RETURN & REPORT:

THE ROLE OF LEADERSHIP AND PERFORMANCE MEASUREMENT SYSTEMS

IN EMPLOYEE ENGAGEMENT

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ABSTRACT

The research in this dissertation attempts to integrate aspects of several theories in accounting and organizational behavior to address the important issue of motivation and performance management. Specifically, the research draws on elements of agency theory, leadership theory, contingency theory, employee engagement and motivation, and management control and performance measurement system (PMS) literature. This study examines the effect the more comprehensive PMS has on employee engagement. In addition, it examines the role that contextual factors, such as leadership style and organizational structure, have on the use of comprehensive PMS as it relates to employee engagement.

A major premise behind the development of more comprehensive PMS is that they can help to improve productivity. Agency Theory, integrated with organizational behavior theories, suggests that a heightened level of organizational justice obtained through more comprehensive PMS, provides the mechanisms through which employees are motivated (Burney, Henle, & Widener, 2009), and the agency problem is mitigated and employee performance is improved.

Data collected from a survey of 312 employees are used to test the SEM model. Results from the structural model tested indicate that transformational leadership is directly related to employee engagement. In addition more comprehensive PMS leads directly to a higher level of engagement. This study provides evidence that the employee's supervisor's leadership characteristics play an important role in cultivating the engagement of employees and also offers evidence that more comprehensive PMS result in the more heightened engagement of an employee.

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CHAPTER I. INTRODUCTION

1. Background

In recent years, researchers have focused on factors that would improve performance through employee engagement. Many have claimed that employee engagement predicts employee outcomes, organizational success, and financial performance (Bates, 2004; Harter, Schmidt, & Hayes, 2002). Much of the employee engagement literature emphasizes organizational characteristics, such as leadership and strategic human resource management, as drivers for engagement (Walker, 2011). Although much as been written on the relationship between engagement and these organizational characteristics (Baptiste, 2008; Gilbreath & Benson, 2004), there remains a gap in the research between that body of literature and the accounting control systems literature.

Research suggests that performance measurement systems (PMS), a form of control systems, are the overarching framework for guiding managers in their efforts to increase engagement in their organizations (Mone & London, 2009). The use of PMS is frequently recommended for facilitating strategy implementation and enhancing organizational performance (Ittner, Larcker, & Randall, 2003). Even though these PMS are an important area of focus today (Franco-Santos, Lucianetti, & Bourne, 2012) and considered to be a potential tool for increasing engagement, prior research on PMS has focused primarily on the links between comprehensive PMS and organizational outcomes (Chenhall, 2003). These studies provide insights into the role and organizational effects of comprehensive PMS (Hall, 2008), but there is little empirical

research examining the specific consequences of PMS on individual outcomes (Lee & Yang, 2011), such as employee engagement.

Most scholars define PMS in terms of their features. For example, Cheng et al. (2007) hold that, "performance measurement systems, such as the balanced scorecard, advocate the use of an array of financial and non-financial performance measures" (p. 221). Other scholars suggest that PMS, "provides the information that allows the firm to identify strategies offering the highest potential for achieving the firm's objectives, and aligns the management processes, such as target setting, decision making, and performance evaluation" (p. 715) (Ittner et al., 2003). For this research I will define PMS as a set of metrics used to quantify both the efficiency and the effectiveness of actions (Neely, Mills, Gregory, & Platts, 1995).

While management researchers recognize that leadership influences employee engagement (Walker, 2011) as well as organizational functions (Bass, 1995; Tims, Bakker, & Xanthopoulou, 2011), accounting researchers have so far been relatively silent on how leadership style influences the use of PMS and ultimately its effect on individuals (Abernathy, Bouwens, & van Lent, 2010; Kaplan, 2006a). The role of PMS in enhancing various organizational characteristics, such as leadership, to improve employee engagement is an important topic given that PMS are a means by which top management can communicate, empower and execute their vision.

2. Prior Theory

The research attempts to integrate aspects of several theories in accounting and organizational behavior to address the important issue of motivation and performance

management. Specifically, the research draws on elements of agency theory, leadership theory, contingency theory, employee engagement and motivation, and management control and PMS literature. I examine the relationship between leaders and employee engagement, as well as organizational structure and employee engagement, as mediated by comprehensive performance measurement systems.

2.1 Agency Theory

Agency is defined as the intentional actions of self-conscious individuals as they interact with others in social situations. Overall, the classic agency model has yielded a number of insights into individual behavior with support from empirical evidence. It also offers potential for more micro-level analysis to understand the behavior of actors in different contextual settings.

The classic model in Agency Theory is concerned with the designs of systems that align the interest of risk- and effort-averse agents (employees) with those of the principal (employer). Despite the algebraic complexity often associated with these models, the philosophy and insights of Agency Theory are fairly straightforward and will be used in this study.

Agency Theory applies to the study of problems arising when one party, the principal, delegates work to another party, the agent (Eisenhardt, 1989). The unit of analysis is the metaphor of a contract between the agent and the principal (Melnyk, Stewart, & Swink, 2004). There are numerous factors and variables that influence the most efficient "contract" in the dyadic relationship between a principal and agent. These include information systems

(Eisenhardt, 1989), outcome uncertainty (Eisenhardt, 1989), and relationship (Celly & Frazier, 1996).

What makes agency theory so attractive is recognizing that in most organizations the concept of a contract as a motivating and control mechanism is not really appropriate (Melnyk et al., 2004). Rather, the contract is replaced by performance measures (Austin, 1996). It is the performance measure that motivates and directs; it is the performance measure that enables principals to manage and direct the activities of the various agents. The development, selection, use, and refinement of the performance measures become a major concern for both the principals and the agents. Consequently, agency theory provides a potentially interesting and useful theoretical context for management accounting researchers to analyze PMS.

Recent literature has expanded the use of Agency Theory to suggests that multiple financial and non-financial measures should be used to properly direct employee's attention and motivate behavior aligned with organizational goals (Burney et al., 2009). Nevertheless, descriptive and anecdotal examples of real-world practices have led critics to claim that most principal-agent relationships are far more complicated than standard principal-agency relationship theory allows (Indjejikian, 1999). For example, linking incentives to the PMS can result in various dysfunctional behaviors, including game playing by employees, the achievement of unbalanced performance and the potential of basing compensation on an incomplete performance measure. As such, Agency Theory and PMS research should be considered within other contextual factors.

2.2 Organizational Theory

Organizational Theory, such as Contingency and Leadership Theory, approach the study of individual behavior in which explanations are given as to how contextual factors such as style of leadership, technology, culture and the external environment influence the design and function process and systems within the organization (Chenhall, 2003). The assumption underlying these theories is that no single type of system is equally applicable to all organizations. Rather, organizational effectiveness is dependent on fit or match between style of leaders, technology, environmental volatility, the size of the organization, the features of the organizational structure and its information system.

These theories often offer ways of understanding these formal organizational structures and the processes through which they have come into being. They are mainly concerned with how an organization interacts with its environment and how that environment influences organizational practices and systems. However, critics of these theories cite the lack of emphasis on the role of agency, and the ability of actors to 'do differently' in specific organizational settings (Lee & Yang, 2011).

3. Proposed Research Framework

The combining of these theories is important to avoid a disconnect that may exist between top-level policy setting and performance management practices at an organizational and individual level. This model answers the call for a broader scope of inquiry for greater engagement of accounting researchers with on-going research in related fields, such as organizational behavior, sociology and psychology (Kaplan, 2006b). In addition, improving the understanding of how principal/agent relations are embedded in a particular context will enhance

the explanatory power of Agency Theory outside the traditional economic contexts in which it has been applied (Wiseman, Cuevas-Rodriguez, & Gomez-Mejia, 2011).

This study seeks to understand the behavior of individual actors in response to institutionally imposed performance measures. As such, it is thus worthwhile to combine these theories to examine the specific individual behavioral consequences of PMS as well as the use of PMS within various contextual factors. As such, the purpose of this study is to address the following research questions:

1- What effect does the level of comprehensiveness of Performance Measurement Systems have on employee engagement within the organization?
2- What effect do contextual factors, such as leadership style and organizational structure, have on the use of PMS as it relates to employee engagement?

4. Summary of Findings and Academic Contribution

This study investigates these questions and measures the direct effect of three proposed constructs: (1) transformational leadership, (2) comprehensive PMS, and (3) organic structures on employee engagement. In addition, the research examines whether the relationship between transformational leaders and employee engagement is intermediated by comprehensive PMS. It also examines whether the relationship between organizational structure and employee engagement is intermediated by comprehensive PMS.

In general, my results show that employee's perceptions of comprehensiveness of the PMS are positively associated with their own level of engagement on the job. These findings are consistent with similar findings by Hall (2008) which indicate that comprehensive PMS influence managers' cognition and motivation. Another finding indicates that leadership behavior is positively and significantly associated with the employee's level of engagement on the job, as argued by previous research (Bass, 1985). Lastly, no significant relationship was found between the organizational structure and employee engagement.

A number of theoretical contributions and practical implications can be derived from the results. From a theoretical standpoint, this paper extends previous management accounting literature using Agency Theory and prior research on PMS by examining the relationship that leadership, organizational strucure and comprehensive nature of the PMS has on employee engagement. In addition, it contributes to the employee engagement literature by providing evidence of direct and indirect links between comprehensive PMS, leadership and employee engaegement and provides evidence of the direct link between comprehensive PMS and employee engagement. This study also has important implications for management practices. For instance, a leader's influence on an employee's overall engagement can be magnified with a more comprehensive PMS.

5. Overview of Chapters

The next chapter presents a theoretical explanation and literature review of previous academic research in this area. It includes a definition of Agency Theory and an explanation of the agency problem within the employer-employee relationship, including the role of governance

mechanisms, such as control systems, in mitigating the agency problem. I also review the literature on human behavior theories in accounting research and discuss the social context of control systems and Agency Theory. Lastly, a literature review on leadership and engagement is presented.

Chapter three is comprised of the theoretical model, which includes the definition and establishment of the constructs under investigation. A complete definition of comprehensive PMS, leadership style, organic structure, and employee engagement is also discussed in this chapter. The chapter concludes with the study's formal model development and associated hypotheses of the model.

Chapter four describes the research methodology used. It identifies the sample size for the research as well as describing the instrument and analyses that are used. It describes the measures that were selected for the model as well the scales used, and the survey instrument used to gather the empirical data.

Chapter five presents the results of the study complete with alternative model testing results. In addition, a sensitivity analysis and within and between group analysis is reported.

Lastly, Chapter six reviews interpretations of the key findings of the study, summarizes the major conclusions, and discusses the limitations of the study. Finally, implications for practice and directions for future research are presented.

CHAPTER II. THEORETICAL FRAMEWORK

A major premise behind the development of more comprehensive performance measurement systems (PMS) is that they can help to improve productivity. As a result, there is a large and growing amount of literature on the use of PMS, including both financial and non-financial performance measures (Francos-Santos et al., 2002; Hall, 2008; Burney and Widener, 2007; Ittner et al., 2003). For this research we will define PMS as a set of metrics used to quantify both the efficiency and effectiveness of actions (Neely et al., 1995). The term comprehensive does not necessarily reflect quantitatively more and all encompassing, but measures that are linked to goals, strategy and objectives, which are expected to capture key strategic performance dimensions that are not accurately reflected in short-term accounting measures.

Agency Theory, integrated with organizational behavior theories, suggests that a heightened level of organizational justice obtained through more comprehensive PMS, provides the mechanisms through which employees are motivated (Burney et al., 2009), and the agency problem is mitigated and employee performance is improved. This study aims to examine what effect the more comprehensive PMS has on employee engagement, thus improving performance. In addition, it examines the role that contextual factors, such as leadership style and organizational structure, have on the use of comprehensive PMS.

1. Agency Theory

Although Agency Theory has roots in the information economics literature, during the 1970's and 1980's it became widely adopted in accounting research (Subramaniam, 2006). It is arguably the most popular theory used by accounting researchers today (Almer, Higgs, & Hookos, 2005), and has been one of the most important paradigms in accounting during the last 25 years (Lambert, 2007).

Rooted in Adam Smith's observation that corporate directors use "other people's money" to pursue their own interests, Agency Theory (See Figure 2.1) specifies that an agency relationship exists when one economic entity (the principal) authorizes the other (the agent) to act on the principal's behalf (Eisenhardt, 1989). Jensen and Meckling (1976) define the principal-agent relationship as a "contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent" (p. 308).

An agency relationship consists of creating formal or informal contracts agreed upon by both parties and the agent then selecting a certain course of action. The action of the agent is observed through performance measures and when appropriate the agent is rewarded with intrinsic or extrinsic rewards (Lambert, 2007). The two key underlying assumptions of Agency Theory are:

1. The efficiency of the principal and agent relationship is impacted by individualistic and opportunistic interests held by each party.
2. The situation may be exacerbated by incomplete information and uncertainty.

The combination of information asymmetry and the agent's aversion to both work and risk steer him/her away from cooperative behavior and gives rise to the "agency problem".

