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Conference Date

Aug, 12-14 2014

Location

De La Salle University, Manila, Philippines 2401 Taft Avenue, 1004
Manila, Philippines

2014 ICOI ORGANIZATION LISTING

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2014 The International Conference on Organizational Innovation Agenda

DATE : Aug, 12 2014, Tuesday

LOCATION : De La Salle University, Manila, Philippines

TIME	ACTIVITY	PLACE
08 : 30 – 09 : 00	REGISTRATION	
09 : 00 – 10 : 00	<p>Conference Host : Ms. Honorata G. Dimapilis</p> <p>Conference Grand Opening Speech : 1. Prof. Dr. Frederick Dembowski, President of International Association of Organizational Innovation. USA 2. Prof. Dr. Ma. Luisa C. Delayc, Dean of the Ramon V. del Rosario College of Business</p> <p>Honored VIP Speech : 1. Prof. Dr. Muslich Anshori, Dean of Faculty of Economics and Business, Airlangga University. Indonesia 2. Dr. Sri Gunawan, Head of Department Management, Faculty of Economics and business, Airlangga university, Surabaya Indonesia. 3. Dr. Fernando Cardoso de Sousa, Director of Portuguese Creativity and innovation Association (Apgico). 4. Dr. Alex Maritz: Swinburne University of Technology, Australia 5. Dr. Tomáš Tichý, VŠB-TU Ostrava, Czech Republic 6. Mr. Velu Perumal, University Putra Malaysia, Malaysia 7. Dr. Szu-Yuan Sun, National Kaohsiung First University of Science, Taiwan, ROC 8. Dr. Chih Yuan Huang, Kao Yuan University, Taiwan, ROC</p>	Natividad Fajardo-Rosario Gonzales Auditorium
10 : 00 – 10 : 30	Tea Time and Academic Exchange	
10 : 30 – 11 : 00	<p style="text-align: center;">Keynote Presentation (1) Speaker : Dr. Sydney Engelberg Topic: Decision-Making, Innovation and Organizational Change: A New Paradigm</p>	
11 : 00 – 11 : 30	<p style="text-align: center;">Keynote Presentation (2) Speaker : Dr. Harold G. Kaufman Topic: Innovations in Human Capital Management</p>	Natividad Fajardo-Rosario Gonzales Auditorium
11 : 30 – 12 : 30	<p style="text-align: center;">Keynote Presentation (3) Speaker : Dr. Sergey Ivanov Topic: Necessary Conditions for Innovation in Organizations and Societies</p>	
12 : 30 – 13 : 30	Lunch	Henry Sy, Sr. Hall, 4th floor

DATE : Aug, 12 2014, Tuesday

LOCATION : Rosario Jose Science Lecture Room, J504
De La Salle University, Manila, Philippines

Time	Topic of Seminar	Country/Region
	Chair : Dr. Raymund Habaradas, De La Salle University, Philippines	
Session 9.1 13 : 30 14 : 50	1. 14R-A25: Management Career, Organizational Commitment and Turnover Intention	Nuri Herachwati, Indonesia
	2. 14R-A23: Ownership Concentration, Firm Characteristics and Dividend Policy of Family Controlled Firms in Indonesia	I Made Sudana Indonesia
	3. 14R-A37: Applying Analytic Hierarchy Process to Categorise Supply Risks in the Palm Oil Chain	Siti Fatimah Indonesia
	4. 14R-A47: Are there enough Controls on SMEs to support Good Corporate Governance?	Yuniarti Hidayah Suyoso Putra Indonesia
	5. 14R-127: Deal Sites and its Role on Small and Medium Enterprises (SMEs) Sales Turnover	Emilina R. Sarreal, Philippines
14 : 50 15 : 00	Tea Time	
	Chair : Dr. Brian Gozun, De La Salle University, Philippines	
Session 9.2 15 : 10 16 : 30	1. 14R-065: Innovative Aspects of Tourism Sector Modernization of the Crimea as a Tool for Integration of the Economy of the Peninsula in the Economic Space of Russia in the Context of Historical Specificity of Sectorial Development of the Region	Ekaterina V. Andreeva, Russia
	2. 14R-124: The Three Factors of Creativity Management: Visual, Number and Word Creativity	Junius W. Yu, Philippines
	3. 14R-A53: The Importance of Organizational Culture on Intellectual Capital	Dian Indiyati Indonesia
	4. 14R-A57: Innovative Control Systems, Top Management Team Heterogeneity and Performance of University	Sondang Mariani Rajagukguk Indonesia
	5. 14R-A68: The Influence Marketing Innovation and Organizational Innovation, to Strategic Innovation, Diffusion Innovation and Market Differentiation, to Market Outstanding Performance, and Organizational Sustainability: A Resource-Based View Perspective of Indonesian Banking Industry	Maria Mia Kristanti Indonesia
18 : 00	Welcoming Dinner	Henry Sy, Sr. Hall, 4th floor

