THE EFFECT OF THE INTEGRATION BETWEEN LEVERS OF CONTROL AND SWOT ANALYSIS ON ORGANIZATIONAL PERFORMANCE: BALANCED SCORECARD APPROACH

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ABSTRACT

Management control system (MCS); such as levers of control (LOC) framework, is an important control system in today’s business environment. We tried to improve a model that could be used in controlling organization and enhancing their performance. To improve our model, we survey literature concerning MCS and organizational performance. We found it is better for organization to analyze its internal capabilities to determine its strengths and weaknesses, and analyze its external environment to determine its opportunities and threats. Therefore, we suggested to use SWOT analysis to formulate organizational strategies, and to improve its control systems. Moreover, we noticed that almost all studies integrated SWOT analysis with balanced scorecard (BSC) to formulate and implement organization’s strategies. We also found limited evidence of which MCS tool could be used to improve organizational performance. According to literature, we suggested to use LOC framework and its effect on organizational capabilities to enhance organizational performance. Finally, we suggested to use BSC to implement LOC framework. We thought it might be better to use "strategic execution BSC", and we proposed as model to do such implementation.

Keywords: Levers of control, Management control systems, SWOT analysis, Organizational performance, BSC, Resource based view

1. INTRODUCTION

MCS is important for organizational growth. It encourages top managers to decrease their attention on processes that could be controlled by exception and provide them with necessary information (Jamil and Mohamed, 2011). MCS is a wider concept includes management accounting systems (MAS) and other controls such as personal and clan controls (Chenhall, 2005). The current thinking in management accounting, concerning the design of performance measurement system (PMS), encourages the use of multiple financial and nonfinancial performance measures that reflect key value-adding activities of an organization; e.g. BSC (Kaplan and Norton, 1996).

The improvement of performance measures in management accounting literature, and their alignment to organizational strategies, is expected to enhance organizational performance (Grafton et al., 2010). Therefore, managers will choose effective strategy implementation, and search for the necessary information to assess and develop organizational capabilities (Chenhall, 2005). Business strategy can be translated into action by identifying performance indicators based on the organization’s key performance indicators (KPI). While the mission and vision guide employees can inspire them to achieve organizational long-term objectives (Simons, 1995).

While empirical evidence argued that the use of strategically-aligned PMS may improve organizational performance (e.g. De Geuser et al. 2009; Malina and Selto, 2001), the literature provided only limited evidence of tools could be used to achieve these improvements (Chenhall, 2005).

Moreover, strategic management studies have been investigated the reasons of sustained competitive advantage and up-normal performance for a long time (e.g., Barney, 1991). Some authors suggested external forces to determine the importance of the industry, and the position of the organization in the market determines how profitable it will be (Porter, 1985). Others have assumed that internal strengths such as capabilities determine how competitive an organization will be and, in turn, its performance (Barney, 1991).

In our attempt to address some of academic gaps concerning the indirect relation between MCS and organizational performance, we are going to survey strategic management literature. The rest of this paper will be divided into three parts: the literature review; a theoretical model to control organizations and the suggested methodology to test the effect of this model in accordance with Egyptian environment; and finally the conclusion.

2. LITERATURE REVIEW

2.1. SWOT Analysis Linkage to MCS

Strategic planning, that analyzes the current and expected future situation, determines the direction of the organization and develops tools to achieve its mission. It needs a systematic approach to identify and analyze external factors of the organization’s environment and match them with organizational capabilities. A situational analysis approach developed to
The external factors were determined in most studies using Porter’s competitive advantage, while resource based view (RBV) is used to determine the internal strengths. Porter (1985) categorized the major forces that determine the characteristics of a market into five factors: competitors, threats of new entrants, substitute products, bargaining power of suppliers, and bargaining power of buyers.

RBV is an influential theoretical framework which created to understand how competitive advantage within organization is achieved and how that advantage might be sustained over time (Barney, 1991). RBV assumes that organizations can be conceptualized as bundles of resources, which are heterogeneously distributed across organizations (Henri, 2006). Based on these assumptions, researchers have theorized that when organizations have valuable, rare, inimitable, and non-substitutable resources, they can achieve sustainable competitive advantage (Barney, 1991). It was concluded that Porter’s competitive advantage and RBV are complementing each other to understand the sources of sustainable competitive advantage and to create SWOT analysis.

SWOT analysis appeared to have many shortcomings due to strategic planning literature. Ghazinoori et al. (2007) argued that it is not possible to differentiate the factors clearly whether they are opportunities or threats, and it is not always possible to measure or evaluate the strengths and weaknesses of the assets and abilities of the organization. While Dyson (2004) added that SWOT analysis can help in generating new strategic initiatives, but a strategic development process also requires considerable analysis and testing of new initiatives before adoption.