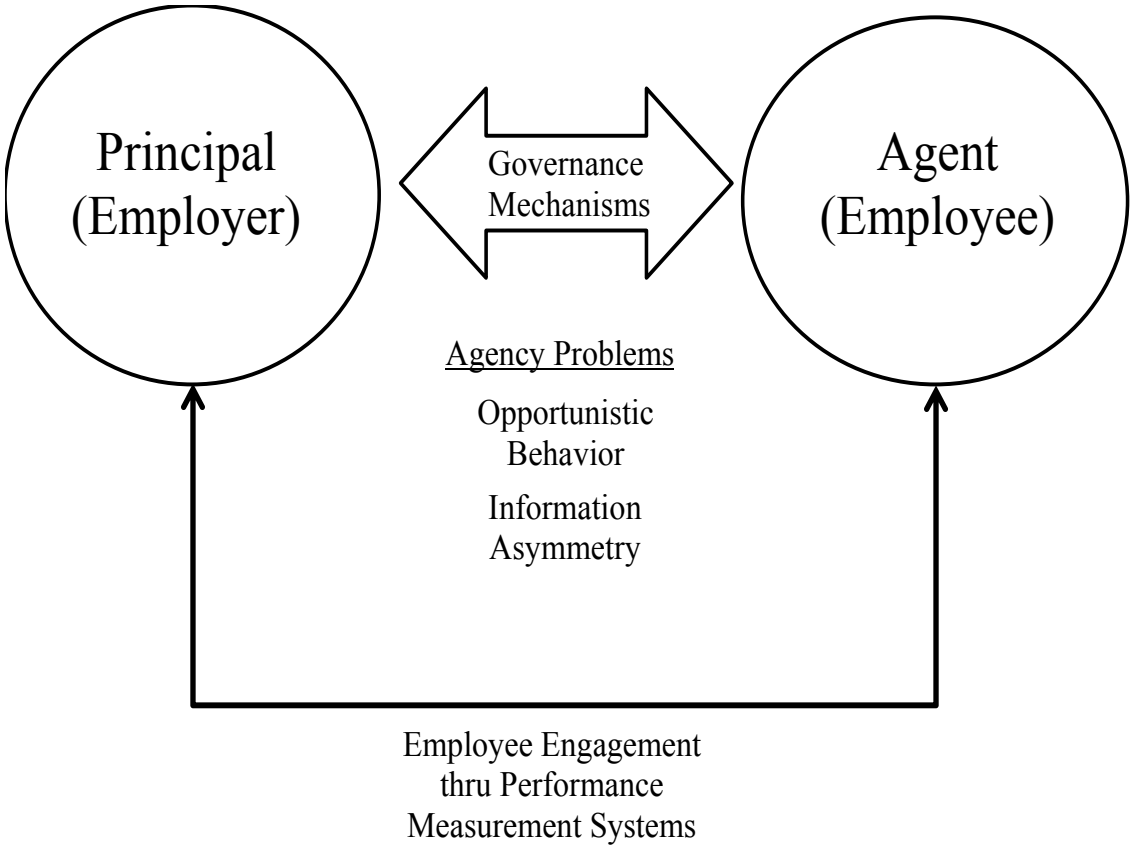

Figure 2.1: The Standard Agency Model based on Jensen & Meckling (1976)

1.1 The Agency Problem

Both parties want to maximize utilities, and as such agency costs inevitably occur when the agent does not pursue the best interests of the principal, but rather acts opportunistically to pursue his/her own strategic ends (Jensen & Meckling, 1976). Central to the agency relationship is this conflict between the party's self-interests and the low verifiability of the agent's behavior by the principal. The challenge is ensuring that the self-interested individuals do not act against

the principal's well-being in an organizational setting and that the agent's behavior can become verifiable through information or reporting.

Most organizations identify the concept of the contract as the ultimate motivating and control mechanism. Austin (1996) suggests going beyond the normal contract as the control mechanism and emphasizes the use of metric or performance measurement as the primary control mechanism. Organizations should utilize performance measures, not just the contract as a "carrot", to help eliminate information asymmetry and uncertainty in order to mitigate the agency problem that exists. This will help motivate employees and alleviate organizational control problems (Sprinkle, 2003). The performance measurements will assist in the motivational process and enable principals to manage and direct the activities of the various agents. The development, selection, use, and refinement of performance measures should be the primary concerns of both principals and agents.

At the most basic level, feedback from the performance measurement system features information about behaviors of the employees (Annett, 1969). Past research has shown that organizations can employ PMS to control and alleviate inherent agency problems (Davis, Schoorman, & Donaldson, 1997; Jensen & Meckling, 1976). Jensen (1976) notes that an appropriate information system informs the principal about what the agent is doing and should curb agent opportunism. In this sense, the agent realizes that he or she cannot deceive the principal and therefore is more likely to support the interests of the principal. The principal can keep track of the agent's self-serving behavior by providing feedback that minimizes the information gap and motivates employees toward the organization's goals. It is also an appropriate channel in which the principal can gain valuable information (e.g. customer

satisfaction) from agents and reduce the likelihood of agent opportunism (Mishra, Heide, & Cort, 1998; Singh & Sirdeshmukh, 2000). Accounting research substantiates this claim and establishes that these agency problems are often mitigated through various strategies or courses of action that involve monitoring agent's behavior through performance measurement (Subramaniam, 2006).

1.2 Performance Measurement Systems

Over the past three decades there has been an escalating body of knowledge and theory development in the area of management control systems (MCS) (Chenhall, 2003; Langfield-Smith, 1997; Otley & Berry, 1980). A central theme of these reviews has been the recognition of how the conceptualization of control has progressed from Anthony's (1965) view of the control system as formal, to one that incorporates a much broader view of both formal systems and informal controls collectively (Abernathy & Brownell, 1997; Malmi & Brown, 2008). The more recent idea infers that there are multiple means of control that interact with each other to complement, operate as substitutes, and also act in opposition (Abernathy & Chua, 1996; Ferreira & Otley, 2009).

The essence of the MCS is to manage the tension between creative innovation and predictable goal achievement and to balance the basic organizational dilemma between control and flexibility (Simons, 1995). One component of the MCS is the PMS which refers to the use of a multi-dimensional set of performance measures for the planning, controlling and management of business.

PMS are developed in an attempt to establish mechanisms for monitoring/reporting results from contracts. Properly reporting performance measures is intended to heighten verifiability of the agent's behavior by the principal and encourage alignment of the principal's and agent's interests. The demands for managers to obtain feedback, particularly through performance measurement systems, that can assist in assessing the effectiveness and efficiency in specific areas such as operations, marketing and human resource management, has resulted in an explosion of approaches to the design of performance measures (Chenhall & Langfield-Smith, 2007).

Traditionally, accounting based performance measures have been characterized as being financially based, internally focused, backward looking and more concerned with local departmental performance than with the overall health or performance of the business (Johnson & Kaplan, 1987; Keegan, Eiler, & Jones, 1989; Neely et al., 1995). As a consequence, in the late 1980s and early 1990s there was great interest in the development of more balanced PMS with the creation of frameworks such as Keegan et al's (1989) supportive performance measures matrix, the SMART pyramid (Cross & Lynch, 1989), and the Balanced Scorecard (Kaplan & Norton, 1992).

These types of PMS utilize a multi-dimensional set of performance measures. The set of measures is multi-dimensional as it includes both financial and non-financial measures (Franco-Santos et al., 2012; Hall, 2008). It includes both internal and external measures of performance; and it often includes both measures which quantify what has been achieved as well as measures which are used to help predict the future (Bourne & Neely, 2003).

1.3 Agency Theory and Performance Measurement Systems

Agency Theory constitutes one of the major pillars of theoretical accounting and provides a rich theoretical premise for understanding organizational processes and control system design from a principal-agent perspective. Using Agency Theory in combination with PMS that are comprehensive, accounting research has developed several arguments embedded with the principal/agent framework[1]. Some of the relevant findings from this work are as follows:

1- Comprehensive PMS improve motivation of the employee (Datar, Kulp, & Lambert, 2001).
2- Comprehensive PMS direct employees' attention to those aspects of the job that is being measured (Moers, 2005).
3- Comprehensive PMS align employees' effort along the dimensions emphasized by those measures (Banker, Potter, & Srinivasan, 2000)

Recent work within the Agency Theory framework utilizes a wide range of performance measures in an attempt to establish rational performance-evaluation procedures to motivate employees to exert themselves in the direction of the organization's strategic vision. Research conducted by Ahn, Hwang and Kim (2010) addresses optimal contract design issues that the principal must address to provide proper incentive to the agent. Using data from performance systems of public enterprises in the Republic of Korea, the authors examine the incentive compensation model that was introduced by the Korean government.

[1] A detail review of recent Agency Theory literature in accounting is presented in Appendix A. This section only includes a few selected papers surrounding Agency Theory and comprehensive PMS.

As the basis for their study, they use a recently developed performance measurement structure for Government Invested Companies (GIC). The PMS for GIC uses various individual measures from three categories: overall management, main business and business management, which comprises financial and human resource management. Their findings suggest that, in order for subjective measures to effectively complement objective measures, the accounting profession must develop more comprehensive and sound performance measurement systems that define and measure subjective performance with sufficient discriminability.

Moers (2005) helps support the general notion of Agency Theory and the fact that any (costless) performance measure that is informative about the agent's effort should be used for incentive purposes (Holmstrom, 1979). He extends the argument that no single performance measure is likely to be complete. The informative principle associated with Agency Theory argues that incentive contracts should include multiple performance measures, especially if they are costless.

Consistent with the concept of informativeness and its role in mitigating the agency conflict, Evans et al. (2010) study comprehensive performance measures and physician compensation. The study utilizes a national survey of physicians in the United States and examines the use of nonfinancial performance measures in physician compensation contracts. Consistent with Agency Theory, they find that nonfinancial measures are used more frequently when the measures are more informative and act to balance incentives tied to individual productivity and effort (Feltham & Xie, 1994; Holstrom & Milgrom, 1991; Lambert, 2001, 2007).

Burney, Henle and Widener (2009) note that multiple financial and non-financial measures are used in compensation contracting to properly direct employees' attention and motivate behavior aligned with organizational goals. They suggest that organizations should clearly communicate the characteristics of the PMS throughout the organization in a manner which employees perceive that it has a high degree of technical validity and is highly reflective of the organizational strategy. Thus management will create a mechanism that will provide information symmetry and a perception that the system properly measures results. This enhances the perceptions of PMS that will impact organizational justice and improve employee performance. Their research continues a process of expanding the Agency Theory to include the notion of fairness and justice and sets the stage for incorporating social constraints into the economic model of agency.

1.4 Recent Developments of Agency Theory in Accounting

While the developments of Agency Theory can be considered a major breakthrough in providing a rigorous analytical framework for accounting research, it also has its limitations (Almer et al., 2005; Noreen, 1988; Stevens, 2002; Stevens & Thevaranjan, 2010). In recent years, many critics have argued that contextual factors outside the principal-agent contract may limit agent opportunism or influence mechanisms used in controlling agent behavior. Cohen & Holder-Webb (2006) challenge that agency models, like any other models that have been simplified for tractability, offer thin support for those who rely on the literature to understand the real world. They continue by stating:

> "Quantitative models, such as agency models, hold a particular appeal for accountants, who are trained in measurement and analysis. These models have become disseminated through the classroom, generally without adequate consideration of their limitations. Accounting provides the juncture between economics and management and is subject to the percolation of ideas from both fields. Thus, concerns about the validity of economics and general business research are particularly germane to accounting researchers and educators. The organizational and social context of decision making is ignored in quantitative models and – by omission – treated as irrelevant. The omission of contextual considerations creates a false picture of how decisions are actually made and allows students to avoid dealing with the social and ethical implications of their analyses. (p. 18)"

Linking comprehensive PMS and Agency Theory, Burney, Henley, and Widener (2009) also noted that traditional Agency Theory is changing and many researchers are now trying to incorporate other psychological factors into the model. In their work, they include the notion of *fairness* or *justice* when considering the motivating effects of performance measurement systems on individual behavior. Specifically, they hypothesize that the extent to which the employees perceive that the PMS reflects the strategic causal model and the degree to which it is technically valid are positively associated with their perception of organizational justice.

Kilfoyle and Richardson (2011) note that the agent-centered literature has recognized a need to better model the social embeddedness of actors, including the effect of continuing relationships with superiors. They encourage other academics utilizing Agency Theory to develop substantive and empirically grounded theories to study specific social contexts.

2. Leadership Theory

The field of leadership is evolving and the consequences of its practice vary. Today, the field of leadership focuses not only on the leader, but also on followers, peers, supervisors, work setting/context, and culture. Leadership is no longer simply described as an individual characteristic or difference, but rather is depicted in various models as dyadic, shared, relational, strategic, global, and a complex social dynamic (Avolio, 2007).

First conceptualized by a political scientist (Burns, 1978), transformational and transactional leadership theory has become one of the most prominent theories of organizational behavior in the past 30 years. Transformational leaders offer a purpose that transcends short-term goals and focuses on higher order intrinsic needs. Transactional leaders, in contrast, focus on the proper exchange of resources. If transformational leadership results in followers identifying with the needs of the leader, transactional leadership give followers something they want in exchange for something the leader wants (Kuhnert & Lewis, 1987). In other words, transactional leadership is based on individual gain and exchange of rewards for effort; transformational leaders motivate behavior by changing their followers' attitudes and assumptions. To direct and inspire individual effort, these leaders transform their followers by raising their awareness of the importance of organizational outcomes, often through the use of more comprehensive PMS.

Bernard Bass (1999) suggested that transformational leaders displayed "superior leadership performance" (p. 21) when they appealed to the elevated spirit of individuals, to motivate them to transcend their individual self-interest for the greater good of the organization. He commented that there are theoretical reasons to believe that transformational leaders will use

transactional leadership and noted, "consistent with honoring of transactional agreements builds trust, dependability, and perceptions of consistency with leaders by followers, which are each a basis for transformational leadership" (p.11). Judge & Piccolo (2004) indicate that the positive effects of transactional leadership are simple by-products of transformational leadership and have nothing unique to contribute. In this study, I will focus only on transformational leadership.

Leading by transforming followers and their commitment to the organizational mission requires a number of conditions to be met. First, leaders must inspirationally motivate employees by clearly articulating an appealing vision of the organization's mission and future. The second condition is that the leader becomes a source of idealized influence, functioning as a role model. Similarly, the third condition is that they must help followers achieve the mission by intellectually stimulating them to challenge old assumptions about organizational problems and practices (Wright & Panday, 2009).

The use of comprehensive PMS will aid the leader in the transformational process as a comprehensive PMS can be used by the leader for communicating and articulating the goals, strategy, objectives and mission of the firm. More comprehensive PMS can help to clarify and communicate strategic intent and can capture different dimensions of performance, which is important in describing the organization's operations (Kaplan & Norton, 1996; Simons, 2000). In addition, comprehensive PMS will improve psychological empowerment by providing information about task behavior and performance (Lucket & Eggleton, 1991), and also assisting in the transformational process.

3. Contingency Theory

The contingency approach to management accounting control emerged out of earlier research in the area of organizational theory (Woods, 2009). Organizational theorists suggest that the structure and activities of complex organizations are subject to the influence of a number of contextual variables such as technology and environment (Waterhouse & Tiessen, 1978). Similarly, contingency-based research in accounting suggests that the formal organizational structure affects design of Management Control Systems (MCS) (Foster & Swensen, 1997; Shields, 1995). A PMS is an integral part of an organization, interacting with the organizational structure to enhance control (Waterhouse & Tiessen, 1978). The organization structure can therefore be expected to assimilate with the PMS (Lee & Yang, 2011).

Organizational structure has been defined along a continuum from organic to mechanistic (Burns & Stalker, 1961). Mechanistic organizations tend to have more organizational levels, higher centralization, more formal rules, a narrower range of control, and a greater reliance on vertical instruction in communication. In contrast, organic structures contain fewer layers in the hierarchy, greater decentralization, fewer formal rules, a wider control range, and a horizontal mode of communication (Lee & Yang, 2011).

In relation to the use of PMSs and their effects, contingency theory suggests that the fit between organizational structure and the design of MCSs is relevant to superior performance (Chenhall, 2003; Luft & Shields, 2003). Organic structures often utilize decentralized authority and control to encourage widespread communication within the firm. These features create

greater information processing requirements for proper coordination, communication and control at lower levels.

This organic structure also encourages the development of new ideas, a free flow of information, learning and sharing lessons, and informal signaling of potential problems (Kahn, 1990). May et al (2004) found that this environment was positively related to psychological safety. This environment inspires individuals to participate in creative decision making and exchanging information which is essential to employee engagement.