“Control Systems, Top Management Team Heterogeneity and Performance of University”

Sondang Mariani Rajagukguk (Maranatha Christian University)

Abstract

Management Control in nonprofit organizations, and specifically higher education or more specifically university, is the central focus of the research. The education sector provides many challenges for academics; one of these is related to issues of control in university. Various aspects of the formal management accounting and control systems (MACS) are a part of the formal and informal control of university.

This study will study the management accounting and control systems used by Top Management Team (TMT) in university (i.e. chief executive of university, faculties, or the primary strategic operating divisions of the university), in relation with TMT heterogeneity and its effect on the functioning of horizontal control that expected will improve the performance of university.

CHAPTER 1

1.1. Background

The continuing reform of the public sector with the implementation of management has give accounting a central role (Hood, 1991, 1995). Changes in public sector accounting over 1980 in a number of OECD countries were central to the rise of the “New Public Management” (NPM). This changes according to Power & Laughlin (1992) was a shift towards “accountingization” and entailed the of idea of a shift in emphasis from policy making to management skills, from a stress on process to a stress on output, from orderly hierarchies to an intendedly more competitive basis for providing public services, from fixed to variable pay and from a uniform and inclusive public service to a variant structure with more emphasis on contract provision.

The influence of NPM in the academy was the focus of a special issue that bring about managerialism effect on accounting education and research and how the critical community has and could respond to it in the future (Saravanamuthu and Tinker, 2002). Reconfiguration of the university has been associated with managerialism, corporatization, marketization, custemerization, modernization, professionalization, and last but not least rationalization.

Managerialism has been used freely to connote everything from the application of performance-based remuneration on public servants to the desocialisation (or reification) of restructuring exercises, such as corporatisation, privatisation, and marketisation. The Universities is turning to managerialist in response to situations where institutions operate under considerable constraints and challenges. Some of these include reduced government funding, increased dependence on fee paying students, intensified competition for international students, pressure to improve the quality of teaching and research outputs, and demand for flexible and multiple delivery platforms (Biggs, 2003). Tatikonda and Tatikonda (2001) highlight the need for universities to continually find ways to cut costs while keeping the quality of programs unaffected.

Over the past two decades, there have been heated debates as to whether private corporate style management is appropriate for the management of the university sector (Deem 2004; Lafferty and Fleming 2000; Davies and Thomas 2002; Roberts 2004; Deem 1998; Parker 2002; Pick 2006). Some scholars have argued that under new managerialism, universities are forced to become what they are not (Jones 1986). Others argued that the lack of commercialism in the University could jeopardize its independence and autonomy over how it discharges its responsibilities to society and are threatened by the loss of control over academic work in return for a higher level of dependence on state funding; although the pressure of the new managerialism regime is relentlessly to cut costs without compromising quality (Tatikonda and Tatikonda 2001).

Despite pro cons commentators regarding reforms towards managerialism and commercialization, University needs an innovative control system to capture a holistic approach to the management and control or organizational performance. Universities are typically complex multi-discipline teaching-research nexus organizations characterized by dependence on both public or private sources of funding, local and international operations, high competition, and demanding compliance and performance reporting requirements. Their management control systems are perceived as broad-based systems that go beyond management accounting systems to embrace behavioral and cultural aspects of controls which, according to Kober et al. (2007), are more meaningful in the higher education sector.

The researcher distinguishes controls between horizontal and vertical control (MACS). Horizontal control is defined as the social control mechanisms which take place *within* teams, such as mutual monitoring. In the case of teams, horizontal control is important because of the limited appropriateness of vertical controls. An overemphasis of vertical controls (i.e. the specification, measurement and evaluation of performance targets) may lead to dysfunctional behavior, since they give team members an incentive to free ride when individual performance is not observable (Zimmerman, 2000).

Management Accounting Control System defined as “process by which managers (academic managers in university) assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization’s objectives” (Anthony, 1965). In particular, MACS concentrated on formal (and usually accounting) controls without setting them in the wider context. Simons (1995) views MACS as the means used by senior managers to successfully implement their intended strategies and Chenhall (2003) defined MACS as the systematic use of management accounting in conjunction with other forms of controls to achieve some goals.