To overcome SWOT analysis limitations, several attempts have recently been made using quantitative methods (Saraiva, 2011). Many studies suggested to use RBV in applying SWOT analysis to achieve sustained competitive advantage, and to overcome some of SWOT analysis problems (Barney, 1991). Lee and Ko (2000) suggested to link SWOT matrix with the BSC to make a systematic and holistic strategic management system. MCS literature argued that implementing the SWOT analysis, to develop a set of goals and strategies will help the actual implementation of the BSC (Lee, et al. 2000). SWOT analysis is implemented to develop the KPI with the four main perspectives of the BSC (Centinkaya, et al. 2006).

Some studies developed a framework integrated three strategic management tools: SWOT analysis, BSC, and quality function deployment (QFD) methodology. This framework called BSQ framework, which used to help organizations developing and implementing their strategic plans (e.g. Lee and Ko, 2000). Lee et al. (2000) applied BSQ framework with educational criteria in Hong Kong. The framework increased organizations’ ability in continuously develop their strategies to follow the rapidly changes in customers’ needs. While Manteghi and Zohrabi (2011) added two more tools to BSQ framework to formulate strategy in organizations. These tools are Porter’s Five Competitive forces and Fuzzy Screening. These attempts showed there is a need for more closely examination of the internal factors that may contribute to the organization’s success, without ignoring the environmental factors that may also affect the organizational performance.

### b. MCS AND ORGANIZATIONAL PERFORMANCE

MCS Approaches to study organizational performance are examining objectives, strategy, measures, incentives, and information flows as well as contextual issues, for example, external environment, organizational culture, social controls and history. These integrated approaches were necessary to both examine the complex nature of the relations between strategy and MCS, and provide some insights into how integrated strategic control systems are used and implemented (Berry et al., 2009). There are many models of integrated strategic control systems have emerged in the literature for example: strategic performance measurement systems (SPMS) like BSC and Simons’ (1995) LOc framework.

The focus of MCS is on multiple control systems working together (Widener, 2007). Control is a policy or procedure that helps organization ensuring its goals and objectives are achieved. This is conducted by setting a standard, receiving feedback on actual performance and taking corrective action whenever actual performance deviates significantly from the planned performance (Jamil and Mohamad, 2011).

A lot of studies discussed the effects of MCS on organizational performance (e.g. Malina and Sello, 2001; De Geus et al., 2009). Almost all studies agreed on the positive effect of using MCS; especially BSC, on organizational performance. However, these studies did not illustrate if there is any mediator variable could affect the performance positively or negatively. The main result of these studies is the MCS is that is essential to control strategy implementation and performance as well.
c. LOC FRAMEWORK AND ORGANIZATIONAL PERFORMANCE

Concerning the multiple control systems, Simons (1995) suggested LOC framework to study the implementation and control of organizational strategy. A core idea in this framework is balancing innovation and constraints. Simons (1995) suggested that the control systems should be consist of four levers to be adequate to address the whole control process. Managers have to balance the relation between strategy change and LOC by designing diagnostic control system; understand how effectively develop and use interactive control systems; and develop a clear beliefs systems and boundary systems and communicate it through the organization.

The power of these levers in implementing strategy lies in how they complement each other. The interplay of positive and negative forces creates a dynamic tension between opportunistic innovation and predictable goal achievement. It is necessary to stimulate and control profitable growth and to provide an effective control environment which facilitates the need for competitive sustainability and strategy implementation (Simons, 2000).

Beliefs systems are created and communicated through formal documents such as credos, mission statements, and statement of purpose (Simons, 1995). While boundary systems are telling employees what not to do, this allows innovation within clearly defined limits (Simons, 2000). The diagnostic and interactive control systems are differentiated depending on the purpose of their use. However, it is also recognized there will not be only diagnostic or interactive use of the control systems. The terms diagnostic and interactive in the context of the LOC framework refer to style of use rather than any particular control mechanism (Mundy, 2010).

In the performance measurement literature, the debate has been about whether PMS are diagnostic or interactive control systems (Kaplan and Norton, 1996, Simons, 2000). While MCS literature showed SPMS can be used either diagnostically or interactively. Some studies suggested and improved that PMS are connected to all the four levers of control (Tuomela, 2005; Widener, 2007).

Kaplan and Norton (1992) present BSC on its first generation as a diagnostic control system. During the last decade, BSC had been developed to enhance its defects. Kaplan and Norton (2004) argued that BSC should not be used as a performance measurement tool only, it might be better for organizations to use BSC interactively as a strategic communication system. Therefore, it might be better to develop the BSC or any other SPMS to address all levers of control, to enhance its efficiency.