4. Employee Engagement Theory

In a recent article published by Blacksmith and Harter (2011), it was reported that seventy-one percent of American workers are "not engaged" or "actively disengaged" in their work, meaning they are emotionally disconnected from their workplace and are less likely to be productive. Much of the work on employee engagement stems from a theoretical framework that was presented by Khan (1990) who proposed that individual and organizational factors, such as leaders and systems, influence the psychological experience of work, and that this experience drives work behavior. He built upon Goffman's (1961a) research that suggests people's attachment and detachment to their roles vary. Kahn (1990) defines engagement as:

> "The harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694).

Maslach, Shaufeli, and Leiter (2001) build on an interdisciplinary framework developed by Kahn (1990), and indicate that engagement is characterized by energy, involvement, and efficacy. The authors argue that engagement is associated with sustainable workload, feelings of choice and control, appropriate recognition and reward, a supportive work community, fairness and justice, and meaningful and valued work.

Gebauer and Lowman (2009) describe employee engagement as having a deep and broad connection with the company that results in the willingness to go above and beyond what is expected to help the company succeed; they also offer a framework for building engagement based on "knowing, growing, inspiring, involving, and rewarding" employees and within that framework recommend actions for senior leaders, managers, human resource professionals, and employees themselves.

Many papers have been written on engagement in psychology and management literature, and Walker (2011) notes that scholars have used several research models and theories to substantiate the extent to which engagement is applicable to general work settings. In a literature review he finds that there are three main areas of inquiry investigating the nomological network of engagement. They are (1) the definition and measurement of the dimensions of engagement in relation to other work constructs, (2) the outcomes of engagement, and (3) the potential drivers of engagement.

Focusing on the function of the interpersonal resources in the process of engagement and defining potential drivers of engagement, Walker (2011) surveyed participants of a major division of a state funded university health center. Research findings of the study strengthen the

link between perceptions of leadership, one's work context, and performance behaviors that support overall organizational functioning. In addition, the study finds that individuals who reported perceptions of psychological conditions present in the work environment that support a climate of engagement were more engaged in their personal work roles. While Walker's study addressed psychological and leadership issues influencing employee engagement and provided some self-reported perceptions of performance, it did not incorporate any issues relevant to the design of management control or performance measurement systems that might influence engagement or performance.

Recent research commentaries have recommended that engagement researchers consider advancing the current state of engagement by exploring integrative research agendas that identify potential drivers of engagement and define the role of leaders in influencing follower engagement (Bakker, Albrecht, & Leiter, 2011). This current study will build upon the current stream of research in engagement (Macey & Schneider, 2008; Walker, 2011) by incorporating control systems into the model and addressing how PMS may be used to enhance employee engagement. By incorporating the role that management control systems and performance measurement systems may play in employee engagement, the study contributes to the evolution of management control systems theory, as well as providing empirical evidence on the subject.

5. Proposed Model

According to the economic, or market view, self-interested individuals are coordinated through the use of mostly financial incentives and punishments (Verstegen, 2010). Many critics

of this view contend that economic theories portray organizations as unitary rational actors, thereby treating what happens in the organization as a black box with boundaries (Malmi & Brown, 2008; Tucker, 2011). Many of the economic approaches attribute firms adopting formal control procedures to efforts that enhance efficiency and competitiveness. However, such approaches do not capture the complexity of organizational worlds and how humans behave (Jones & Dugdale, 2002).

Merchant et al (2003) note the limited awareness that management accounting researchers have regarding developments and insights into other disciplines. Mensah et al (2004) also noted that there was very little cross-fertilization of ideas and findings with other disciplines. They found that there was decreasing incidence of citation of management accounting in other disciplines. However, there are large potential contributions to other areas as noted by Kinney (2001) who highlights the unique contribution that accounting has made in the measurement area, and considers knowledge of business measurement as one of the core competencies of accounting.

Anthony Hopwood's (1974) seminal work contributes significantly to the advancement of human behavior regarding accounting research. In his 1974 book, *Accounting and Human Behavior*, Hopwood comments:

> "… the effectiveness of any accounting procedure depends ultimately upon how it influences the behavior of the people in the enterprise….there is nothing new about such a view point: accounting has never operated in a behavioral vacuum. Just try to imagine designing and operating an accounting system in technical expertise alone. What type of

information would you design information for control purposes without considering how it would fit in with other means of influencing behavior in organizational settings? How would you provide information to motivate superior performance without having some understanding of human needs and aspirations? And how would you manage the process of standard setting, budgeting, and planning, all of which are essentially social in nature? (p 1-2)"

The relationship between the nature and the development of principal/agent relationships, and an investment in governance mechanisms, such as PMS and incentive alignment, has been extensively discussed in the accounting agency literature (Lambert, 2007). Contextual antecedents of employee engagement, as noted by Macey and Schneider (2008), have also received recent momentum in the literature

This study proposes a model that leads towards a more socialized theory of Agency Theory within management accounting research. It proposes linking contextual factors, such as leadership style and organic structure, and integrates the management control and performance measurement literature with the employee engagement literature.

Formal hypotheses will be developed in the following chapter. As portrayed in the model, and substantiated in the literature, a comprehensive performance measurement system will have a direct effect on the level of employee engagement. Within the framework of Agency Theory, the performance measurement as a contract is assumed to align the interest of the agent with the principal and thus influence the agent's selection of action and increase the level of engagement

or effort toward the organization's overall mission and objectives (Salanova, Agut, & Peiro, 2005). This current study does not measure the relationship between engagement and employee performance. However, prior studies have found that engagement was linked to individual performance (Judge, Thoresen, Bono, & Patton, 2001), client satisfaction in service settings (Salanova et al., 2005) and objective daily returns of employees (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). In addition, a meta-analysis conducted by Harter, Schmidt and Hayes (2002)found relationships between employee engagement and business unit outcomes of customer satisfaction, productivity, profit, employee turnover and accidents.

CHAPTER III. THEORETICAL MODEL AND HYPOTHESES

1. Theoretical Background

Previous work in control system research has focused on the relationship between PMS and organizational performance (Chenhall, 2005; Davis & Albright, 2004; Ittner et al., 2003), as well as the use of multiple performance measures in performance evaluation judgments (Banker, Chang, & Pizzini, 2004; Lipe & Salterio, 2000). These studies have adopted rather simplistic models, focusing on organizational behavior, and have not adequately considered the issues relating to individual behavior. These studies are based on assumptions about, rather than a detailed investigation of, these individual behaviors (Covaleski, Evans III, Luft, & Shields, 2003).

Chenhall (2003) notes that assumptions about individual behavior involve broad leaps in logic and there is no compelling evidence to suggest that these links between organizational behavior and individual behavior actually exist. The goal of this research is to provide academics, researchers and practitioners with information to understand how more comprehensive PMS influence individual employee engagement. In addition, it focuses on how this behavior is affected by certain contextual factors, such as leadership and organizational structure.

The standard agency model serves as the underpinning of this research. As noted in Jensen and Meckling (1976), the agency relationship is considered to have an "agency problem" comprised of (1) opportunistic agent behavior and (2) information asymmetry. Accounting literature maintains that PMS are important in mitigating this agency problem (Subramaniam, 2006).

Agency Theory focuses on the role of performance measures in promoting congruence between the principal's objective and that of the agent (Lambert, 2007). Without performance measures, an opportunistic agent may be more likely to skimp on quality or effort to reap greater payoffs without providing the level of effort or quality expected in the initial contract with the principal. Information asymmetry will strengthen the confidence of these opportunistic agents. The agents believe the quality decrements and effort slack cannot be easily detected by information deficient principals (Christen, Lyer, & Soberman, 2006). In addition, various models suggest that non-comprehensive PMS are unlikely to be the most efficient means to motivate or engage employees (Hall, 2008; Ittner et al., 2003).

Utilizing organization behavior literature, consisting of psychological and sociological theories, Macey and Scheider (2008) establish a framework for studying the antecedents of individual behavior, specifically employee engagement. This model delineates the relationship between employee engagement and several constructs or drivers, and their consequences **(**See Figure 3.1). As noted by Christian et al. (2011) this framework offers a clear description of the engagement nomological network. Using this framework as a reference point for the study of employee engagement provides functional and clear understanding of some of the organizational and social contexts that are often ignored in models used in economic literature. The omission of these contextual considerations in economic models may create a false picture of how individual behavior is affected by certain accounting processes and systems.

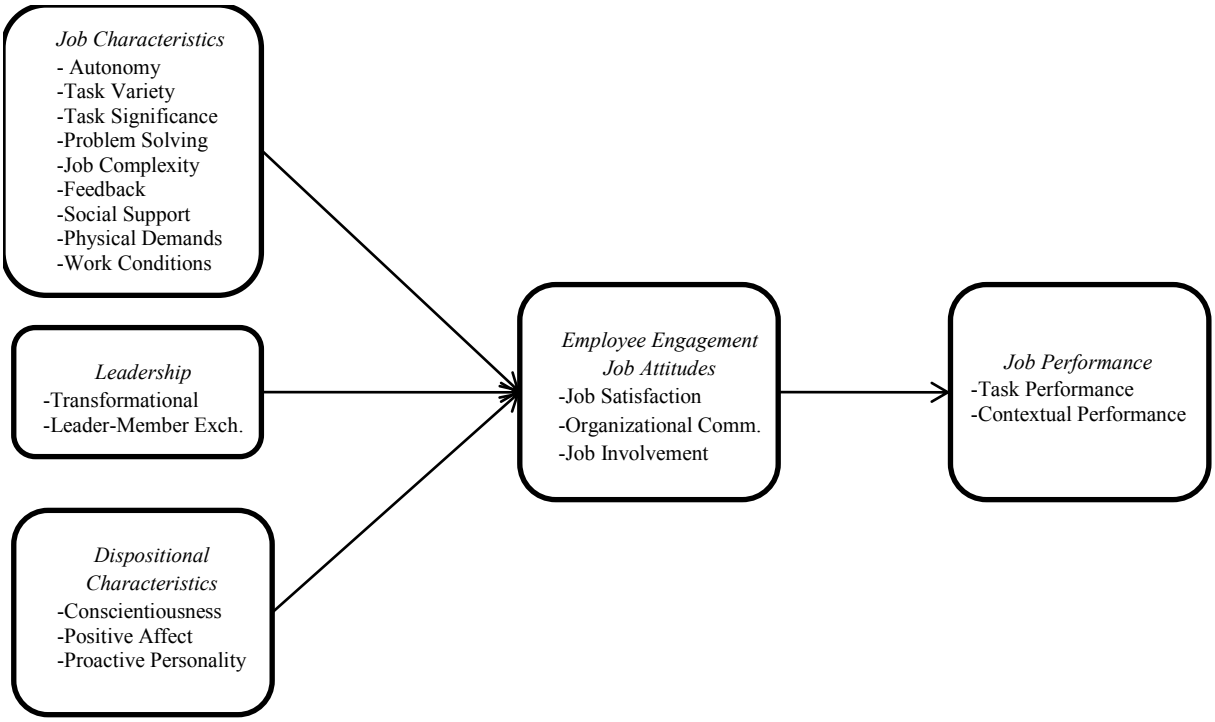

Figure 3.1 Macey & Schneider Employee Engagement Framework (2008)

Management accounting provides a juncture between economics and management and should be influenced by ideas from both fields. As such, this study combines the standard Agency Theory model with the framework provided by Macey and Schneider (2008) and answers the call to 'employ a broader approach to control systems research in order to account for how various control systems are mobilized in idiosyncratic ways when embedded in unique social dimensions'(Free & Macintosh, 2009). The combination of these two theoretical positions is shown in Figure 3.2.

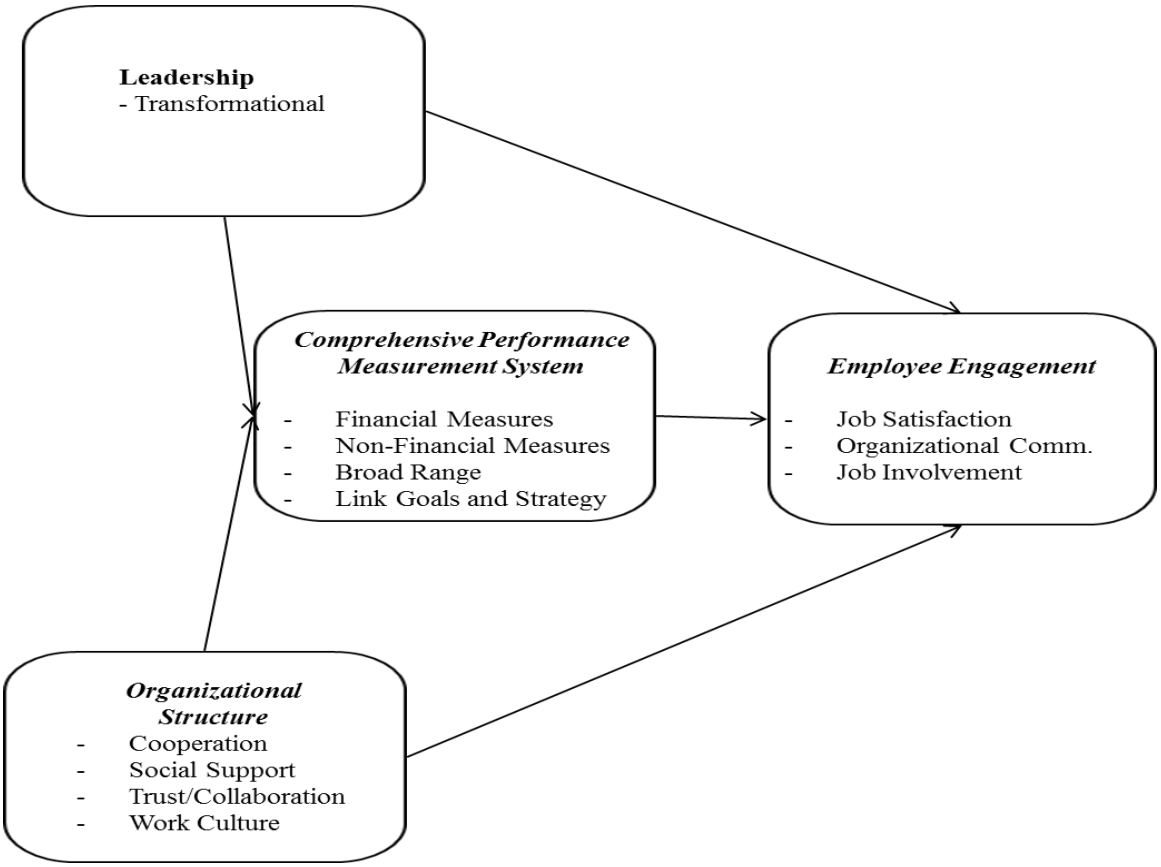

Figure 3.2 Integrated Theoretical Framework

Figure 3.2 models the relationships and the constructs under investigation. The combined model considers three main constructs relating to the observed construct of employee engagement. They are: (1) comprehensive PMS, (2) transformational leadership, and (3) organic structure.