In the design and implementation of management control system, the professional backgrounds of managers are critical element. Abernethy and Brownell (2006) study the relevance of the professional backgrounds of managers at individual or team level (Naranjo-Gil and Hartman 2006, 2007). Hambrick and Mason (1984) states that organizational outcomes, strategic choices and performance levels are partially predicted by TMT heterogeneity such as age, education, tenure or length of employment have been analyzed.

This research propositates that Universities as knowledge repository operating within this so-called Intangible Economy, by effectively using MACS will produce much of their wealth from intellectual capital (IC) where the real competitive edge is located in the quality of relationships, structures and people (Segelod, 1998) and by that will improve the performance and sustainable competitive advantage.

1.2. The unique nature of university and impact on management control

Despite reforms towards managerialism and commercialization, universities differ in many respects from industrial/commercial enterprises and some commentators have explained how it would be very challenging for accounting control system designers to accommodate external political pressure whilst implementing the changes which academic managers are able and willing to accept and utilise (Jones 1986).

The structural complexity of universities makes their setting different from commercial organizations (Pettersen and Solstad 2007). A typical university would have several types and levels of organizational units such as faculties, schools/departments, institutions, centres, administrative divisions and sections. It would provide different types of services (teaching, research, consultancy and community engagements); in many forms (academic programmes, courses, units, undergraduate, postgraduate, course based; research based; basic research; applied research; collaborative research, etc); in multiple modes; and locations. But the fundamental complexity relates to the measurement of outputs of universities. The quality of a student's learning experience, the value-adding achievements of a program or course, or the international impact of research activities are difficult (if not impossible) to objectively measure in a standardized way (Bobe, 2010)

In relations to management control, the unique nature of academic work and academic managers can be summarised as follows:

- Performance evaluations are mainly conducted by the parties outside the organizational units of employees. For example, teaching is evaluated by students (customers) and research is evaluated by publications and research income that are verifiable by external parties (usually peers).
- Academic managers (i.e. deans, heads of departments/schools, research directors, teaching and learning directors, vice-chancellors, etc.) are primarily academics with regards to their professional career. Most of these people continue their research careers, some of them also continue with their teaching career, when they hold managerial positions;
- The relationship between academic managers and academic is unique. For example, a head of department and a professor, might working together in research project. The research partner might be senior to the head of department. Their relationship cannot be described as normal supervisor-subordinate relationship.

Hence the management control system will be theoretically quite different from other private as well as public sector organizations. The relationship can best be described as more of collegial rather than managerial notwithstanding the changes in the NPM era (Bobe, 2012).

1.3. The Questions and Objective of Research

The research questions are:

- a. How MACS use can emerge horizontal control functioning within management teams?
- b. What is the effect of top management team heterogeneity on university management control system?
- c. What is the effect of horizontal control on team performance?

The objective of the research are:

- a. to explore the relationship between the use of the formal MACS and the functioning of horizontal controls within the team affecting team performance.

- b. To understand the effect of team heterogeneity in the application of MACS to groups rather than individuals, and that is crucial to be viewed from a management accounting and control perspective in contemporary organizations.
- c. To study the effect of horizontal control on team performance

2. THEORETICAL BACKGROUND

Academically, this research merges three important and adjacent, yet, separate fields of management research; research on the effectiveness of MACS (Abernethy & Brownell, 1999; Abernethy & Lillis, 1995; Abernethy & Lillis, 2001; Bisbe & Otley, 2004; Eisenhardt, 1985), research on team processes (Ashforth & Mael, 1989; Chatman & Flynn, 2001; Chatman & Spataro, 2005; Tajfel, 1981; Tajfel & Turner, 1985; Turner, 1978; Van Knippenberg, 2000) and research on the relationship between top management team characteristics and team performances (Hambrick & Mason, 1984; Hambrick, Cho & Chen, 1996). Since these three themes are interwoven in daily organizational practice, it is important that research starts to investigate the complex relationships between MAS use, top management team heterogeneity and control.

2.1 Management Accounting Control System

Management accounting control systems (MACS) are systems for influencing human endeavour within the organization (Flamholtz *et al.* 1985; Langfield-Smith 1997). MACS is defined broadly as a system conveying useful information to assist managers in their jobs and decision-making to efficiently and effectively achieve desired organisational goals (see also: Anthony & Govindarajan 2001; Langfield-Smith 1997; Otley 1999). The definition of MACS embraces both formal and informal information-based routines and procedures for being able to investigate the “control package” (Otley, 1980, 1999) in its entirety. As a result, MACS involve both personal (Merchant 1985), clan control (Ouchi 1980) and performance measurement systems in general, combining both financial and non-financial information.

