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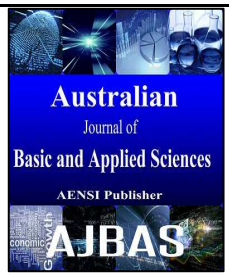


# Management Control System under the Pressure of Strategic Uncertainty: The Case of the Arab World

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**ABSTRACT**

This paper contributes to a stream of literature by developing conceptual framework to understand the possible influence of strategic uncertainty on management control system (MCS). In particular, it investigates the possible role of the political and competitive uncertainty, which is dominating the Arab world, on the philosophy and use of the levers of control (LOC) framework. Four hypotheses are proposed concerning this relationship, predicting a positive relationship between strategic uncertainty and each of LOC frameworks (i.e., beliefs, boundary, diagnostic, and interactive system). Furthermore, this paper provides a clear distinction between MCS and MCS design to further understand the possible influence of the contingency factors on the MCS design process. Finally, it discusses different kinds of strategic uncertainties that are brought to the market as a negative side effect of the political uncertainty.



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## INTRODUCTION

The aim of management control system (MCS) is to provide valid and reliable information that is useful for the process of decision making, planning, and performance evaluation (Merchant & Otley, 2006). While MCS literature is replete with studies that focus on developed economy, few studies give attention to MCS in the context of a developing economy. Arab world as an important body of the developing economy constitutes of 22 countries, is spread over a large geographical area and offers significant opportunities for many foreign investments has received little attention in the previous MCS research. In fact, the missing part of this global MCS research is the Arab countries. Business organizations in the Arab world are generally suffering from the pressures of politico-economic uncertainty since the appraisal of the Arab spring revolution in 2011, and the subsequent armed and political conflict in many countries such as, Yemen, Saudi Arabia, Iraq, Syria, Lebanon, Libya, and Egypt as well as the political uncertainty that is dominating Palestine since decades. Indeed, one of the most critical strategic uncertainties that is dominating Arab world is the political uncertainty. Researchers in the field of MCS need to examine the impact of such uncertainty on MCS design, since it may lead to different kinds of strategic uncertainties. An example of such emergence uncertainties includes; supply and demand fluctuation, assets safety, employees' safety, aggressive price competition, new government legislation, public boycott products of some countries, and prevention of import and/or export of raw materials to and from some countries, among others. Many different negative side effects have to be considered of the future research to provide a proper solution to cope such dangerous uncertainties.

Using levers of control (LOC) framework, this study will try to understand the possible influence of strategic uncertainty on MCS. Previous studies have addressed uncertainty with respect to market, technology, competition, strategy, etc. (Govindarajan, 1984; Hoque, 2005; Khandwalla, 1972; Simons, 1990; Widener, 2007). However, there is little research directed toward strategic uncertainty that originates from political pressures (Kattan, Pike, & Tayles, 2007), since previous studies have been conducted in a stable political environment. Although developed economy is replete with studies that investigated MCS regarding strategic uncertainty, many focus on some parts of MCS and not on the holistic approach such as LOC framework (Widener, 2007). Previous studies focus on performance measure (Ittner & Larcker, 1998), Budget, (Abernethy & Brownell, 1999), non-financial measurements (Hoque, 2005), among

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others. Focusing on some parts of MCS and not on the holistic approach hinders the ability to fully understand the possible influence of MCS techniques on each other.

In fact, it is recognized in the literature that MCS is composed of various interrelated control systems that work together (Otley, 1980; Widener, 2007) and/or in sequential manner to generate effective control environment. Simons (2000) in his LOC framework, noted that four control systems that constitute LOC has to be designed in a cyclical manner starting from beliefs system (e.g., mission & vision), boundary system (e.g., limits & constraints), diagnostic control (e.g., measuring and communicating performance) and finally interactive control (e.g., top-management involvement). Researchers have to target the holistic approach of MCS instead of sufficiency on selecting some parts of MCS, due to the sequence of MCS and the possible interference influence between different types of control systems.