The central focus of this study is the relationship between comprehensive PMS and employee engagement. It also examines the perceived level of transformational leadership of the supervisor and the organic structure as they relate to employee engagement with moderation by

comprehensive PMS. The establishment of this combined model integrates both theory established in economic literature and organizational theory, and depicts how measurement systems embedded in organizational and social context help to strengthen employee engagement. Understanding the influence of comprehensive PMS in conjunction with contextual factors will be an important step in better understanding an economic model of agency and how it might vary across social contexts.

2. Comprehensive Performance Measurement Systems

For this research, I define comprehensive PMS as a measurement system that supplements traditional financial measures with a diverse mix of non-financial measures that are expected to capture key strategic performance dimensions that are not accurately reflected in short-term accounting measures (Ittner et al., 2003). Literature often uses phrases interchangeably with "comprehensive performance measurement systems". Some of them include, "contemporary performance measurement" (Francos-Santos et al. 2012), "integrated performance measurement" (Hall, 2008), "strategic performance measurement"(Burney & Widener, 2007; Ittner et al, 2003), or "business performance measurement" (McAdam & Bailie, 2002). The term comprehensive does not necessarily reflect quantitatively more and all encompassing, but measures which are linked to goals, strategy and objectives.

A more comprehensive PMS is intended to provide richer and more complete feedback about operations and results to managers/principals (Chenhall, 2005; Kaplan & Norton, 2001; Malina & Selto, 2001), which is expected to empower and motivate employees/agents toward the common goal and strategy of the firm by helping employees understand their role in the firm. By

sharing a broad array of organizational information (i.e promises and obligations, financial information, non-financial metrics, operational and marketing practices), the organization is helping its employees recognize their contribution and significance to the success of the business (Lester, Clare, & Kickul, 2001), thus having positive effects on the employee's role clarity and psychological empowerment (Hall, 2008).

3. Transformational Leadership

Transformational leadership style focuses on the development of followers and their needs. Supervisors displaying transformational leadership style focus on the development of value systems of employees and their motivational level, as well as moralities with the development of their skills (Ismail et al., 2009). Transformational theory proposed by Burns (1978) explains that transformational leadership style supports mutual understanding between employees and management. Bass (1985) expands the concept of transformational leadership by explaining that interaction between employees and management is managed in ways that ultimately leads employees beyond their self-interest in support of organizational targets.

Transformational leadership is often discussed based on two important characteristics of intellectual stimulation and individual consideration. As discussed by Bass and Avolio (1990), intellectual stimulation is the enhancement of the followers' ability to think on his/her own related to the work tasks. Intellectual stimulation is the enhancement of the follower's ability to be logical, rational and able to intelligently adapt to certain situations. Stimulating employees'

intelligence encourages them to take risks in order to bring new practices and ideas that help improve performance.

Another characteristic of transformational leadership is individualized concern. Literature defines individualized concern as the consideration for the employee's individuality. Transformational leaders link priorities of every follower with the development of the organization (Bass & Avolio, 1990). Leaders that focus on the development and training of employees often create promotion opportunities and motivate employees to perform better (Maslach et al., 2001).

Transformational leadership has often been studied in the context of performance and development. Findings of these studies show that transformational leadership style and desired organizational outcomes are highly interrelated (Tims et al., 2011). Transformational leadership also improves the overall operations in the organization (Pounder, 2002). Through intellectual stimulation and individual consideration, employees managed with transformational leadership style will feel more empowered, confident and satisfied and hence more engaged.

4. Organic Structure

In the accounting literature, mechanistic structure constitutes well-defined, deliberate and established systems and actions, whereas organic structure tends to involve less well-defined practices and loose connections between elements of the system. Although these terms are broad in definition and meaning, organic structure and mechanistic structure are readily observable within organizations.

Organic structure has a higher level of integration and open communication through networks of relationships that employees shape across functions and divisions (Krackhardt & Hanson, 1993). As noted by Langfield-Smith (1997) this structure serves to communicate rules, policies, procedures and targets informally to all employees, essentially reflecting unwritten policies of the organization. Means by which this communication occurs include shared values, beliefs, and traditions that guide behavior of employees (Falkenberg & Herremans, 1995); management style, informal dialogue and social forces (Marginson, 1999); and group norms and socialization (Collier, 2005).

Organic structures are more flexible, responsive, and involve fewer rules and standardized procedures that tend to be richer in data (Chenhall, 2003). Authors have described organic structures as involving higher discretion or power, coordination by mutual adjustment and high interdependence between work groups (Perrow, 1970), informal clan controls including recruitment, traditions and ceremonial control (Ouchi, 1979), and controls that create slack resources, self-contained tasks, vertical information systems and lateral relations (Galbraith, 1973). Lee and Yang (2011) state:

> "Organic structures have two specific features. One is that they are adaptive and flexible with regards to tackling new problems or opportunities in task assignments. The other feature is that organic structures utilize decentralized authority and control to encourage widespread communication within the firm. These features create greater information processing requirements for proper coordination, communication and control at lower levels. Integrated information is therefore required to aid the various decisions made by decentralized managers"(p.86).

5. Model Development and Hypotheses Formulation

The following sections will define the proposed model and hypotheses under investigation[2]. The model will be tested through the structural equation model detailed in Figure 3.3.

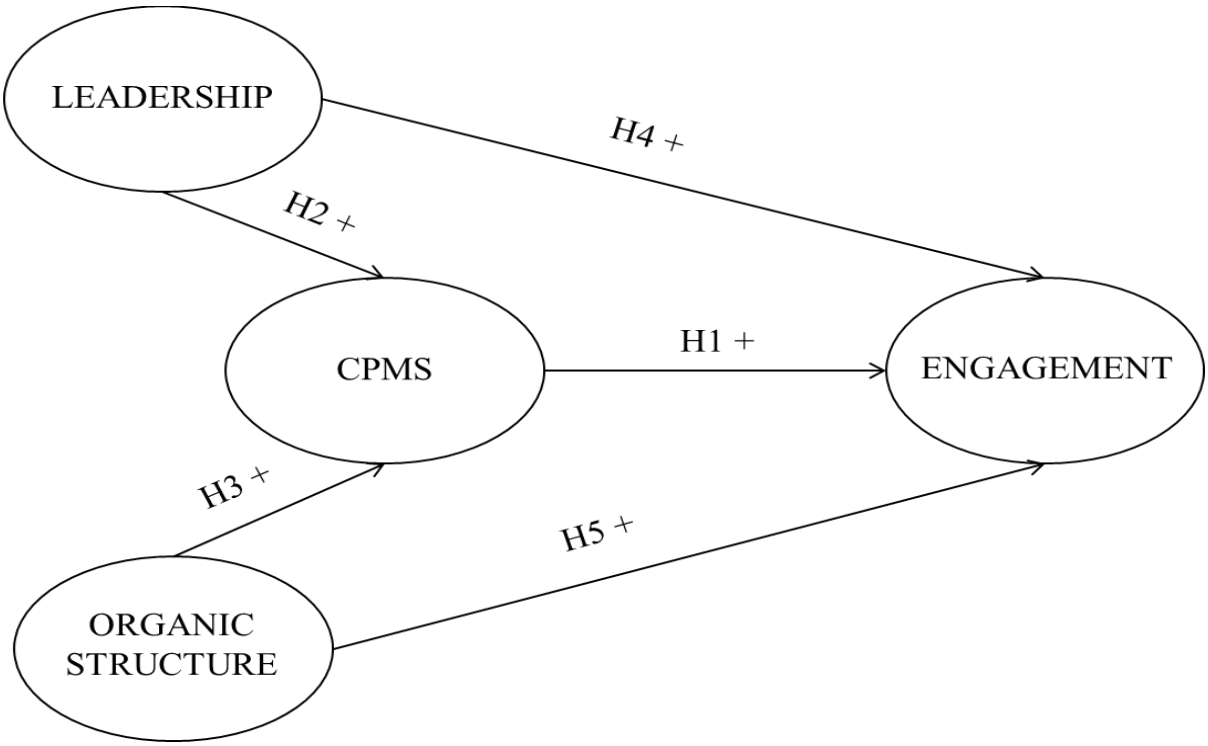

Figure 3.3 Theoretical Model Illustrating Hypothesized Relationships between Constructs.

[2] The direction of the proposed model was determined through an Alternative Model Testing technique. Results confirm this proposed model is the best fitting model and will be used for the development of hypothesis. See results of Alternative Model Testing in Chapter 5.

5.1 Comprehensive Performance Measurement System and Employee Engagement

The PMS primary role is to provide feedback on operations and is defined as "the set of metrics used to quantify both the efficiency and effectiveness of actions" (Neely et al., 1995). Research has noted that providing feedback to employees is a key driver of employee engagement (Mone & London, 2009). Management accounting research notes that feedback theories from psychology indicate that performance information can improve psychological empowerment by providing information about task behavior and performance (Lucket & Eggleton, 1991).

Engaged employees are expected to have a greater level of meaning and self-determination which reflects higher intrinsic task motivation (Thomas & Velthouse, 1990). As a result, these types of employees are expected to have a more focused attention on tasks, greater effort (intensity) and persistence during task and improved task strategies (Mitchell & Daniels, 2003). In particular, intrinsic task motivation is increased when employees are provided with feedback of operations (Ilgen, Fisher, & Taylor, 1979). This is because performing a task without knowledge of results provides little feedback to employees, which is likely to be frustrating and dissatisfying, thus reducing intrinsic motivation (Lucket & Eggleton, 1991).

Utilization of a PMS can be conceptualized as the overarching framework for guiding managers in their efforts to increase engagement in their organizations (Mone & London, 2009). A firm that properly utilizes a more comprehensive PMS can provide a better explanation regarding its fulfillment of psychological contracts within the employer-employee relationship (Morrison & Robinson, 1997; Rousseau, 1995). As noted by Hall (2008), a comprehensive PMS

is expected to provide important information for managers to enhance their role clarity and psychological empowerment to influence employee's cognition and motivation. In other words, more comprehensive performance measures are expected to improve motivation and psychological empowerment.

Hypothesis #1: ***More comprehensive PMS results in higher levels of employee engagement.***

5.2 Leadership Characteristics and PMS Design

Practitioners and management scholars all acknowledge the importance of authority that resides with top management that enables them to define structures, shape strategic priorities, implement formal controls, set targets, and then take actions to correct deviations. According to Ruth (1996), the main qualities of leadership are abilities for long-term strategic thinking, communications skills, integrity and ambition. Westley and Mintzberg (1989) discussed leadership as a process; taking a vision/idea and through proper communication, empowering employees into action.

A transformational leader is one who articulates a vision that is appealing and inspiring to followers. He/She challenges followers with high standards, communicates optimism about future goal attainment, and provides meaning for the task at hand (Judge & Piccolo, 2004). There are numerous ways in which a transformational leader can execute their vision and achieve accountability. PMS are one form of accountability used by top management to influence behavior and evaluate performance. PMS influence behavior because they form the basis for compensation and promotion decisions within the firm(Abernathy et al., 2010).

Transformational leaders will use a more comprehensive PMS because these types of leaders tend to offer a purpose, transcend short-term goals, and focus on higher order intrinsic needs (Bass, 1990; Judge & Piccolo, 2004).

The study of Martinez (2005) reveals that PMS have a positive effect on things such as focusing people's attention on what is important to the company, aligning operational performance with strategic objectives, improving people's satisfaction and aligning people's behaviors toward continuous improvements – all important aspects of motivating and committing people. Dumond (1994) states that PMS are most important in guiding an individual's performance and can have an even greater effect when the right types of interaction are provided to support the system.

A more comprehensive PMS provides richer and more complete feedback about operations and results to the employees. The availability of a comprehensive PMS to managers will aid in the development of certain transformational characteristics, such as modeling behaviors consistent with the stated vision and raising awareness of the importance of the organizational values and outcomes articulated in the comprehensive PMS. Consistent with this explanation, Yang and Pandey (2009) found that by managing for results, activities can increase employee commitment not only by improving communication and organization goal clarity, but also by reducing centralization and routinization.

Evidence and research show that the use of performance measurement and its emphasis on communication and mission motivation are consistent with the fundamental tenets of transformational leadership which leads to H2:

Hypothesis #2: ***There is a positive relationship between the level of transformational leadership characteristics displayed by direct supervisor and the comprehensiveness of the performance measurement system.***

5.3 Organic Structure and Comprehensive PMS

Since an organic organization has a higher level of integration than a mechanistic one, it is required to integrate and coordinate various departments with different functions (Lee & Yang, 2011). Henri (2006) finds that more organic firms tend to further integrate PMS in their organizational processes and use more performance indicators than do mechanistic firms. In addition, organic firms tend to use PMS that contains non-financial and financial measures, focus on the external conditions, and can generate extensive information (Kaplan & Norton, 2001). The combination of financial and non-financial measures allows various functional departments to have a broad understanding of the performance information in their units which aids communicating the firm's strategic objectives and control operation at each layer. The above argument suggests that a more comprehensive PMS will enhance the decision-making in organic structures by satisfying their information requirements. Thus the following hypothesis is proposed.

Hypothesis #3: ***There is a positive relationship between more organic organizational characteristics and the comprehensiveness of the performance measurement system.***

5.4 Leadership Effect on Employee Engagement

Transformational leadership involves articulating an appealing vision of the organization's mission and modeling behavior that is consistent with the stated vision. This builds pride in the organization and employee confidence, thus positively influencing the performance of the employee in terms of improved quality of outcome (Ismail et al., 2009).

Transformational leadership not only enhances positive outcomes, but also reduces the effect of negative aspects associated with employee satisfaction and performance. This style of leadership is positively associated with the level of commitment shown by employees within their work and the organization and enhances satisfaction levels of employees in their work setting by improving organizational citizenship behavior (Breaugh, 1991). Organizations exercising transformational leadership style and practicing follower's development showed employees have less intentions to leave the organization and reduction in absenteeism and intention to leave, which is directed towards the improvement of performance (Arnold & Feldman, 1982).

Employee engagement is often studied from the context and relationship to employee commitment, performance, and association with the organization. Miles (2001) noted that it was the responsibility of management to keep employees engaged. Bass (1985) found that employees were more likely to devote additional effort when they reported to a transformational leader who led by influencing them and inspiring their trust. Berson and Avolio (2004), and Bass (1990) also noted that managers who adopted transformational leadership qualities in the way they lead their organizations were seen by their subordinates as more effective. Likewise,

Avolio and Bass (1990) stated that leaders who were transformational in their style of influence often engaged the whole person and helped them develop from an associate level job to a managerial/leadership position in the organization.