Hansen and Mowen (2000, p.825) define a management control system as “an information system that produces outputs using inputs and processes needed to satisfy specific management objectives”. Management control systems encompass the following areas: planning, budgeting, responsibility centers, cost management, decision-making, management control, performance measurement, and compensation (Anthony and Govindarajan, 2001). Management control systems also have many characteristics which influence their use. For example, management controls may be formal or informal (Langfield-Smith, 1997). In any case, the presence, use or absence of management control systems significantly influences the actions and decisions carried out within an organisation (Anthony and Govindarajan, 2001). In this work, MACS are not defined by their technical design features. They are defined by how managers use these systems for decision-making in the process of organisational performance management

MACS is the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organizations objectives. (Anthony, 1965). MACS is thus the process that links strategic planning and operational control (Otley, Broadbent & Berry, 1995). MACS have the purpose of providing information useful in decision-making, planning and evaluation (Widener, 2007; Merchant & Otley, 1980). Simons (1995) argues that management accounting control system are the formal, information-based routines and procedures managers use to maintain or alter patterns in organizational activities.

Management control according to Merchant and Van der Steede (2007) addresses the question whether employees behave appropriately or not. Management control systems are therefore intended to help the organization to motivate employees to make decisions and to take actions which are in the organization's best interest (Chow, Shields & Wu, 1999). Management control systems thus have two main purposes: providing information useful to management and helping to ensure viable patterns of employee behavior in order to achieve organizational objectives.

The discipline of management control is based on the presumption that managerial and all behavior of individuals working in organizations is largely self-interested, also a tenet in economics. Goals of management control include increased efficiency and effectiveness, and minimization of agency costs. Three interconnected techniques typically are employed in implementing improved management control systems: (a) performance measurement using internal accounting systems; (b) incentives and disincentives intended to reward or deter particular types of behavior and performance; and (c) methodologies that delineate decision making authority and responsibility within the organization. Bureaucratic organizations define decision authority and responsibility by separating decision control from decision management through the creation of hierarchical structure.

Despite the importance of management teams to contemporary organizations, little is known about the proper way to control such teams and about the processes that result as a consequence of using the MACS for the control of management teams (Towry, 2003). Although the reliance on (management) teams to accomplish organizational goals has increased dramatically during the last several decades, the literature evidences that many organizations fail in realizing the full performance potential of teams (Cohen & Bailey, 1997; Rowe, 2004; Scott & Tiessen, 1999). Several accounting researchers posit that an important reason why organizational teams on many occasions do not deliver improved performance is that vertical management control systems (e.g., rules and standard operating procedures; standard operating budget) work less effectively in teams. These vertical MACS rely heavily on specification, measurement and evaluation of desired results, neglecting that, as tasks become more interdependent, measurability of individual performance declines (Abernethy & Lillis, 1995; Scott & Tiessen, 1999).

2.2 Horizontal Control

Generally, the increase in the prevalence of teams is argued to be caused by increased competitiveness which requires the intensive cooperation of managers with different competences. When competition increases, organizations have to respond quicker and be more responsive to customer demands (Abernethy & Lillis, 1995; Scott & Tiessen, 1999). Also in the public sector, increased external pressures provide a similar need for the interaction of professionals and managers (e.g. in education). However, more complex and dynamic conditions also make formal performance measurement and evaluation troublesome, as well as more important for an organization's viability.

The benefit of 'proper' horizontal controls within teams is that some of the difficulties surrounding the specification of desirable performance *ex ante* and adequately measuring performance *ex post* by management can be avoided (Milgrom & Roberts, 1992). Instead, performance evaluation may take place between team members, who have the knowledge to determine what 'good' performance is. Letting team members socially control each other's behaviors (i.e., horizontal control) may, thus, be very useful to an organization.

There are some recent accounting studies investigated horizontal control in an accounting context using laboratory experiments. Rowe (2004) investigated the effect of the accounting report structure (unit-levels vs. process level reports) and team structure on team performance. He found that process-level reports in combination with face-to-face team structures provided the strongest horizontal control and highest team performance. Using social identity theory, Towry (2003) investigated the combined effect of team identity (high vs. low) and reporting system (horizontal vs. vertical) on team performance. She finds that when team identity is strong members behave cooperatively, and that under these conditions it is more effective if team members directly observe and control each others' behaviors (horizontal control) than report about those behaviors to management (vertical control).