LOC framework emphasized that environmental uncertainty drives the design and use of control systems (Simons, 2000), which in turn, impact the organizational effectiveness. This also emphasized the importance of contingency theory that matches organization with its context in the process of MCS design. Many researchers have attempted to define MCS (Anthony, 1965, 1988; Fisher, 1998; Merchant, 1985; Simons, 1990), but overlooked the concept of "MCS design" in those definitions. A proper distinction between MCS and MCS design can assist us to understand the fundamental role of the organization context in the process of MCS design. Hence, we define MCS design as the process of selecting and modifying the most appropriate control mechanisms that fit the organization with its context, to provide valid, reliable, and timely information. In addition, it could also be defined as the process of selecting and modifying control mechanisms that suit the organizational context, to ensure that information flow from those mechanisms will result in quick response and discipline to keep the organization on track of growth and success.

The purpose of this study is to examine LOC framework in the context of the developing countries, to investigate the antecedents of control systems represented by strategic uncertainty (i.e., political, competitive, uncertainty). The proposed theoretical framework is illustrated in Fig.1.

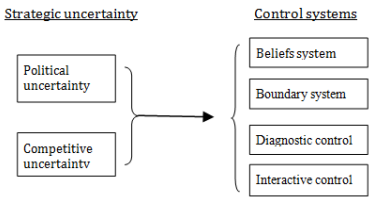


**Fig. 1:** Theoretical framework.

***Overview of Control Systems and Its Sequential Design:***

The LOC framework consists of four sequential control systems: beliefs system, boundary system, diagnostic controls, and interactive controls. The beliefs system (the first system) is considered as the fundamental base that the firms have to start with, in order to design the remaining three systems effectively. Simons (1995, p. 34) described beliefs system as "the explicit set of organizational definitions that senior managers communicate formally and reinforce systematically to provide basic values, purpose, and direction for the organization". Beliefs system is used to communicate core values of an organization in order to inspire and motivate its members to search, initiate, create, explore, and expand their efforts to engage in useful and appropriate actions. On the other hand, this correlates with the probability of engaging in high risk activities, which raise the need to impose some limits and restraints on activity searching behavior.

These limits and constraints are termed as the boundary system, which works in opposite manner to the beliefs system. Boundary system must be designed based on the beliefs system to set the most accurate limits and constraints to keep the positive energy of beliefs systems under control, and that is the starting point of the sequential design of LOC framework. A boundary system "delineates the acceptable domain of strategic activity for organizational participants" (Simons, 1995, p. 39). The idea behind the boundary system is to clearly communicate the actions and/or behavior that the organizational members should avoid. Its purpose is to allow employees a freedom to search, initiate, and innovate within certain pre-defined areas. In fact, both boundary and beliefs systems are similar to each other since both systems are intended to motivate organization members to search and initiate for new ways of survival and growth. However, boundary system does so in a negative manner through its limits and constraints of behavior, whereas beliefs system does so in a positive manner through inspirational energy (Simons, 1995). Firms often communicate its beliefs through its mission or vision statement, while its boundaries through a code of conduct.

Once, ensuring that both beliefs and boundary systems are well designed and fitting the organizational context, the sequence of LOC framework will be ready to move to the third system that is responsible for measuring and communicating critical success factors that are embedded in the diagnostic system. The aim of the diagnostic system is to motivate organization members to align their performance and behavior with organizational objectives. It reports fundamental information that allows managers to focus their attention on monitoring critical success factors in order for the

