GFI coefficient is higher than the norm (0.9), the GFI = 0.985. This value reflects a good "fit" between model and data. At this level, our two research hypotheses and our overall hypothesis can be broadly adopted. In addition, the RMR index (in terms of residual variance, that is to say, unexplained variance) is very low, it is equal to 0.047. Side indices to judge the quality of fit of the model such as the CFI is equal to 0.998. The RMSEA is equal to 0.039; AIC is equal to (80.033) strictly less than the saturated model (90,000). The values of  $\chi^2$  (32.033) and CFI (0.998) estimated by AMOS indicate that the level of overall fit of the model is very high, confirming the unidimensionality of alignment and performance. We can therefore conclude that the fit of the proposed model is acceptable according to the results, indices assessment used (Table 1).

##### 4.1. Analysis of the significance of the model parameters

Analysis of the significance of the parameters model factors associated with constructed our model research are expected to influence our sole variable namely explain organizational performance. Only variables with a significant contribution (regression coefficient between the independent variables and the dependent variable) tested with the subscript "t student" (at the risk  $\alpha < 0.05$ ) are retained. Output states of AMOS show that all coefficients regression are significant, the Student's test

(R.C.) is greater than 1.96 for all variables model (Table 2). This confirms that the overall model is acceptable.

**Table 1. Results of the adjustment of the structural model**

Goodness of fit index	Acceptability threshold	Value found
$\chi^2$ (p-value associated) $\chi^2 /ddl$	p must be > 0.05 do not reject the model	<b>32,033</b> <b>P=0,065</b>
<b>GFI</b>	>0,9	<b>0,985</b>
<b>TLI</b>	>0,9	<b>0,996</b>
<b>CFI</b>	>0,9	<b>0,998</b>
<b>RMR</b>	<0,08	<b>0,047</b>
<b>RMSEA</b>	<0,08 and possibly <0,06	<b>0,039</b>
<b>CAIC model tested</b>	CAIC model tested must be lower than the saturated model / independence <sup>2</sup>	<b>80,033</b>
<b>CAIC saturated model</b>		<b>90,000</b>

**Table 2. Results of the significance of the model parameters**

Regression coefficient	Estimate	(S.E.)	(R.C.)	P
MCS<---CSR	1,371	0,077	17,809	***
MCS <--- INCER	-2,859	0,208	13,762	***
MCS T<--- STRAT	1,273	0,051	25,005	***

#### 4.2. Discussion

The overall results obtained from the fit indices of the global model, the significance test of the model parameters (correlation coefficients standardized and associated CR), the coefficients of determination (relating to variances explained), and finally the verification of causal relationships between the model and the variables associated with it, confirms that the model tested is acceptable. In addition, the quality of the fit (the fit) between the data and the conceptual model of the research is confirmed by the significant coefficients of determination of the dependent variables of the model and the existence of a significant causal relationships direct links between variables. This brings us to confirm our initial research proposal argues that corporate social responsibility impact management control system and say, more the business environment is uncertain, they include indicators of social responsibility (H1). This is part of a strategy of cost leadership (H2). The results show the existence of a relationship between social responsibility and management control influenced by the uncertainty associated with the environment. This is oriented in the context of a cost leadership strategy, where management control systems integrate the economic dimensions of social responsibility. Hence, the assertion that the system of management control in industrial companies is oriented economic responsibility. It is emerging in response to pressure uncertainties related to the environment and are part of a strategy of domination by cost.

#### 5. Conclusion

The objective of the research is reflected in understanding the behavior of systems of management control through prescription non-financial indicators. The studied phenomenon is relatively recent and is a management practice for less than a decade, researchers and practitioners do not stop focusing on this research axis. The results show the existence of a relationship between the social responsibility of the company and management control influenced by the uncertainty associated with the environment. This is oriented in the context of a cost leadership strategy, where management control systems integrate the economic dimensions of social responsibility. It is emerging in response to pressure uncertainties related to the environment and are part of a strategy of domination by cost.

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