The two studies suggest the importance of horizontal control in addition to vertical control, and also the existence of an interaction between these two factors with team composition to affect team performance. The studies provide little insight, however, into the effect of vertical control (provided by the typical formal MACS) on horizontal control. Thus, the studies leave unexplained what factors may evoke horizontal control, as in their experimental methodology it was considered an exogenous factor ('experimental condition') instead.

Horizontal control is defined as the social control mechanisms which take place *within* teams, such as mutual monitoring. In the case of teams, horizontal control is important because of the limited appropriateness of vertical controls. An overemphasis of vertical controls (i.e. the specification, measurement and evaluation of performance targets) may lead to dysfunctional behavior since they give team members an incentive to free ride when individual performance is not observable (Zimmerman, 2000).

2.3 Top Management Team Heterogeneity

The upper echelons theory set forth by Hambrick and Mason (1984) triggers the interest in the members of the top management team (TMT) of an organization. They argue that both strategic choices and organizational performance correlate with characteristics of the upper echelons (top managers) in an organization.

The ability of an organization to anticipate and respond to opportunities or pressures for change, both internal and external, is one of the most important ways in which its competitiveness and viability are ensured. The nature and effectiveness of organizational responses vary in part with how top management triggers and interprets strategic issues (Dutton & Duncan, 1987; Kiesler & Sproul, 1982). Management's role in defining the "developments and events which have the potential to influence the organization's current or future strategy" (Dutton & Duncan, 1987: 280) provides a major link between a firm and its external environment.

Scholars have been drawn to the study of top management teams (TMTs) for five main reasons. First, as an aggregation of subunits and individuals, organizations have multiple goals that are often in conflict (Cyert and March 1963; Weick 1979b). The existence of these multiple goals, and hence of multiple preferences, at the top of organizational outcomes, as well as the characteristics of those outcomes.

Second, almost all descriptions of strategic decision-making processes typically emphasize the relevance of stages, sequences, and processes that involve a group of top managers interacting toward desired ends (Pettigrew 1973; Mintzberg, Raisinghani, and Theoret 1976; Nutt 1984; Roberto 2003). Indeed, the top management team is at the strategic apex of an organization (Mintzberg 1979); it is the executive body most responsible for strategic decision

making and, by extension, for such fundamental organizational outcomes as firm strategy, structure, and performance.

Third, the interactions among top managers, including power distributions, decision processes and integration, and fragmentation, create outcomes of interest to strategy research.

Fourth, there is clearly some amount of role differentiation in most, if not all, top management groups. For example, Sarbanes-Oxley requires that a chief financial officer, along with the CEO, personally certifies accounting statements prior to sending them to the shareholders and filing them with the Securities and Exchange Commission (SEC). Thus, some specific responsibilities of executives other than the CEO have been legally mandated for public companies.

Fifth, and most important, evidence suggests that studying TMTs, rather than CEOs alone, provides better predictions of organizational outcomes (Hage and Dewar 1973; Tushman, Virany, and Romanelli 1985; Finkelstein 1988; Ancona 1990; O'Reilly, Snyder, and Boothe 1993; Tushman and Rosenkopf 1996). For example, in a series of tests of upper-echelons hypothesis, Finkelstein (1988) reported far stronger results using the TMT, rather than the CEO, as the level of analysis. Other studies have similarly demonstrated that significant variance in organization-level outcomes can be explained by examining the attributes of executives beyond the CEO (Bertrand and Schoar 2003; Reutzel and Cannella 2004; Zhang and Rajagopalan 2004; Bigley and Wiersema 2002).

For these reasons, whether one refers to such groups as dominant coalitions (Cyert and March 1963; Bourgeois 1980), top management groups (Hambrick 1994), or top management teams (Bourgeois 1980; Hambrick and Mason 1984; Carpenter, Geletkanycz, and Sanders 2004), there is much to gain from focusing on the relatively small constellation of executives at the top of an organization.

The examination of teams as an appropriate level of analysis are evident in Carpenter (2002), O'Reilly, Snyder and Boothe (1993), and Simsek, Veiga, Lubatkin, and Dino (2005). Perhaps the stronger criticism of focusing on the TMT as the level of analysis in upper-echelons research comes from Dalton and Dalton (2005), who put forth two arguments. First, they believe that the measures and analytical strategies in use at the team level are inadequate, reducing the appeal of the team as the level of analysis. Second, they simply believe that teams are much less important than CEOs and that, absent strong evidence to the contrary, the CEO should be the unit of analysis in upper-echelons research. Despite these doubts and caveats, there is substantial evidence that scholarly attention to TMTs has been and will be fruitful.