1. LOC AND PERFORMANCE

Prior studies used various approaches to operate the LOC framework. One stream of research has considered the framework in its entirety (e.g. Tuomela, 2005; Widener, 2007; Mundy, 2010; Hoque and Chia, 2012; Bobe, 2012), while another has focused on the diagnostic and interactive levers only (e.g. Henri, 2006; Grafton et al., 2010). A third stream focused on one lever only; interactive control systems (e.g. Abernethy and Brownell, 1999; Bisbe and Otley, 2004).

A second methodological choice concerns the selection of MCS used to investigate the LOC framework. While a non-specific package of organizational controls has been investigated by a few studies (e.g. Mundy, 2010), other researchers have focused on a particular MCS. This latter category includes studies examining the framework in relation to PMS (Henri, 2006; Hoque and Chia, 2012), budgets (Abernethy and Brownell, 1999; Tekavčič et al., 2008), and BSC (Tuomela, 2005).

A recent stream of studies examined the effect of MCS on organizational performance using mediator variables, such as product innovation (Bisbe and Otley, 2004), organizational learning and attention (Widener, 2007), and organizational strategic capabilities (e.g. Henri, 2006; Grafton et al., 2010; Bobe, 2012). In this research, the main concern is the second methodological stream.

Concerning the non-specific package of MCS and performance Mundy (2010) underlined the importance of using LOC framework as a whole to gain a comprehensive understanding of the link between managers and MCS in their attempts to guide, manage, and control organizational activities.

For a specific package of MCS, Abernethy and Brownell (1999) tested the interactive use of budgets; as a moderating variable, on the relation between strategic changes and organizational performance. Bisbe and Otley (2004) examined the mediating and the moderating effects of the interactive use of MCS (BSC; budgets; and project management systems) on product innovation and organizational performance. Tuomela (2005) linked PMS to all four levers of control. He analyzed and provided evidence of the cost and benefits of the interactive use of PMS effects on the organizational strategies quality improvement and application. Widener (2007) examined the use of LOC framework in control strategies; explored the interrelations among the different levers of control; and the cost and benefits of PMS.

Moreover, Tekavčič et al. (2008) examined the balance between different styles of BSC uses, by incorporating a wider range of controls, including informal controls (e.g. social), to provide a more comprehensive analysis of the use of MCS. Jamil and Mohamed (2011) improved a modified MCS that can be used to implement SMEs sustainable strategies. This model integrates strategies; LOC; and PMS. Hoque and Chia (2012) examined the effect of one of special circumstances (organization takeover); that the organizations may be experienced during their life, on the improvement and application of the MCS (LOC framework).

We noticed there is a need for further research on using a specific MCS tool as a LOC framework. Further research is required to evaluate the mediating (indirect) as well as the moderating (interaction) effects of both interactive and diagnostic uses of MCSs on performance.

2. LOC, ORGANIZATIONAL CAPABILITIES, AND PERFORMANCE

To enhance organizational ability of improving its performance, organization could use LOC to control its capabilities. The capabilities of any organization are considered a strategic source of sustainability (Bobe, 2012). Grant (1991) stated that the resources and capabilities of organization are the central considerations in formulating its strategy, establishing its identity, framing its strategy, and generating its profitability. He also argued that the key to a resource-based approach to strategy formulation is understanding the relations between resources, capabilities, competitive advantage, and profitability and how competitive advantage can be sustained over time.

Concerning the LOC literature, there are only three studies; due to our knowledge, that discussed the relation between LOC capabilities, and performance. Henri (2006) examined the effects of the interactive and the diagnostic use of MCS on strategic capabilities and organizational performance. He moved the analysis from the strategic-choice level to the capabilities level. Grafton et al. (2010) examined the effect of MCS uses on organizational performance by affecting its capabilities. Bobe (2012) integrates and tests the relations between MCS use, strategy implementation, capabilities development and organizational performance in one model.
We concluded from the previous presentation of literature that; first, there is a need for further research on the relation between a balance between different uses of MCS (diagnostic and interactive), LOC framework, and organizational capabilities or performance. Second, the management control literature has not attempted to understand how KPI are related to strategy implementation objectives and mechanisms, including the development of capabilities to achieve up-normal performance. Finally, there is a limited research has integrated the RBV of strategy with the literature on the use of MCS.