In summary, transformational leaders are expected to better motivate, encourage and stimulate employees and positively influence pride in the organization and psychological empowerment. This leads to H4.

Hypothesis #4: ***The more transformational the leadership the higher the level of employee engagement.***

5.5 Organic Structure and Employee Engagement

As noted by Langfield-Smith (1997), organic structures communicate rules, policies, procedures and targets informally to all employees, essentially reflecting unwritten policies of the organization. Means by which this communication occurs include shared values, beliefs, and traditions that guide behavior of employees (Falkenberg & Herremans, 1995); management style, informal dialogue and social forces (Marginson, 1999); and group norms and socialization (Collier, 2005).

May et al (2004) found that an organic structure was positively related to psychological safety. Psychological safety involves a sense of being able to show and employ the self without negative consequences (Kahn, 1992). An important characteristic of organic structures and an element of safety stems from the amount of care and support employees perceive to be provided by their organization as well as their direct supervisor. In fact, Kahn (1990) found that

supportive and trusting interpersonal relationships promoted psychological safety. Employees felt safe in work environments that were characterized by openness and supportiveness.

Organic structures encourage the development of new ideas, a free flow of information, learning and sharing lessons, and informal signaling of potential problems (Kahn, 1990). In other words, when employees believe that the organization is concerned about their thoughts, ideas and communication, they are likely to respond by becoming more engaged. These arguments and evidence lead to H5:

Hypothesis #5: ***Higher levels of organic organizational structure result in higher levels of employee engagement.***

CHAPTER IV. RESEARCH METHODOLOGY

1. Sample

Data was collected using a questionnaire (See Appendix B) administered to employees. The survey instrument was developed using the electronic survey creation package, Qualtrics. I created a list of potential respondents by contacting various community chambers of commerce and recognized business leaders in the southwestern U.S. to identify companies that were known to have PMS in their organization. As a result of this process, 25 potential firms were identified based on industry and size.

These firms provide a good cross-sectional representation of companies in the region, and include a variety of industries in services and manufacturing industries. Phone calls were made to top management and human resource specialists to request permission for distribution of the survey, which resulted in 18 of the 25 firms agreeing to participate in the study. A limitation of this form of non-probability sampling is that the sample is based on the subjective judgment of the researcher, rather than random selection, which is the cornerstone of probability sampling techniques. However, non-probability sampling can be useful and efficient sampling method under certain circumstances, and in some situations, it is the only available alternative (Van der Stede, Young, & Chen, 2005).

A link to the electronic survey was created and emails were sent to the 550 potential respondents within the various industry classifications. The original email contained an explanation regarding the purpose and intent of the survey along with the electronic link to the

Internet survey (See Appendix B). Approximately two weeks following the initial email, a follow-up email was sent to serve as a reminder to those who had not completed the survey. In addition, to encourage the completion of the questionnaire, the participants were promised a summary of the results as well as assuring them that the responses were anonymous and provided with a practitioner article (See Appendix G) on PMS. (Davila, 2000).

To maximize the sample response rate and address the issue of non-response bias, a survey 'endorsement' (See Appendix D) was obtained from either a corporate officer or someone of authority in each organization, thus increasing the response rate of participants. Completed surveys were obtained from 312 of these participants, representing a response rate of 56.7%. The resulting sample size of 312 was deemed adequate for the SEM analysis method. (Morgan, 1990).

In addition, a comparison of early responders (first 20%) and late responders (last 20%) was analyzed. The idea behind this comparison is that late responders are more likely to resemble non-responders than do early responders (Moore & Tarnai, 2002). The results (See Appendix E) of this analysis indicated that there was no statistical difference between the two groups (early vs. late) indicating that the results are generally free from non-response bias.

The 7 firms that chose not to participate indicated that the survey may be too time consuming or intrusive and disrupt employees. The final sample consisted of 312 responses from a total of 18 companies. On average 17 employees were from the each firm, with minimum of 4 and maximum of 59 per firm. All firms within the sample size are located in the Mountain West Region of the United States. Table 4.1 shows the firm description, industry and location.

TABLE 4.1: Firm Description and Location

FIRM	DESCRIPTION	INDUSTRY	LOCATION	# OF EMPLOYEES SIZE	RESPONSE	RESPONSE
A	Regional waste removal company specializing in commercial and residential waste hauling	Garbage/Waste	Southern Utah and Southern Nevada	55	25	45%
B	Local waste removal company specializing in commercial waste hauling	Garbage/Waste	St. George, Utah	6	6	100%
C	Regional freight hauling company	Transportation	Southern Utah and Southern Nevada	17	16	94%
D	Manufacturer of frozen foods	Manufacturing	Southern Utah and Central Iowa	110	59	54%
E	Local physical rehabilitation center	Health	St. George, Utah	18	10	56%
F	Manufacturer of dietary supplements	Manufacturer	Southern Utah and Mexico	97	40	41%
G	Distributor of sanitary and janitorial supplies	Retail	St. George, Utah	9	5	56%
H	Consulting firm specializing in financial statement analysis	Professional	St. George, Utah	19	16	84%
I	Accounting firm providing tax and accounting services	Professional	Cedar City, Utah	18	18	100%
J	Food and beverage catering company	Food	Washington, Utah	40	17	43%
K	Road and asphalt installation and repair	Construction	Southern, Utah and Northern Arizona	9	4	44%
L	Casino management	Finance	Mesquite, Nevada	9	6	66%
M	Internet provider and website design firm	Information	St. George, Utah	37	26	70%
N	Outpatient recovery and physical therapy	Health	Provo, Utah	9	7	78%
O	Laundry and linen sales/cleaning	Retail	St. George, Utah	50	32	64%
P	Bank and financial lending institution	Finance	Cedar City, Utah	19	9	47%
Q	Accounting firm providing tax and accounting services	Professional	St. George, Utah	9	5	56%
R	Legal firm specializing in corporate and real estate law	Professional	St. George, and Cedar City, Utah	19	11	58%
			TOTAL	550	312	56.7%

The sample was also compared to the general United States business population to determine the generalizability of the results to the overall population. A chi-square test was performed for both industry ($\chi^2 = 42.235$ df = 10, $p<.001$) and firm size ($\chi^2 = 42.952$ df = 3, $p<.001$). The results indicate that the sample differs from the general population in that the sample firms are larger than the general population as a whole. With regards to industry there is a significant difference, however, when the "other" industry category is removed from the population the chi-square ($\chi^2 = 15.668$ df = 9, $p=.074$) indicates the sample is not significantly

different than the population. Based upon the table comparison of the sample and general population my sample appears to reasonably represent the overall business population in the United States with respect to industry, but may involve relatively larger firms than average. As a results the findings may be more applicable to larger firms, as my samples consists of proportionately more large firms than small firms (See Table 4.2 and Table 4.3 for results.)

TABLE 4.2: Comparison by Firm Size of Sample with General Business Population

Firm Size	US Businesses		Current Sample	
	Number	Percent	Number	Percent
Firms with 1 to 9 employees	4,661,829	79%	6	33%
Firms with 10 to 19 employees	633,141	11%	6	33%
Firms with 20 to 99 employees	526,307	9%	5	28%
Firms with 100 employees or more	129,280	2%	1	6%
Total	5,950,557	100%	18	100%

Source: http://www.census.gov/epcd/susb/latest/us/US--.HTM

TABLE 4.3: Comparison by Industry of Sample with General Business Population

Industry	US Businesses		Current Sample	
Construction	761,474	13%	1	6%
Manufacturing	281,644	5%	2	11%
Retail Trade	693,137	12%	2	11%
Transportation	169,937	3%	1	6%
Information	72,749	1%	1	6%
Finance & Insurance	253,388	4%	2	11%
Professional	771,725	13%	4	22%
Waste Management	332,190	6%	2	11%
Health Care	620,965	10%	2	11%
Food Services	476,854	8%	1	6%
Other	1,516,494	25%	0	0%
Total	5,950,557	100%	18	100%

Source: http://www.census.gov/epcd/susb/latest/us/US--.HTM

As part of the questionnaire, demographic information was also collected on the respondents, including age, gender, educational attainment, country of origin, length of time with

the current firm, length of time with current position, and industry. Table 4.4 provides the sample characteristics and demographic information of the respondents to the questionnaire.

TABLE 4.4: Summary Statistics of Sample

CATEGORIES	N
AGE	
20-30	75
31-40	70
41-50	84
50-60	59
60+	24
GENDER	
Female	125
Male	187
TENURE COMPANY	
Less than 3 months	7
3 months – 1 year	25
1 year – 3+ years	69
4 years – 6+ years	74
7 years – 10+ years	44
11+ years	93
TENURE POSITION	
Less than 3 months	13
3 months – 1 year	40
1 year – 3+ years	89
4 years – 6+ years	65
7 years – 10+ years	38
11+ years	67
EDUCATIONAL DEGREE	
High School	116
Associates	76
Bachelor	70
Master	38
Doctorate	12
CURRENT EMPLOYMENT POSITION	
Officer/Director/Manager/Supervisor	70
Professional (salaried non-mgt, business and technical)	75
Technical/Production (hourly)	78
Sales Representative	17
Administrative Support	39
Customer Service	33

2. Instrument and Analyses

This research focuses on the relationships among leadership characteristics, PMS, organizational structure and employee engagement. In order to measure the latent variables described in the model, questionnaires were developed and administered to managers and staff in various industries in Utah, Nevada and Idaho. The questionnaire obtained information about the firm's PMS, perceived leadership characteristics of the immediate supervisor, organizational structure of the organization and employee engagement. For each of the four constructs measured, established scales from the academic literature were utilized, as described in Section 3 of this chapter.

After an original version of the questionnaire was developed, it was reviewed by Dr. Shirley J. Daniel, and Dr, John P. Wendell, who are current faculty members in the School of Accountancy at University of Hawaii – Manoa. Dr. Ronald Heck of The College of Education at University of Hawaii also reviewed the questionnaire. In addition, Dean of the Udvar-Hazy School of Business at Dixie State College, William Christensen provided guidance on selection of questions. Finally, Dr. Kevin J. Barrett, Accounting Professor, Udvar-Hazy School of Business at Dixie State reviewed the survey instrument for clarity and design. A pilot test was conducted, comprised of reviewing the questions with business managers who participated in completing the questionnaire and a brief interview. The pilot test and interviews resulted in some changes to the questionnaire, and recommendations for the delivery and distribution of the instrument for easier understanding and presentation.

3. Measures

Validated quantitative scales were used to develop the survey instrument, as more fully described in section 3.1. I used the following scales to assess each construct:

Table 4.5 Analysis of Scales

Scale	Number of Items	Adapted From	Cronbach's Alpha	Factor Analysis Variance Explained
Comprehensive PMS	9	Hall (2008)	.91	71%
Transformational Leadership	20	Avolio et al. (1999)	.97	67%
Organic Structure	10	Chenhall et al. (2011)	.88	48%
Employee Engagement	17	Schaufeli, et al. (2002)	.93	50%

3.1 Comprehensive Performance Measurement Systems

This construct was measured using an established scale by Hall (2008). The scale consists of nine items that relate to the extent to which the PMS provides a variety of performance information about the important aspects of the operations. At the beginning of the section, a definition of a PMS is established. It also includes an explanatory statement indicating interest in the respondent's perception regarding the extent to which the PMS provides information about the operations of the respondent's business unit. The purpose of the definition and statement was to help ensure that the respondents were focused primarily on the role of the PMS in providing performance information.

A sample comprehensive PMS item is "The performance measurement system provides a diverse set of measures related to the key performance areas of the business unit". The items measured the extent the system provides information about the operation of the business unit. A

five-point response scale ranging from 1 (*Not at all)* to 5 (*To a great extent)* was used to measure the responses on the survey. The measure for CPMS loaded on a single factor and accounted for 71% of the variance. The factor loadings ranged from 0.81 to 0.89 and the reliability level for this study is 0.908 indicating a high level of internal consistency.

3.2 Transformational Leadership

Since the introduction and delineation, transformational and transactional leadership have been investigated in scores of research studies. Transformational leadership has proven to be the most popular (Judge & Piccolo, 2004). In fact, the transformational leadership style is complementary to the transactional style and likely to be ineffective in the total absence of a transactional relationship between leaders and subordinates (Bass & Riggio, 2006). Lowe, Kroeck, and Sivasubraminiam (1996) provided a meta-analysis of studies that used the Multifactor Leadership Questionnaire(MLQ) (Avolio, Bass, & Jung, 1999). The authors analyzed five dimensions of transformational and transactional leadership. For the transformational leadership, the confirmatory factor analysis validities in their study ranged from .71 to .60. With regards to transactional leadership, the overall validities ranged from .41 to .05. Judge and Piccolo (2004) find that transformational and transactional leadership are so highly related that it makes it difficult to separate their unique effects and it is possible the positive effects of transactional leadership are simply by-products of transformational leadership and have nothing unique to contribute.

The MLQ, which was developed by Avolio, Bass, and Jung (1999) is a scale comprised of 45 items measuring leadership. The first twenty-five questions pertain to transactional leadership.

From previous literature suggesting transformational leadership does exist in the absence of transactional leadership and work on the empirical validation of subscales measuring the full range of transactional/transformational leadership (Judge & Piccolo, 2004), I decided to focus only on the transformational characteristics of the supervisor. The final twenty items relating to construct of transformational leadership were extracted and used in this survey

A five-point frequency scale ranging from 1 (*Not at all)* to 5 *(Frequently, if not Always)* was used to measure the presence of transformational leadership. Higher scores on the MLQ scale indicate that the participant had a direct supervisor that was more transformational, as compared to lower scores that indicate the direct supervisor was less transformational. Although some research has indicated that transformational leadership has four separable dimensions (Avolio, Bass & Jung, 1999), other research has suggested that the dimensions may lack discriminant validity. (Bycio, Hackett & Allen, 1995). The scale used in this study includes 20 questions that represent the four different subscales that reflect the different dimensions of transformational leadership. A factor analysis of these items extracts only one factor that explains nearly 67% of the variance and is consistent with previous findings that suggest that the transformational dimensions may be best characterized as a single factor (Carless, 2001; Moynihan, Pandy & Wright, 2011) The factor loadings of this study range from 0.60 to 0.88 and the reliability level for this study is 0.973 indicating a high level of internal consistency.