The heterogeneity of a team expected to be proactive in applying MACS include receptivity to change, willingness to take risk, diversity in information sources and perspectives, and creativity and innovativeness in decision making. Receptivity to change suggests an openness to pursuing different business approaches, essential to strategic change. Willingness to take risk is important because changing firm strategy involves risk: established ways of conducting business are abandoned in favor of making commitments to strategic directions for which the payoffs are not guaranteed. Novelty, and therefore change, result from a creative, innovative decision-making style. Finally, diversity in information sources and perspectives suggests differentiation in an organization's belief structure that in turn leads to a perception of the feasibility of change and a momentum toward change (Dutton & Duncan, 1987).

2.4. Team Performance

Performance measure systems should explicitly incorporate models of profit-generating processes, so, when managers take actions the models suggest will improve performance along one or more dimensions, the intended improvements are likely to materialize. Thus, the models should incorporate relationships over time as well as contemporaneous relationships and linkages capturing cause-and-effect relationships between constructs and measures of performance throughout the firm (horizontally and vertically; aggregated to disaggregated; across the entire value chain). Finally, the measures should also have “good” theoretical and empirical measurement properties (Johnston and Banker, 2000a,b).

This study acknowledges that control of team performance is unlikely to be straightforward. As organizations have difficulties in specifying and measuring relevant dimensions of team performance, specific group processes could enhance team performance. In order to understand the specific group processes which occur in teams, we draw on the psychological literature, which has extensively researched small group dynamics. Social identity theory, for example, stresses the importance of the concept of *team identity* (the feeling of belonging to a group) to understand the effect of social pressure as a horizontal control device within teams.

3. ANALYSIS & DISCUSSION

a. How MACS use can emerge horizontal control functioning within management teams?

Simons (1995) differentiate the use of MACS into interactive and diagnostic system. The early empirical research on the diagnostic role showed that management control systems can play in shaping organizational change in manufacturing industry (Burchell et al. 1980) and later research on the interactive style of use of management control systems in the formulation and implementation of strategic change (Abernethy & Brownell, 1999) in the health services industry. The latter study draws on Simons’ (1980) interactive and diagnostic uses of management control systems in their modelling of the relationship between strategic change, style of budget use and performance in public hospitals.

Interactive use of control system

Interactive control systems are formal control systems used by managers to get involved in the decision activities of subordinates, to debate on strategic uncertainties and to encourage dialogue between managers and lower level of management as well as among organizational members (Simons, 1995, 2000). Those systems expand and orient opportunity-seeking providing input to the formation of emergent strategies. As the result of the interplay of interactive control system with the other levers of control it eventually contributes to foster the development of horizontal control functioning.

Drawing on the communication properties of the interactive use of management accounting control system, Chenhall and Morris (1995) observe that through management accounting control system manager can maintain a focused view of organizational direction, capabilities and constraints. Accordingly, Bisbe and Otley (2004) argue interactive control systems provide the appropriate environment for top managers to offer guidance for organizational participants on where to look for new innovation ideas, encourage (i.e. stimulus) peoples’ action thresholds to look for new opportunities, and functioning as a tool for top management to indicate which initiatives are legitimate to the organizational agenda. Henri (2006:533) supports the functions of interactive use as stimulus for actions and guidance, arguing

that of interactive use of management accounting control system “stimulates the development of new ideas: and “focus attention [...] by reflecting signals sent by top managers”.

Morris (1995) observe that through management accounting control systems managers can maintain a focused view of organizational direction, capabilities and constraints. The use of management accounting control systems as interactive dialoggue tools might help organizational participants to learn how to discriminate which opportunities are worthwhile and which are not, given the strategic uncertainties faced by the organization. This systems allow organizations to filter and trim off creative efforts that are not in line with the managerial agenda (Chenhall and Morris, 1995).

Bruining et al. (2004) suggest that an important aspect of interactive control system is of providing firms with the strategic flexibility to adapt and evolve in changing environments through the development of its absorptive capacity (Zahra and George, 2002). Henri (2006) suggest that performance measurement systems used in an interactive (diagnostic) fashion contribute positively (negatively) to the deployment of specific capabilities, namely, market orientation, entrepreneurship, innovativeness, and learning. Particular, nowteworthy in Henri’s study was that it reinforces traditional lever of control framework (Simon, 1995) in the sense it relates the use of interactive control systems to the development of horizontal control functioning.

However, it challenges, to a certain extent, research that suggests interactive control systems is not always used by top managers to favour horizontal control, but it could be used to inhibit or constrain innovation in specific firms that follow certain innovation strategies (Bisbe and Otley, 2004).