Due to the LOC literature, the relations between different use of MCS, capabilities, and performance could be summarized in four categories. First, the relations between diagnostic use of MCS and capabilities: It constrains innovation and opportunity-seeking to ensure predictable goal achievement, which is needed for intended strategies (Simons, 1995). It pointed out the failure of productivity and efficiency to limit the deployment of the organizational capabilities by providing boundaries and restrict risk-taking (Henri, 2006).

Second, the relations between interactive use of MCS and capabilities: It builds internal pressure to expand search routines, stimulate opportunity-seeking, and encourage the emergence of new strategic initiatives (Simons, 1995). It is relying on organizational dialogue and signaling, and representing adequate tools to enhance organizational capabilities.

Third, the relations between joint use of MCS and capabilities: Diagnostic and interactive uses of MCS create a dynamic tension that positive effects of interactive use on capabilities will be achieved. Dynamic tension provides valuable information increases flexibility, innovation, and improvement. It also encourages open discussions, and helps employees group their ideas and actions (Grafton et al., 2010). Dynamic tension is significantly affectsemployees’ behavior, organizational capabilities, and performance. It plays a key role in strategy communication, management processes, and generating organizational capabilities (e.g. Kaplan and Norton, 1996).

Fourth: the relations between PMS, capabilities and organizational performance: according to the RBV, information and control systems are generally not a source of competitive advantage for two reasons: (i) they lead organizations to fully realize the benefits of the resources they control but do not generate sustainable revenues, and (ii) they can be readily transferred (Barney et al., 2001). MCS may not contribute directly to performance, but instead contribute indirectly through capabilities. The ability to reach a balance between two uses of MCS which try to stimulate innovation while searching for predictable achievements represents a capability that is valuable, distinctive, and imperfectly imitable (Henri, 2006).

The MCS literature, concerning LOC presented in this research, appeared to have one more gap. The studies investigate the alignment between strategy and organizational MCS are limited, this leads to a limited knowledge and outdated strategy construct. Therefore, we need to incorporate additional strategic aspects such as: strategic resources, competitive advantages, strategic risk, strategic uncertainties, etc.

3. THE THEORETICAL MODEL

The reasons of enhancing organizational performance using MCS are not clear in literature. Some studies tried to address this problem in many ways using different mediating tools. We will test the mediating effect of organizational capabilities on the relation between MSC and performance. We will expand the examination context by combining SWOT analysis with MSC in the stage of creating and formulating strategies and control systems. The suggested theoretical model to address the literature gaps in this research is presented in figure (2).

![Fig. 2. The theoretical model.](image-url)
Kaplan and Norton (2004) point out the importance of using the BSC as an interactive control system. They argued that diagnostic systems, boundary systems and internal control systems are all necessary, but they do not create a learning organization aligned to a focused strategy. Some BSC implementation failures occurred because organizations used their scorecard only diagnostically and failed to get the learning and innovation benefits from an interactive system.

The BSC also represents a belief system because of its ability to articulate organizational strategy. While the purpose of beliefs systems is to inspire organizational search and discovery, any MCS provides managers with information regarding the organization’s values or priorities can be leveraged as a beliefs system (Malina and Selto, 2001).

Moreover, strategy maps and their associated BSCs, with measures, targets, and strategic initiatives, provide a natural foundation for thinking systematically about how to identify, mitigate, and manage the risks of organization’s strategy. The key risk indicator (KRI) scorecard contains risk metrics for every strategic objective. It increases management’s and employees’ awareness of events that could fail the organization to achieve its strategic objective (Kaplan and Mikes, 2011). These characteristics could encourage managers to use BSC as boundary system.

BSC has been developed in the last two decades from a simple evaluation tool to a more complicated strategic system. Kaplan and Norton (1992) introduced BSC as a performance measurement tool. They improved it in 1996 to a strategic management system. BSC was developed in 2004 to strategic communication system using what Kaplan and Norton (2004) called “strategy map”. Kaplan and Norton (2006) tried to make a perfect structural solution to the alignment of organizational structure and strategy by aligning business units, support units, external partners, the board and investors with the corporate strategy.

The last generation of BSC called “strategic execution BSC” (Kaplan and Norton, 2008). It is a comprehensive management six-stage model solves one of the greatest management challenges (linking strategy to operations). This generation presented in figure (3).

![Strategic Execution BSC](image)

**Fig. 3. Strategic Execution BSC. Source: Kaplan and Norton (2008), p.8.**

The first stage in this model is: developing the strategy by: 1- Introducing the organization’s mission, values, and vision. 2- Strategic analysis of three sources: external environment analysis; the internal environment; and the progress of the existing strategy. 3- Formulating business strategy according to SWOT matrix.