3.3 Organic Structure

The fourth section is intended to measure the organic structure (Chenhall, Kallunki, & Silvola, 2011). The published scales established by Chenhall, et al., which consisted of 10 statements that describe the organization, were used to measure this construct. The respondent

was asked to read each statement and then indicate his/her level of agreement (Strongly Disagree to Strongly Agree), regarding their perception of the organizational culture. The mean score of the participant's response was calculated, and higher scores on the items were indicative of a more organic work environment, while lower scores represented a more mechanistic environment. The measure for organic structure loaded on a single factor and accounted for 48% of the variance. The factor loadings range from 0.57 to 0.71 and the reliability level is 0.878 indicating a high level of internal consistency for this measure.

3.4 Employee Engagement

Employee work engagement was measured using scales developed by Schaufeli, Salanova, Gonzalez-Roma, & Bakker (2002) in their research on employee work engagement. Schaufeli et al.'s theoretical and operational definition of employee work engagement based on the factorial validity of the Ultrecht Work Engagement Scale (UWES) scale as established by Schaufeli and his colleagues was used. Support for the factorial validity of the UWES scale as being predictive in measuring employee work engagement was also established in subsequent research (Schaufeli, Martinez, Marques Pinto, Salanova, & Bakker, 2002).

The UWES scale is comprised of 17 items at the overall level. A five-point scale ranging from 1 (*Never)* to 5 (*Always)* was used to measure the UWES. A mean score of the participant's responses was calculated, and higher scores on the items were indicative of engaged employees, and lower scores of lesser engaged employees. The measure for employee engagement loaded on a single factor and accounted for 50% of the variance. The factor loadings range from 0.60 to 0.80 and the reliability level is 0.934 indicating a high level of internal consistency.

3.5 Test of Measures

To test the hypothesized model using SEM, I first conducted a series of principal component analysis to determine the items to include from the scales to comprise the constructs under investigation. Principal component analysis seeks to describe the variation of a set of multivariate data in terms of a set of uncorrelated linear combination of the observed variables, where each consecutive linear combination is derived so as to explain as much as possible of the variation of the original data, while being uncorrelated with the other linear combinations. The analysis results (which are reported later) indicated that all measured variables loaded on factors that are consistent with the model construct. Therefore, all items in each scale were retained for the analysis.

I assess the composite reliability of each of the constructs using the composite reliability index and Cronbach's alpha. These measures reflect the internal consistency of the indicators measuring the given construct. I also compute estimates of the variance extracted (Fornell & Larker, 1981) which measures the amount of variance that is captured by an underlying factor in relation to the amount of variance due to measurement error. Estimates of 0.50 or larger are desirable, *albeit* that lower values are acceptable in fields of inquiry that are still not well understood (Abernethy, Bouwens, & van Lent, 2010). I use this statistic to assess the discriminant validity of the constructs.

Table 4.6 includes descriptive statistics for the constructs used in the SEM model. In addition, presented below in Table 4.7 are reliability statistics and a correlation table with AVE statistics on the diagonal.

Table 4.6 Descriptive Statistics for Constructs used in SEM Model (Figure 5.3)

Construct	Mean	Standard Deviation	Cronbach Alpha
Comprehensive Performance Measurement System	2.93	1.318	0.908
Transformational Leadership Style	3.40	1.063	0.973
Organic Structure	3.42	1.021	0.878
Employee Engagement	3.53	0.954	0.934

Table 4.7 Reliability Statistics and Correlation Table

	Cronbach Alpha	Composite Reliability	AVE	Correlations			
				1	2	3	4
1.CPMS	0.908	0.937	0.708	0.841			
2.Transformational Leadership	0.973	0.984	0.665	0.489***	0.815		
3.Organic Organizational Structure	0.878	0.889	0.478	0.155***	0.201***	0.691	
4.Employee Engagement	0.934	0.935	0.498	0.300***	0.509***	0.209***	0.706

*****, **, * Means are significantly different at p-value <0.01, 0.05, 0.010**

NOTE: Diagonal elements are the square root of the AVE statistics. The square root of the AVE is used to evaluate the discriminant validity of the latent variables. Discriminant validity is said to exist if the diagonal entries are greater than the corresponding off diagonal entries. The off diagonal entries are the correlations between the variables calculated.

3.6 Within and between Group Differences

As noted above, the data obtained (n=312) was from 18 companies. I analyzed the data to determine if the variation was due to interaction between the groups/firms or if the variation was due to differences within the individuals within the groups/firms. The results found on Table 4.8, indicate that more variation is found within the individual than between the groups/firms. For CPMS, the variance within organizations is approximately 0.85 (85%) and the variance between organizations is about 0.15 (15%). While some variance is due to

perceived differences in these measures between the organizations in the study, the majority of the variance in the performance measures is at the individual respondent level.

Similarly, the leadership construct yielded variance within the organization of 0.86 (86%) and the variance between organizations is about 0.14 (14%). The final two constructs, organic structure and employee engagement, resulted in non-significant findings, meaning that virtually all the variation in these constructs was between individuals and not between firms. Thus the use of the individual employee as the level of analysis is appropriate

Table 4.8 Variance in Constructs With-in and Between Organizations

CPMS

Parameter		Estimate	Std. Error	Wald Z	Sig.
Residual		.849256	.069832	12.161	.000
Intercept	Variance	.145127	.070075	2.071	.038

Leadership

Parameter		Estimate	Std. Error	Wald Z	Sig.
Residual		.866008	.071538	12.106	.000
Intercept	Variance	.153357	.079724	1.924	.054

Organic Culture

Parameter		Estimate	Std. Error	Wald Z	Sig.
Residual		.958415	.078385	12.227	.000
Intercept	Variance	.042514	.032171	1.322	.186

Employee Engagement

Parameter		Estimate	Std. Error	Wald Z	Sig.
Residual		.976097	.082534	11.827	.000
Intercept	Variance	.030427	.047253	.644	.520

CHAPTER V. RESULTS

This study investigates the antecedents of employee engagement and measures the direct effect of three proposed constructs, (1) transformational leadership, (2) comprehensive performance measurement systems, and (3) organic structure. The research also examines whether the relationship between transformational leaders and employee engagement is indirect through comprehensive performance measurement systems as well as examining whether the relationship between organic structure and employee engagement is indirect through comprehensive performance measurement systems. The analysis calculates both the standardized direct effects and standardized indirect effects of the structural paths in the diagram.

1. Structural Equation Modeling

The AMOS 5.0 software program is used, with maximum likelihood estimation technique, to estimate the base model. Structural Equation Modeling (SEM) is incorporated to test the hypotheses in this study as SEM is an extension of the general linear model that enables researchers to test a hybrid model which is a mixture of path analysis and confirmatory factor analysis. The SEM method can examine a series of both dependence and independence relationships simultaneously. SEM is also particularly useful when examining latent constructs which are abstract psychological variables such as attitudes or perceptions that are commonly measured using a combination of manifest variables. By explicitly modeling measurement error, SEM helps the user to derive unbiased estimates for the relationships between latent constructs.

In order to depict the model under investigation, a four factor non-recursive model was selected. SEM is the appropriate technique to use because the study delves into relationships among latent variables and assesses whether the proposed model is satisfactory (Kline, 1998). Maximum likelihood method with mean estimation technique was employed as it is the most widely used fitting function for structural equation modeling (Bollen, 1989).

Each employee was given a separate link to the online survey to require a unique response and ensure that the data are independent. Tests of compliance with assumptions of multivariate analysis indicate that the data are normal and homoscedastic, and the residuals are randomly distributed.

2. Validity

To establish the construct validity, a series of empirical tests were carried out to assess validity. First, in terms of convergent validity, principal component analysis was conducted with a first-order model, and the principal components of the scales retained accounted for the maximal amount of variance of observed variables. Principal component analysis seeks to describe the variation of a set of multivariate data in terms of a set of uncorrelated linear combination of the observed variables, where each consecutive linear combination is derived so as to explain as much as possible of the variation of the original data, while being uncorrelated with the other linear combinations. The variables included in the constructs in this study were determined to comprise the first principal component in each construct.

Each latent variable was assigned a scale by setting the loading of a particular item to 1.0 since the latent variables are not directly measured (Kline, 1998). In Table 5.1 & 5.2 the results

of the measurement model are reported. The confirmatory factor analysis yields standardized loadings greater than 0.60, all of which are significant (p-value <.001), which provides evidence of convergent validity (Hair, Anderson, Tatham, & Black, 1995).

TABLE 5.1 Loadings for Items used in measuring Constructs (CPMS & Leadership)

	Unstandardized Loading	Standardized Loading
COMPREHENSIVE PERFORMANCE MEASUREMENT SYSTEM		
CPMS1	1.000***	0.853***
CPMS2	1.012***	0.815***
CPMS3	0.971***	0.832***
CPMS4	1.027***	0.875***
CPMS5	1.045***	0.896***
CPMS6	1.022***	0.831***
CPMS7	1.068***	0.883***
CPMS8	1.024***	0.824***
CPMS9	1.062***	0.896***
LEADERSHIP		
LEAD1	1.000***	0.670***
LEAD2	0.996***	0.607***
LEAD3	1.232***	0.790***
LEAD4	1.350***	0.804***
LEAD5	1.519***	0.851***
LEAD6	1.206***	0.802***
LEAD7	1.408***	0.843***
LEAD8	1.281***	0.774***
LEAD9	1.426***	0.854***
LEAD10	1.250***	0.791***
LEAD11	1.520***	0.907***
LEAD12	1.336***	0.818***
LEAD13	1.150***	0.731***
LEAD14	1.445***	0.874***
LEAD15	1.205***	0.724***
LEAD16	1.303***	0.839***
LEAD17	1.476***	0.884***
LEAD18	1.213***	0.813***
LEAD19	1.312***	0.864***
LEAD20	1.279***	0.850***

TABLE 5.2 Loadings for Items used in measuring Constructs (Organic & Engagement)

	Unstandardized Loading	Standardized Loading
ORGANIC STRUCTURE		
ORG1	1.000***	0.606***
ORG2	0.920***	0.577***
ORG3	1.187***	0.589***
ORG4	1.035***	0.714***
ORG5	1.050***	0.601***
ORG6	1.056***	0.683***
ORG7	1.222***	0.643***
ORG8	1.153***	0.651***
ORG9	0.874***	0.742***
ORG10	1.147***	0.714***
EMPLOYEE ENGAGEMENT		
ENGAGE1	1.000***	0.801***
ENGAGE2	0.891***	0.785***
ENGAGE3	0.425***	0.685***
ENGAGE4	0.501***	0.601***
ENGAGE5	0.567***	0.670***
ENGAGE6	0.884***	0.769***
ENGAGE7	0.817***	0.640***
ENGAGE8	1.133***	0.843***
ENGAGE9	1.196***	0.880***
ENGAGE10	0.810***	0.715***
ENGAGE11	1.063***	0.815***
ENGAGE12	0.808***	0.617***
ENGAGE13	0.883***	0.758***
ENGAGE14	0.570***	0.691***
ENGAGE15	0.586***	0.640***
ENGAGE16	0.809***	0.669***
ENGAGE17	0.750***	0.637***

The construct validity was evaluated using the following fit measures: the χ^2/df (chi-square to degrees of freedom ratio), the CFI (Comparative Fit Index) and the RMSEA (Root Mean Square Error of Approximation). The χ^2/df less than 3 (Kline, 1998), the CFI close to 1 (Bentler, 1990), and the RMSEA less than 0.08 (Browne & Cudeck, 1993) indicate good model fit. The structural model based on the total sample size of 312 questionnaires shows excellent fit measures as revealed in the following: χ^2/df :2.23, CFI:0.951, and RMSEA:0.055. In Table 5.3 the results of the structural model are reported.

TABLE 5.3: Model Fit Statistics and Path Coefficients for SEM (Figure 5.3)

Paths to:			
Independent Variable	**Dependent Variable**	**Direction**	**Coefficient**
CPMS	ENGAGEMENT	+	0.115**
ORGANIC	CPMS	+	0.059
LEADERSHIP	CPMS	+	0.507***
LEADERSHIP	ENGAGE	+	0.547***
ORGANIC	ENGAGE	+	0.074
		Model Fit	
		Chi-square	402.287
		p-value	0.0000
		DF	180
		CMINDF	2.235
		RMSEA	0.055
		CFI	0.951
		GFI	0.949

*** Significant at p-value < 0.01
** Significant at p-value < 0.05
* Significant at p-value < 0.10

Every construct exhibits acceptable model fit, and all factor loadings are statistically significant. In sum, the standard measures of model fit support the hypothesis that the relationships suggested by the measurement and structural equation model are acceptable.

In general, there is a positive relationship between employee perceptions of the comprehensiveness of the PMS and their own level of engagement on the job. Leadership is also positively and significantly associated with the employee's level of engagement on the job, and based on the coefficient has a substantially stronger direct effect on engagement than the

comprehensive PMS relationship. The organic structure construct was not significantly related to either the PMS or employee engagement.

3. Demographic Differences among Survey Respondents

The demographic characteristics, gender, age, years in company, and educational attainment were examined. In order to determine whether there were differences in participant responses, I conducted a series of t-tests and analysis of variance. The results of these tests did not yield significant findings. I concluded that these demographics measured do not affect the significance levels of the relationships between the constructs.

4. Alternative Model Testing

The primary purpose of this study is to explore the relationships of three latent constructs, CPMS, Transformational Leadership and Organic Structure with Employee Engagement. As Hoyle and Painter (1995) noted, in practice researchers may not have one conceptual model in mind, but rather a series of competing models. Statisticians proficient in SEM have also commented that researchers often fail to test alternatives to proposed models (Boomsma, 2000; Steiger, 2001). Testing the adequacy of the other proposed models in sequence is known as an alternative models approach[3].

[3] A current issue of potential concern in theory-based management accounting research is the extent to which endogeneity limits the validity of empirical testing of models. In this particular model the problem of simultaneity

To perform this alternative model testing, I present the proposed model as well as another theoretically plausible model which represents competing hypotheses. I utilized the data (n=312) and analyze model fit to determine the most appropriate model (Cudeck & Henley, 1991) in terms of usefulness, theoretical support, and model fit to try to determine the best model that approximates reality in as parsimonious a fashion as possible.

4.1 Model 1: Transformational leadership and Organic Structure on CPMS

The original model proposes that the level of comprehensiveness of a performance measurement system is influenced by the two factors -- leadership and organizational culture. In other words, the system is influenced by the organizational contextual factors that surround it. This model is supported by Henri (2006), who finds that more organic firms tend to further integrate PMS in their organizational processes and use more performance indicators than do mechanistic firms. In addition, a study conducted by Martinez (2005) reveals that performance measurement systems have a positive effect on things such as focusing people's attention on what is important to the company, aligning operational performance with strategic objectives, improving people's satisfaction and aligning people's behaviors toward continuous improvements – all important aspects of transformational leadership. This SEM Model (**Model 1**) is presented below.