Diagnostic system of LOC

Diagnostic management accounting control systems are feedback and measurement systems based on programmed cybernetic processes (i.e., setting standards, measuring, comparing, and taking corrective actions) and on management by exception. According to Simons (1994, 1995, 2000) these systems are used to focus search and attention, limit the chances of deviation from preset outcomes or behaviours and to monitor and reward achievement of pre-specific goals through the review of critical performance variables or key success factors.

A diagnostic use of management accounting control systems tends to negatively influence certain organizational capabilities such as market orientation, entrepreneurship, innovativeness and organizational learning (Henri, 2006).

The use of MACS and horizontal control

When accurate and verifiable measures of individual performance are not available, rewards based on these measures at the team level may even lead to dysfunctional behaviors and negative outcomes, such as low productivity, for example as a result of *free riding* (Campion, Medsker & Higgs, 1993; Towry, 2003; Zimmerman, 2000). In contrast, so called ‘horizontal’ control systems, like *mutual monitoring* may be better suited to evoke desired behavior from team members, as they imply that team members evaluate each other’s behavior.

Horizontal control thus refers to the control of performance by peers at the same organizational level or in the same working environment. As opposed MACS systems, which rely on specification, measurement and evaluation of team performance by a principal, such horizontal control systems rely on social control mechanisms which take place *within* teams.

The major difference with MACS is that performance evaluation is not dominantly based on formal performance goals set by any principal, but on the performance goals a team may set for itself (Arya, Fellingham & Glover, 1997; Barker, 1993; Barron & Gjerde, 1997; Kandel & Lazear, 1992; Merchant, 1998; Rowe, 2004; Towry, 2003). A crucial role is played by the *norms* that teams set for themselves, and make their members adhere to. Bettenhausen and Murnighan (1993) thus argue that “social norms are among the least visible and most powerful forms of social control over human action (p. 350)”. However, since the norms those teams set for they may be either high or low (Towry, 2003), horizontal control may not be effective in the full absence of any formally and externally benchmarked performance standard. Therefore, effective team control is likely to be a combination of vertical and horizontal controls.

b. What is the effect of top management team heterogeneity on university management control system?

The formulation of strategy entails a firm’s strengths and weaknesses with the problems and opportunities in its environment (Andrews, 1971). As the strategic decision-making process is by its very nature ambiguous, complex, and unstructured, the perceptions and interpretations of a top management team’s members critically influence strategic decisions (Dutton & Duncan, 1987). A team’s decision to initiate changes in strategy will be based on members’ perceptions of opportunities and constraints (Tushman & Romanelli, 1985).

The characteristics of a team expected to be proactive in initiating strategic change include receptivity to change, willingness to take risk, diversity in information sources and perspectives, and creativity and innovativeness in decision making. Receptivity to change suggests an openness to pursuing different business approaches, essential to strategic change. Willingness to take risk is important because changing firm strategy involves risk: established ways of conducting business are abandoned in favor of making commitments to strategic directions for which the payoffs are not guaranteed. Novelty, and therefore change, result from a creative, innovative decision-making style. Finally, heterogeneity in information sources and perspectives suggests differentiation in an organization’s belief structure that in turn leads to a perception of the feasibility of change and a momentum toward change (Dutton & Duncan, 1987).

As a top team engages in the strategic decision-making process, each manager’s perceptions and interpretations will reflect his or her own “cognitive base.” Because an individual’s cognitive base evolves from experiences, including training and background (Cyert & March, 1963), heterogeneity are indicators of its qualities (Hambrick & Mason, 1984). For example, age has been found to be negatively related to the ability to integrate new information (Taylor, 1975) and to make risky decisions (Carlson & Karlsson, 1970).

Further advantages of heterogeneity are objectivity, parsimony, comprehensibility, logical coherence, predictive power, and testability (Hambrick & Mason, 1984).

Diversity effects, which refer to the relative homogeneity or heterogeneity of a team on a characteristic, suggest the breadth of perspective available in a decision-making process. Research has suggested that a team’s demographic homogeneity will be linked to its propensity to maintain the strategic status quo. Homogeneity on demographic traits leads to perceptions of similarity with and attraction to others (Byrne, 1961). Shared cohort membership, which implies that two or more people experience an event like birth or organizational entry within the same time interval (Ryder, 1965), indicates similar exposure to social, environmental, and organizational events. A shared language develops among individuals with similar experiences,

backgrounds, beliefs, and values (Allen & Cohen, 1969; Rhodes, 1983), enhancing communication frequency and integration (O'Reilly, Caldwell, & Barnett, 1989).