The second stage is plan the strategy: by first developing strategic objectives, measures, targets, initiatives, and budgets guide action and resource allocation. Second, describing strategy from short-term productivity improvements to long-term innovation, and creating a strategy map to plan and manage each key component of the strategy. Third, converting the objectives defined in the strategy maps into a BSC of measures, targets, and gaps. Fourth, managers choose strategies to achieve targeted performance for the strategy map objectives.

The third stage is aligning the organization with the strategy: by describing corporate strategy using a strategy map.

Forth stage is planning operations: by linking long-term strategy with day-to-day operations through an operational plan.

Stage five concerned monitoring and learning using two main kinds of meetings operational review meetings and strategy review meetings. At operational review meetings, managers examine departmental and financial performance and address new or persistent problems; examine short-term performance and respond to newly identified problems that need immediate attention. Strategy review meetings concentrate on discussing the indicators and initiatives from the unit’s BSC; assessing the progress of and barriers to strategy execution to review the progress of the strategy implementation; tracking the source and causes of implementation problems; recommending corrective actions; and assigning responsibility to achieve the targeted performance.

The final stage is testing and adapting the strategy by managers. They should attend a separate meeting to test whether fundamental strategic assumptions remain valid; the performance assessment of strategy and the consequences of recent changes in the external environment; and testing and adapting the existing strategy.

Strategic execution BSC provides a richer, more holistic view of the organization. The organization can establish strong linkages from strategy to operations so employees’ everyday operational activities will support organizational strategic objectives (Hoque, 2014). We prefer to use the strategic execution BSC to implement LOC framework where the six-stage BSC model present the four levers of control and its linkage to SWOT matrix. We suggested to implement LOC framework using strategic execution BSC as follows:

**The first stage** of strategic execution BSC addressed the beliefs systems and the boundary systems of LOC framework, where it concentrates on developing and communicating mission, vision, core values, codes of conduct boundaries, and
strategic boundaries. Improving SWOT analysis matrix (by analyzing internal capabilities of the organization (using Grant(1991) framework in figure (4); to determine its strengths and weaknesses, and scan external environment (using Porter’s five competitive forces analysis); to determine its opportunities and threats). This stage will help in generating and formulating strategies.

The second, third, and fourth stages of BSC is planning choosing strategy and operations and aligning the organization with the strategy. The managers will develop its objectives, measures, targets, initiatives, and resource allocation. This will help in designing strategy map and KPI to create BSC and use it as a diagnostic control systems of LOC framework. After developing BSC, the management will link it to incentive system and communicate it to all levels of organization to align organizational strategy with employees’ objectives and daily activities.

The fifth and sixth stages of BSC are depending mainly on regular meetings; between managers and employees to review operations; and among different levels of managers to review strategy implementation process; special meeting to test the validity of organizational strategy and if it needs any modification or replacement. This stage will help in organizational learning and innovation, which represents the interactive control system of LOC framework.

Fig. 4. A resource-based approach to strategy analysis. Source: Grant (1991). p.115.

The proposed model can be tested empirically using the relations in figure (2). We suggested to conduct first an in-depth interviews with three or four general managers (of industrial, commercial, and service organizations) to determine the main aspects of controls in Egyptian companies. The information collected from these interview will be used to formulate a questionnaire. The suggested sample of this research is a CEO’s of large companies from the database of the Egyptian Stock Exchange Market (EGX 100). We suggested to analyze the validity of collected data using Cronbach’s α and factor analysis. The suggested data analysis method is structural equation model; descriptive analyses; correlation and factor analysis.

4. CONCLUSION

MCS literature, concerning the effect of MCS tools on organizational performance, had limited evidence of which MSC tool could be used to improve the performance. Therefore, we survey the literature to create a model that may be enhance the performance. In accordance with MCS, we noticed that to be successful in current business environment, organizations need to analyze their internal capabilities; to determine their strengths and weaknesses, and analyze their external environment; to determine their opportunities and threats. Due to literature, we suggested to use SWOT analysis to improve organizational strategies, in addition to link SWOT analysis with one of MCS tool; BSC, to implement these strategies.

Moreover, to enhance organizational performance, organizations need to control their performance. We thought LOC framework may enhance the control process, which may improve the performance. To implement LOC framework, we thought BSC will be a good MCS tool that could be used to do such implementation. We suggested to use “strategic execution BSC” to apply LOC framework and present its four levers.

Finally, we noticed that to have a sustainable advantage in the market, companies need to determine their capabilities that could enhance their market share. The internal capabilities are the main source of sustainability in the current market. Therefore, we thought using them in our model as a mediator variable could enhance the effect of MCS tools on organizational performance. Further research is needed to apply our model and investigate its effect on organizational performance.

REFERENCES