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contributes to the concern of endogeneity. Simultaneity happens when two variables simultaneously affect each other. In this case the relationship between Leadership and comprehensive PMS, as well as organic structures and comprehensive PMS, can be considered simultaneous causality. The standard expectation is that transformational leaders will utilize a more comprehensive PMS, and more organic organizational culture will increase the comprehensive nature of the PMS. However, comprehensive PMS may also influence the level of transformational leadership characteristics manifest in supervisors as well as extenuate the organic environment in the organizations. This research relied on proven theory, qualitative interviews and analyzing other proposed alternative models to settle on the current model under investigation. Interviews and analysis of alternative models are discussed later in the research.

MODEL 1

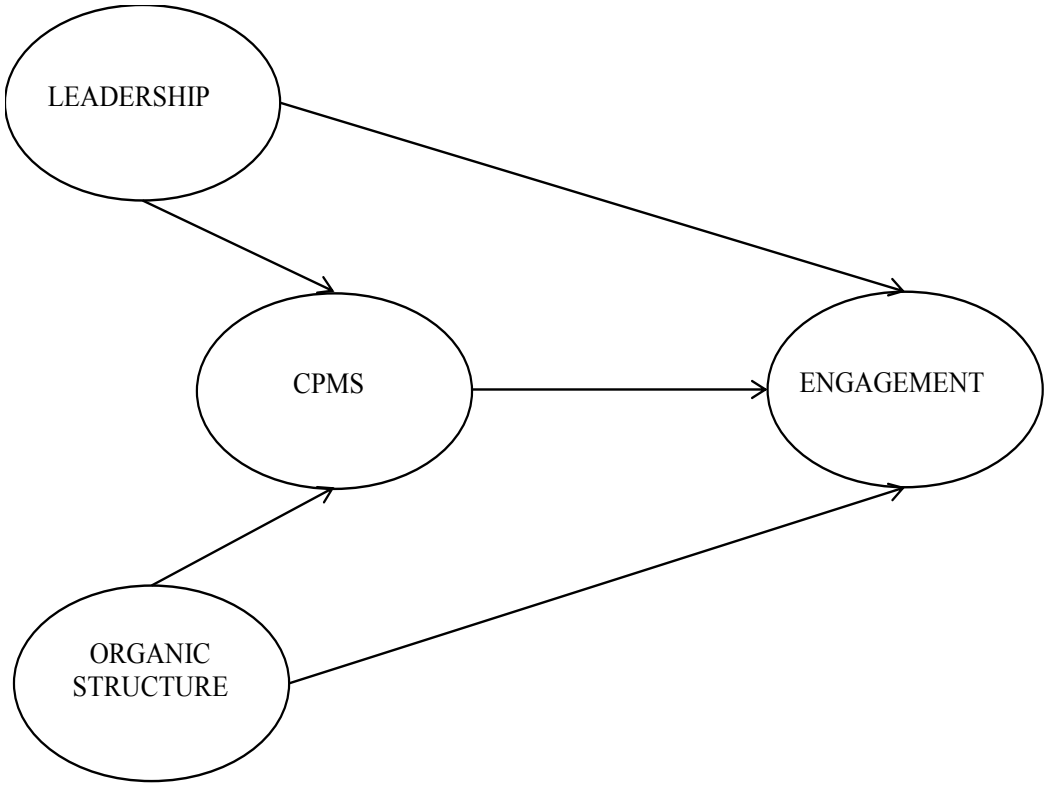


Figure 5.1 Model 1 Hypothesized Direction (Proposed Model)

4.2 Model 2: CPMS on Transformational leadership and Organic structure

The second and competing model proposes that more comprehensive PMS causes a heightened manifestation of transformational leadership characteristics and organic organizational structure. Wright and Pandey (2007), find that use of more comprehensive

performance measures are associated with significant increases in the use of transformational leadership behaviors. This alternative model (**Model 2**) is presented below.

MODEL 2

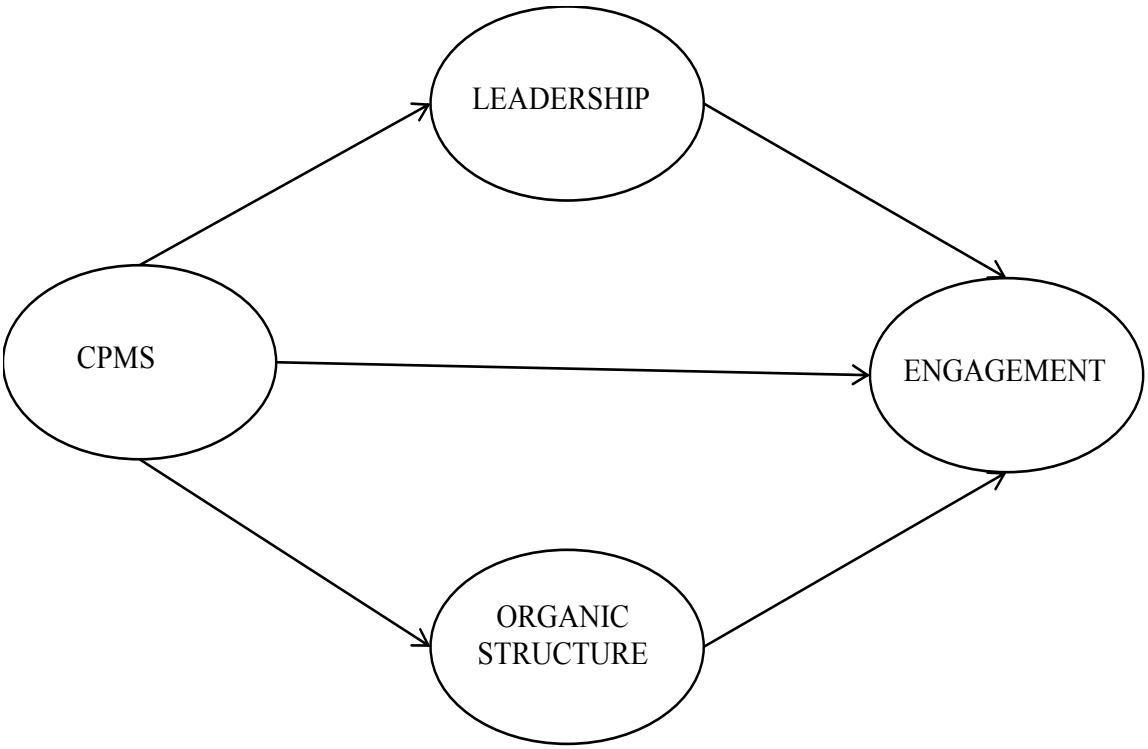


Figure 5.2 Model 2 Hypothesized Direction (Alternative Model)

4.3 Results of Alternative Model Testing

The proposed models define the relationships between the underlying constructs in this study. These models were tested against the entire sample of participants. The structural model

based on the total sample size of 312 questionnaires shows good fit measures on both proposed models (Table 5.4 & 5.5). However, Model 1 has a better model fit and indicates that the model is favorably supported and mirrored by the data. In addition the change in explained variance of employee engagement is slightly greater (27.5%) for the originally proposed model 1 compared to the alternative model 2 (26.4%).

Table 5.4 Model Fit Statistics and Path Coefficients for Model 1

Paths to:			
Independent Variable	**Dependent Variable**	**Direction**	**Coefficient**
CPMS	ENGAGE	+	0.059
LEADERSHIP	ENGAGE	+	0.459***
ORGANIC	ENGAGE	+	0.107**
ORGANIC	CPMS	+	0.058
LEADERSHIP	CPMS	+	0.477***
Overall r^2	0.275	**Model Fit**	
		Chi-square	13.178
		p-value	0.0000
		DF	5
		RMSEA	0.086
		CFI	0.952
		TFI	0.892

*** Significant at p-value < 0.01
** Significant at p-value < 0.05
* Significant at p-value < 0.10

Table 5.5 Model Fit Statistics and Path Coefficients for Model 2

Paths to:			
Independent Variable	**Dependent Variable**	**Direction**	**Coefficient**
CPMS	ENGAGE	+	0.059
LEADERSHIP	ENGAGE	+	0.462***
ORGANIC	ENGAGE	+	0.108**
CPMS	LEADERSHIP	+	0.489***
CPMS	ORGANIC	+	0.155***
Overall r^2	0.264	**Model Fit**	
		Chi-square	19.807
		p-value	0.0000
		DF	5
		RMSEA	0.057
		CFI	0.927
		TFI	0.854

*** Significant at p-value < 0.01
** Significant at p-value < 0.05
* Significant at p-value < 0.10

The question of causality is often problematic in empirical studies such as this one, and the only way to actually test which model direction best fits reality may be through a longitudinal study. This calls for future research which is not possible within the scope of this dissertation, but may provide interesting insights at a later time. Model 1 has more theoretical support in the literature, and we assume that in most organizations that the leader and organizational structure will precede the development of CPMS. Therefore, after considering several indices, Model 1 model-fit data was deemed acceptable and considered superior compared to the competing alternative model. Thus, this model was retained as the most tenable, and I will proceed with interpreting the individual parameters.

5. Results of Accepted Model Hypothesis Testing

Figure 5.3 report the path coefficients for each of the hypotheses of interest and provide evidence consistent with the proposed model. First, there is a significant positive linkage between comprehensive PMS and employee engagement ($\beta = 0.115$, $p < 0.050$). As expected, the direction is consistent with H1, and supports this direct effect. This indicates that a more comprehensive PMS is related to a higher level of engagement among the employees and is consistent with findings by Hall (2008) which indicate that a more comprehensive PMS positively influences managers' cognition and motivation.

Analyzing the transformational leadership relationship with the comprehensive nature of the PMS (H2), we see a positive and significant linkage ($\beta = 0.507$, $p < 0.001$). This relationship supports existing research and shows the important relationship

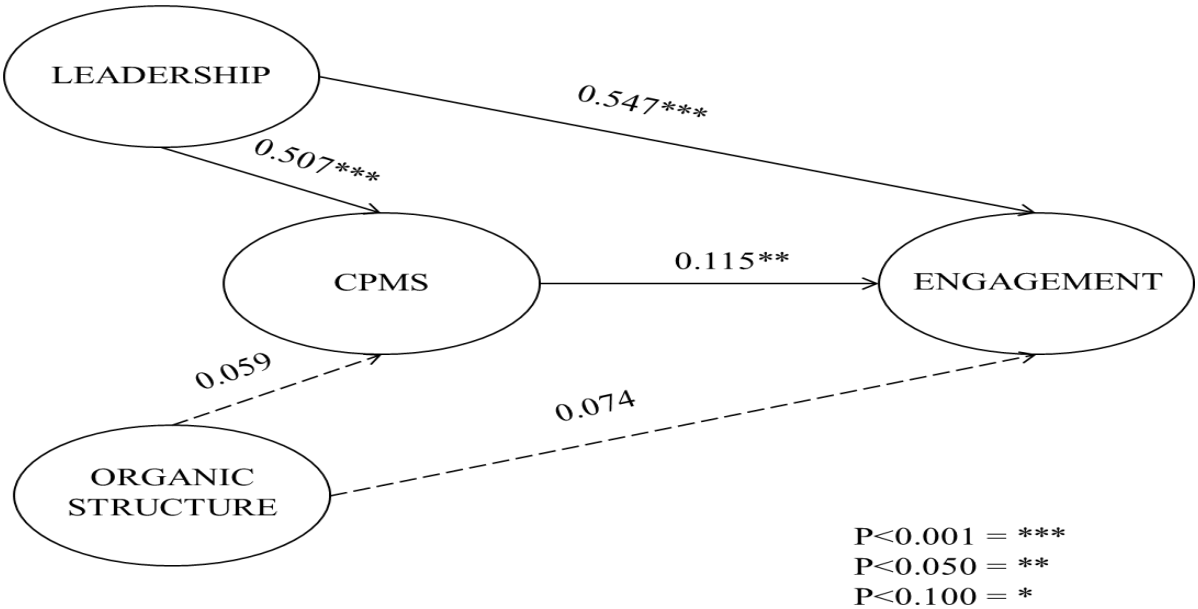


Figure 5.3 Structural Equation Modeling Results for General Model

between organizational processes and the style of leadership. More transformational type leaders are strongly correlated with a more comprehensive performance measurement system. Similarly, for the leadership path and employee engagement (H4), there is a positive and significant (β = 0.547, $p < 0.001$) relationship between leadership style and employee engagement. This positive path coefficient shows that the more transformational leadership attributes displayed by the supervisor, the higher level of engagement an employee will display.

Although the organic structure path and employee engagement (H5) displays a positive path coefficient (β = 0.074, $p > 0.10$) the linkage is not significant. This research hypothesized that the more collaboration, and informal access to managers within organizations, the more likely an employee is to become engaged. This hypothesis is not substantiated with statistical significance and as such conclusions cannot be made. Similarly, when analyzing the path from organic to comprehensive PMS (H3), the results display a positive relationship but again are not supported with statistical significance (β = 0.059, $p > 0.10$).

5.1 Summary of Results

A summary of results is presented in Table 5.6. The results are discussed above.

Table 5.6 Summary of Results of Hypothesis Testing

Summarized Hypothesis		Direction	Result
H1	More comprehensive PMS results in higher levels of employee engagement	+	Supported
H2	Positive relationship between transformational leadership and the comprehensivenes of PMS	+	Supported
H3	Positive relationship between more organic organizational characteristics and the comprehensiveness of PMS	+	Not Supported
H4	More transformational leadership results in higher levels of employee engagement	+	Supported
H5	Higher levels of organic organizational characteristics results in higher levels of employee engagement	+	Not Supported

6. Sensitivity Analysis

In order to determine how sensitive this model is to changes in the value of the parameters of the model and changes to the structure of the model, I conducted sensitivity analysis. If results of an SEM model are different based on grouping of demographics, characteristics, or parameters, SEM can be utilized to test the invariance of a conceptual model across these groups of respondents. Once the invariance is established, investigation about the difference in results for various groups can be performed. For example, the model can be tested across differing groups to determine the impact of various demographic or contextual factors (i.e. educational attainment, job task industry, business size, national culture) on the results using SEM software.

This analysis was intended to strengthen the confidence in the model by studying uncertainties that are often associated with the parameters in the model. After the general model

was developed and the theoretical framework was proven to be robust and fitting, I conducted additional within and between group tests to exam variability across the organizations. In addition the sample was separated into groups based on the nature of the participant's job task: technical production/hourly and supervisory/management/professional, and on the participant's level of education: high school and post-high school. Viewing this model under theses lens helps to establish the validity of the model and make the model sufficiently useful and practical.

6.1. Within and Between Group Testing

The survey data was obtained from 312 respondents across 18 organizations. I tested possible multi-level effects by creating factor scores and examining their variability across the organizations. The results indicate there is a relative "collective" or between-group component for leadership that is 14%. There is also a between-group component for CPMS which is 15%. The other two constructs were small and not significant. These multi-level analysis supports the prior results indicated that aggregating to the group level for analysis is not necessary and individual analysis may be adequate.