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firm to attain its intended strategy. The diagnostic system is considered as the backbone of MCS, as it enables managers to benchmark organizational performance against targets. Both boundary and diagnostic systems are similar in imposing constraints on employee behavior (Simons, 2000). While diagnostic control is responsible for measuring critical success factors by allowing managers to manage results on an exception basis. This leads the MCS designer to start thinking about forward looking by interactive use of MCS. An interactive control, as the last system in the LOC framework, allows this forward-looking as it is characterized by active and frequent dialogue among top managers (Widener, 2007). Interactive control enables top managers to engage personally in monitoring the outcome of any previous systems, to stimulate search and learning for new ways to strategically position itself in a dynamic and uncertain marketplace. Simons (1995, p. 96) noted that interactive control system is not a unique type of control system: "many types of control systems can be used interactively by senior managers". Choosing which control to be used interactively depends on the strategic uncertainty level, source, type, and its possible influence. Some strategic uncertainty requires beliefs system to be use interactively, while others by using boundary system interactively, whereas yet other uncertainties require a diagnostic system to be used interactively, especially the use of performance measurement system (PMS) that embedded in diagnostic system. The above overview of MCS design using LOC framework illustrates the logical sequence during the design process. That implies that MCS designers have to start firstly with beliefs system, following that boundary system and then diagnostic control. Once those three control systems have been designed, top managers can choose which control system to be used interactively to personally monitor strategic uncertainty (Simons, 1990). It has to be noted here, that the sequences of those systems are required during MCS design, but once completed all systems are working together.

***Literature Review and Hypotheses Development:***

Since the researchers are in disagreement on one MCS design that fits the requirements of all organizations, MCS design has been a mainstream issue in accounting research for many years (Harrison & McKinnon, 1999). Contingency based-research has a long tradition in the study of MCS design and holds that the design and use of control system are contingent upon the context in which these controls operate and function (Fisher, 1995; Otley, 1980). One of the recent contextual variables that heavily influence MCS design is the environmental uncertainty (Chenhall, 2003; Otley, 2012) due to fast and continuous changes in the business environment. In the LOC framework one type of environmental variable is strategic uncertainty, which has been defined previously by Simons (2000, p. 215) as "the emerging threats and opportunities that could invalidate the assumptions upon which the current business strategy is based". A feature of LOC framework requires managers, under the pressure of strategic uncertainty, to decide to which level they must place on each of the four types of control system (Merchant & Otley, 2006) in order for a firm to avoid threats and capture opportunities. In this study two types of strategic uncertainties will be proposed to understand its possible influence on MCS design (i.e., political and competitive uncertainty). Political uncertainty is dominating the Arab world since the outbreak of the Arab spring revolution in 2011, which gives a rise to different kinds of strategic uncertainties. To better understand the possible side effect of political uncertainty, a careful review of the political uncertainty dominating Palestine since decades can be beneficial in this regard.

Palestinian environment is dominated by political uncertainty since the Israeli occupation in 1948. However, the second Intifada that started in 2000 had the most significant impact on the levels of economic uncertainty (Kattan *et al*., 2007). Rapid and complex changes in Palestinian political environment gave a rise to economic instability, which caused many problems. Some of those problems include demand fluctuation, supply fluctuation, poverty, declining purchasing power and high unemployment rate. This negative side effect of the second Intifada caused the market demand to drop rapidly, which enforced Palestinian companies to change their behavior and act aggressively to ensure survival. This aggressive behavior brought new strategic uncertainty to the Palestinian business environment along with the political uncertainty namely, competitive uncertainty. Consequently, political uncertainty dominating the Arab world may lead to the emergence of different kinds of strategic uncertainties.

For the purpose of facing and managing strategic uncertainties, firms must use both beliefs and boundary control systems to manage and control these uncertainties since they help ensure that employees' behavior are consistent with organizational objectives, in order to minimize the possibility of harm instigating from uncertainty (Widener, 2007). Uncertainty is considered as a source of problems that hinders organizations to achieve its objectives and implement strategy. Simons (1995, p. 36) described the importance of beliefs system to tackle this problem and stated, "when problems arise in implementing strategy, a beliefs system helps participants to determine the type of problem to tackle and solutions to search for". Based on this understanding, the firms that face uncertainty must use beliefs system to inspire its members to search for new ways of survival by invigorating the morale of organization members.

This is done in order to motivate them to initiate, explore and search to find new solutions to cope with such uncertainties. Boundary system on the other hand, is also beneficial in managing and controlling uncertainty. Empirical research of Merchant (1990) found that, under the condition of uncertainty, profit center managers are more likely to engage in data manipulation, which further stresses the need to design an appropriate boundary system to set the most accurate limits and constrains to protect the organization.