Solidarity, sponsorship, and mutual choice are likely to occur among similar individuals (Pfeffer, 1983), leading to congruence in beliefs and perceptions of a firm and how it operates (Tushman & Duncan, 1985) and to high consensus (Pfeffer, 1983), and continuity (Reed, 1978) in decision making. Such congruence can be particularly functional when high interdependence characterizes a firm's diversification posture, demanding integration among top team members. Michel and Hambrick (1992) found a positive association between team homogeneity and performance for vertically integrated and related-diversified firms; no such relationship existed for firms with unrelated diversification.

Homogeneous groups can also be expected to exhibit conformity and lack of openness to information. Social psychological research on decision-making groups has shown that members' perceptions of similarity with others, particularly on values, beliefs, and attitudes, increases group identification and cohesion (Byrne & Wong, 1962). Cohesiveness is in turn associated with high conformity (Kiesler & Kiesler, 1969), high commitment to prior courses of action (Janis, 1972), lack of openness to information, and interference with a group's ability to fully use information (Whitney & Smith, 1983).

Group heterogeneity has also been shown to be associated with high levels of creativity and innovation (Bantel & Jackson, 1989). The presumed benefit of a diverse group is that its members' different points of view lead to diversity, novelty, and comprehensiveness in the set of recommended solutions. The members of such a team will be able and willing to challenge each others' viewpoints (Hoffman & Maier, 1961).

c. What is the effect of horizontal control on team performance?

From the field of organizational behavior, Bandura's work on self-efficacy (a person's estimation of his/her ability to achieve target behaviors successfully) suggests that self-appraisals may be valid predictors of performance: individuals who view themselves as capable of performing tasks, tend to do so successfully. When detailed measurements are made, efficacy assessments and subsequent performance are highly correlated; indeed, a reciprocal relationship exists between them. Not only is the self-appraisal process appropriate for teams, it may also improve the team members' performance during future hospital projects. Individuals are often best judges of their own performance, and by getting involved in a project, they may become more motivated to improve their performance. Self-appraisals tap dimensions of performance that are overlooked by other sources. Furthermore, examination of the psychometric properties of self-appraisals of performance indicates that self-ratings reduce some of the perceptual errors made by other raters.

Within the horizontal control, group effectiveness or performance has been defined as the extent to which a group meets or exceeds its standards; group output; organizational commitment; and satisfaction of group members. Some suggest that group performance is multidimensional and should be operationalized relative to the activities of the group. Another group considers performance of design teams as the normal engineering measures of efficiency, effectiveness, and timeliness. Efficiency is the ratio of outputs to inputs, and effectiveness is the quality of work produced. In the context of project teams, efficiency is subjective perception efficiency in team operations, and the team's adherence to allocated resources. Effectiveness is measured as the quality of work produced and interaction with people outside the team. Self-

evaluation of performance has been widely adopted in the areas of organizational behavior and human resource management.

According to Hambrick and Mason's (1984) model, a heterogeneous team will gather information from a variety of sources and have diverse interpretations and perspectives. Dutton and Duncan (1987) posited that differentiation in an organization's belief structure, defined as high complexity with low consensus, enhances the search for information, the perception that change is feasible, and the momentum for change. Other theorists have also suggested that high member diversity and variety enhance the ability of an organization to adapt (Katz, 1982; Weick, 1969) and higher team performance.

4. CONCLUSION

By invoking upper echelons theory, this literature study presumed that the way Executives choose to use management control systems, and therefore orient their faculty in a more collegial or managerial control mechanisms, will be influenced by their heterogeneity background. Universities executives' experiences and values greatly influence their interpretations of the situations they face and, in turn, affect their choices (Hambrick, 1984) in two interconnected parts: (1) executives act on the basis of their personalized interpretations of the strategic situations they face, and (2) these personalized construals are a function of the executives' experiences, values, and personalities. (Hambrick, 2007). Further, Hambrick (2007) states that "if we want to understand why organizations do the things they do, or why they perform the way they do, we must consider the dispositions of their most powerful actors-their top executives." (p.334).

If management accounting information systems are to be useful for strategic purposes, that is, to help managers increase the likelihood that they can achieve their strategic goals and objectives, their design and use must follow from organizations' missions and competitive strategies.

An interactive use of management accounting control system reflects the continuous interaction and exchange of information between higher level managers and organizational members (Simons, 1995) and across levels and functions, which is believed to encourage university's organizational learning, stimulate creative responses to environmental changes.

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