Hence, firms under the pressure of environmental uncertainty should design proper boundary system to protect its survival and growth, which has been emphasized previously by Khandwalla (1972); Otley (1978) and Bromwich (1990). Strong and accurate design for boundary and beliefs systems are fundamental to counter undesirable employee behavior and minimize the negative side effect of strategic uncertainty on the total organizational performance.

Related contingency based-research found that firms use sophisticated MCS as a response to face environmental uncertainty (Chenhall, 2003), environmental hostility (Otley, 1978),and market competition (Bromwich, 1990; Khandwalla, 1972; Mia & Clarke, 1999). Chenhall (2003, p. 138) commented on this stream that appears in the previous literature by saying that "hostile and turbulent conditions appear, in the main, to be best served by a reliance on formal controls...". Hence, the following proposed hypotheses illustrate the expected relationship between beliefs and boundary system and strategic uncertainty that originate from political uncertainty and aggressive competition.

Proposed H1: The extent to which firms face strategic uncertainty (i.e., political and competitive uncertainty) is positively associated with the emphasis they placed on beliefs control system.

Proposed H2: The extent to which firms face strategic uncertainty (i.e., political and competitive uncertainty) is positively associated with the emphasis they placed on boundary control system.

In addition to the beliefs and boundary systems we also propose to investigate the diagnostic and interactive control under the existence of the political and competitive uncertainty. Firms use diagnostic system to confront and manage strategic uncertainty (Simons, 2000; Widener, 2007). Diagnostic system is considered an important facet of performance measures (PM) and provides direction to make sound decisions through measuring and communicating output. Firms that face uncertainty must design its diagnostic system in a way that can assist in processing the most relevant and reliable information at the appropriate time. Diagnostic control system is considered as the information provider system since such system includes different types of control systems working together or individually to provide reliable and valid information for top managers, which may produce huge amount of information. In order to reduce information process burden that is usually faced by top managers, delegating decision throughout the organization can fix this problem (Galbraith, 1973). Furthermore, delegating performance measurement embedded in diagnostic system can provide direction to the empowered employees which will help to align their behavior with organization goals. Moreover, as strategic uncertainty needs more reliable, valid, and timely information diagnostic system can significantly facilitate information process by providing exception reports (Widener, 2007). Galbraith (1973, p. 15) suggested for the firms after finishing goal setting, to decide either "reduce the need for information processing" or "increase the capacity to process the information". If the firm chooses to increasing information processing capacity to manage strategic uncertainty this can be achieved by engaging in a vertical information system (Galbraith, 1973), which is the fundamental role of interactive control system. By using interactive control, information can be distributed vertically throughout the organization starting from top managers to operating managers, eventually reaching the lower-level employees. The interactive control system can be the most relevant control system in the condition of strategic uncertainty as this system allows top managers to engage personally in monitoring threats and capturing opportunities in order to survive (Simons, 1995; Bisbe & Otley, 2004). Simons (1990) noted that, top managers use interactive system to set agendas to manage uncertainty. Besides, Simons (1991) found that strategic uncertainty originating from market competition can be managed by using MCS interactively, and that is consistent with Widener, (2007) who reported that competitive uncertainties derives control system, and that implies that firms use interactive control system to scan its external environment in order to quicken its response to tackle strategic uncertainties. Thus, we propose the following hypotheses to illustrate the expected relationship between diagnostic and interactive systems and each of political and competitive uncertainty.

Proposed H3: The extent to which firms face strategic uncertainty (i.e., political and competitive uncertainty) is positively associated with the emphasis they placed on diagnostic control.

Proposed H4: The extent to which firms face strategic uncertainty (i.e., political and competitive uncertainty) is positively associated with the emphasis they placed on interactive control system.

***Conclusion:***

This study provides a conceptual relationship between strategic uncertainty (i.e., political and competitive uncertainty) and LOC framework. Four hypotheses have been proposed and illustrated to examine the association between LOC framework

and strategic uncertainties. The purpose behind selecting those two strategic uncertainties is that they dominate Arab world and there is an urgent need to understand its possible influence on MCS design. Future researchers interested to examine the possible influence of the strategic uncertainty represented by the political and competitive uncertainty may use this conceptual paper as a guide to conduct a useful study.

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