I then examined the data as a multilevel model, (Figure 5.3 & 5.4) which adjusts estimates for possible clustering effects of individuals within groups. I find similar results for the multi-level model as the proposed general model. The multi-level structural model based on the total sample size of 312 questionnaires shows excellent fit measures as revealed in the following: χ^2 / df :1.607, CFI:0.965, and RMSEA:0.056.

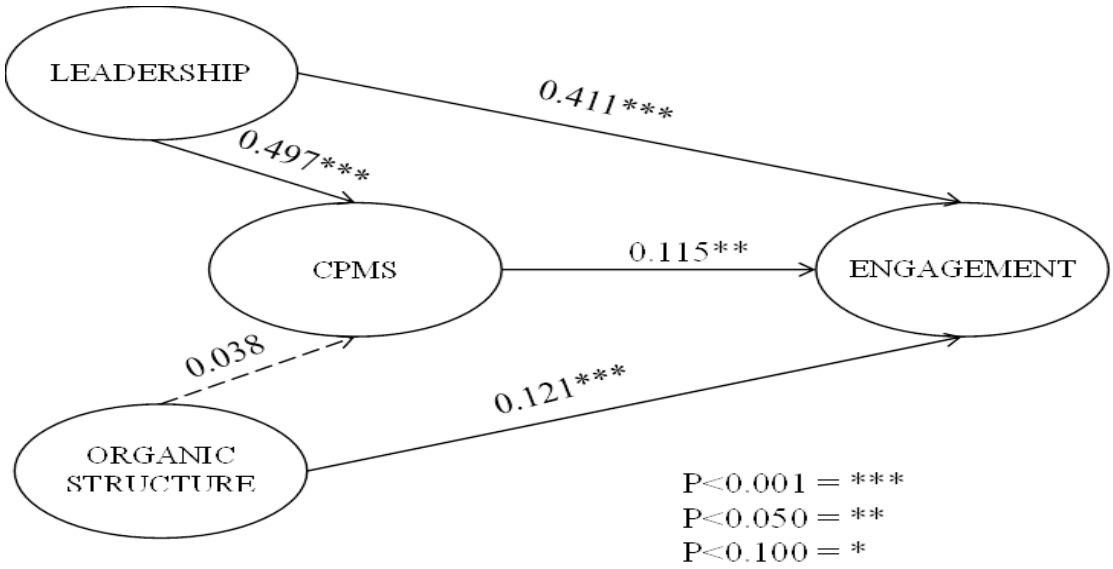


Figure 5.4 Within Group SEM Path Coeffecients

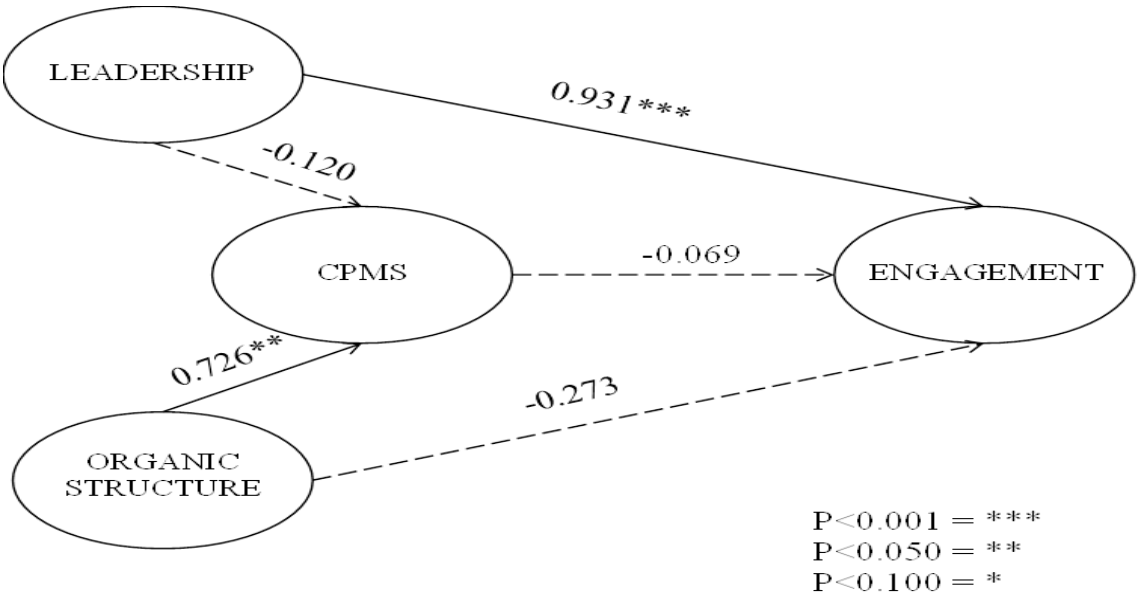


Figure 5.5 Between Group SEM Path Coeffecients

6.2 Job Task Complexity

Conventionally, MCS are concerned with control of past output, performance outcome and therefore is perceived as a passive tool to assist management in decision making (Ouchi, 1977; Simons, 1995). Targets set under these types of diagnostic MCS typically remain static and seldom changed or modified. The interactive MCS, or more comprehensive PMS, use involves continual interactions to help resolve task uncertainty. In addition, a more interactive approach is believed to have a positive association with the outcome of organizational learning (Simons, 2000) and shapes new strategies, new ideas and possibilities, and promotes curiosity and knowledge seeking behavior (Dent, 1991).

Complexity of the task or job tends to increase as we move away from the traditional technical production style of work. The increasing complexity of the task leads to multiple ways to measure the goals of these tasks. There are often different perspectives among the employees about which choices to make and which choices are correct. The PMS that is more comprehensive will be viewed to be more adapted to a model of governance that seeks to incorporate the rights and views of the employees. For employees that have more complex job task, this is a vital part of increasing their engagement.

Drawing from the theoretical literature (Feltham & Xie, 1994), it is reasonable to ask whether the complexity and observability of the employee's work effort and results might influence the importance/impact of the performance management system on his/her level of engagement. Specifically, one might posit that for technical production/hourly employees, there is obvious and immediate feedback for them about their performance imbedded in their job tasks, making the PMS less of a motivating factor. On the other hand, supervisory/managerial/

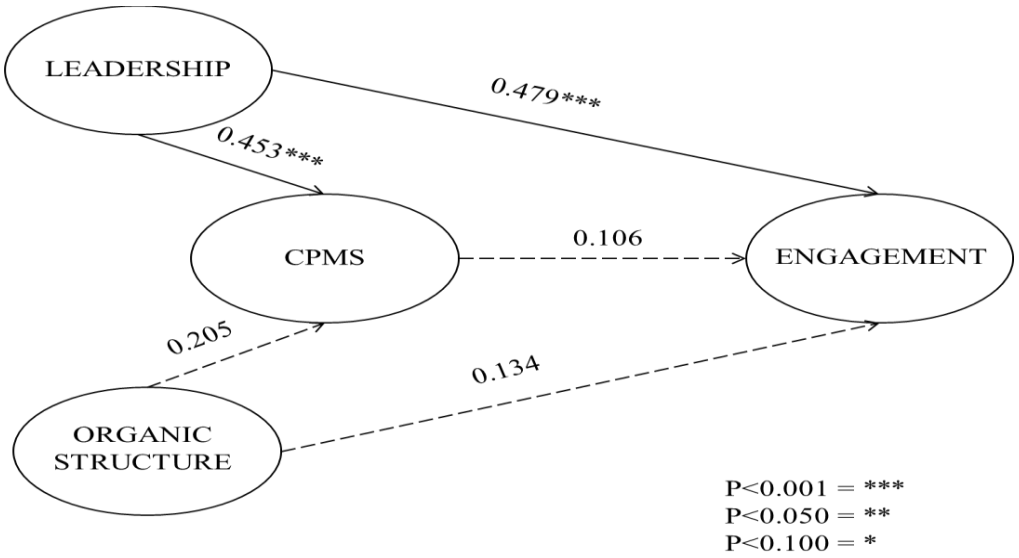
professional personnel are more likely to be engaged in job tasks and responsibilities with little or no short term observable results and feedback, and therefore might be more influenced or motivated by a comprehensive PMS to guide their efforts. This evidence leads us to hypothesize that job complexity will predict the influence of comprehensive PMS on employee engagement.

Hypothesis #6: ***The importance of leadership characteristics, the organic structure and the performance measurement system in influencing employee engagement will differ depending on job task complexity.***

6.2.1 Job Task Complexity Results

The results of the analysis which compares (1) technical production/hourly and (2) supervisory/management/professional respondents are shown in Figure 5.2. The results indicate that job task produced different results within the general model. For participants with supervisory/management/ professional job characteristics, there is a significant linkage between CPMS and employee engagement ($\beta = 0.133$, $p < 0.10$). The path coefficient is consistent with the overall general model. However, the model for participants with job characteristics that is

Technical Production/Hourly



Supervisory/Management/Professional

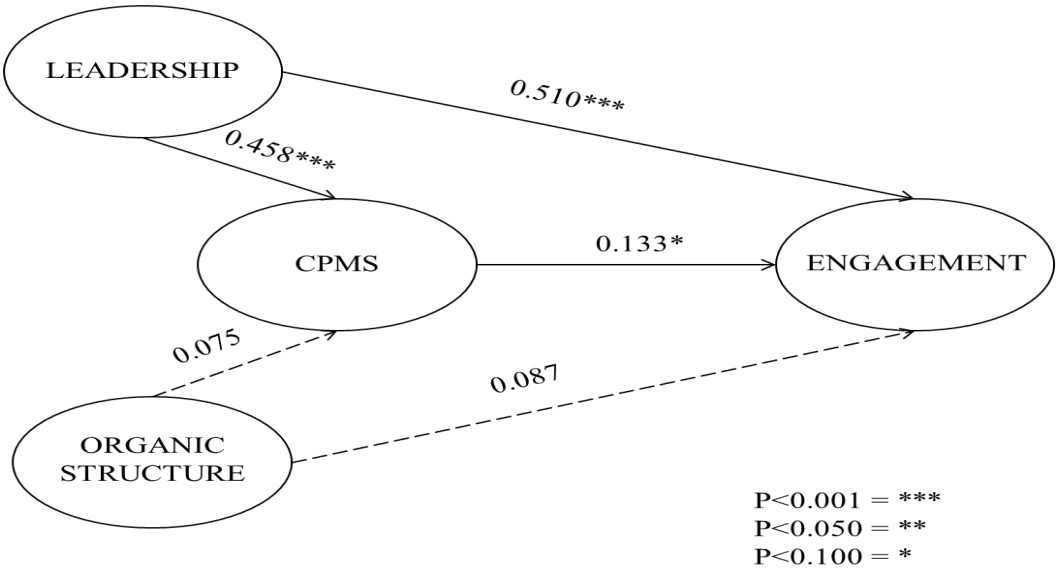


Figure 5.6 Structural Equation Modeling – Multi-Group Analysis: Job Complexity

technical production and hourly, does not contain a significant linkage between comprehensive PMS and engagement ($\beta = 0.106$, $p>0.10$). These results indicate that the impact of comprehensive PMS on employee engagement may only be significant for certain job types. This is assumed that tasks that are simple enough that a small number of measures could definitely represent performance, whereas more complex job task require a larger number of more comprehensive performance measures to represent performance. In conclusion, the results overall support the idea that jobs with higher task complexity perceive a more comprehensive performance measurement system to be important to their engagement.

Interestingly, in both groups there is a strong relationship between transformational leadership characteristics and overall engagement of the employees. The relationship between leadership characteristics and the comprehensive PMS also is significant for both groups.

6.3 Educational Attainment

Literature suggests that more educated individuals have more highly developed cognitive structures, information in memory, and rules for using information, which allow more effective problem structuring and successful problem solving(Sujan, Sujan, & Bettman, 1988). Perkins and Rao (1990) find more experienced and educated managers consider more kinds of information useful. By nature, more comprehensive PMS include broad array of information and performance metrics that may be perceived as more useful for more educated individuals.

In addition, organic work cultures are often perceived as flat with little or no respect for hierarchy. Research has indicated that individuals with less education appreciate equal respect shown to all, through an informal environment, and may want to be treated with the equal respect

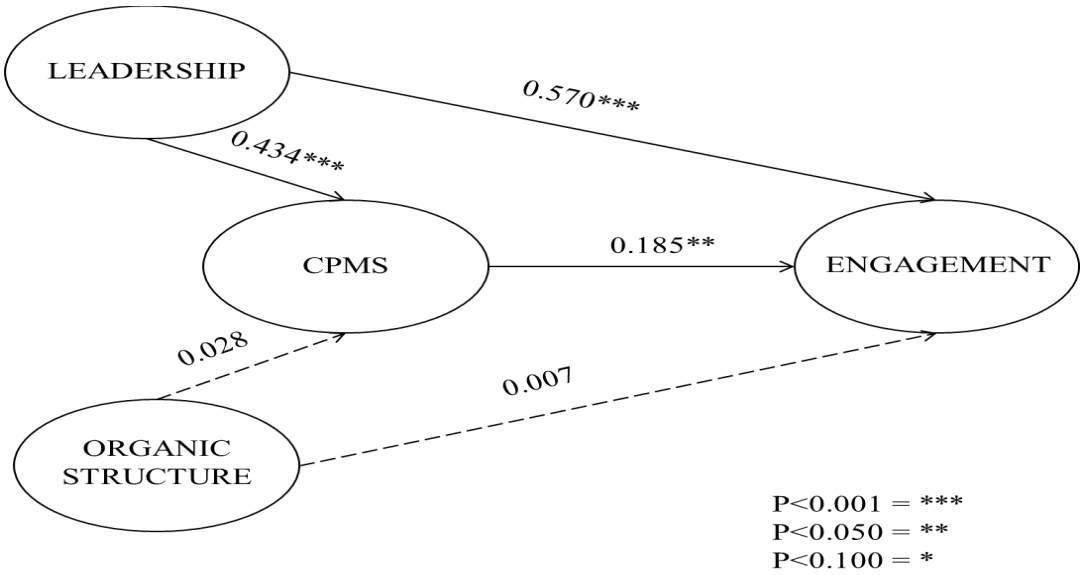
shown to someone at a higher level of education in the hierarchy (Deal, 2007). In essence, an organic culture provides the opportunity for all employees to feel wanted and needed. Hence I hypothesize the following:

Hypothesis #7: ***The importance of leadership characteristics, the organic structure and the performance measurement system in influencing employee engagement will differ depending on employee education level.***

6.3.1 Educational Attainment Results

This additional analysis was conducted for respondents with high school education versus those respondents with post high school education. The results in Figure 5.3 indicate that level of educational attainment does produce different results within the general model.

Post High School Education



High School Education

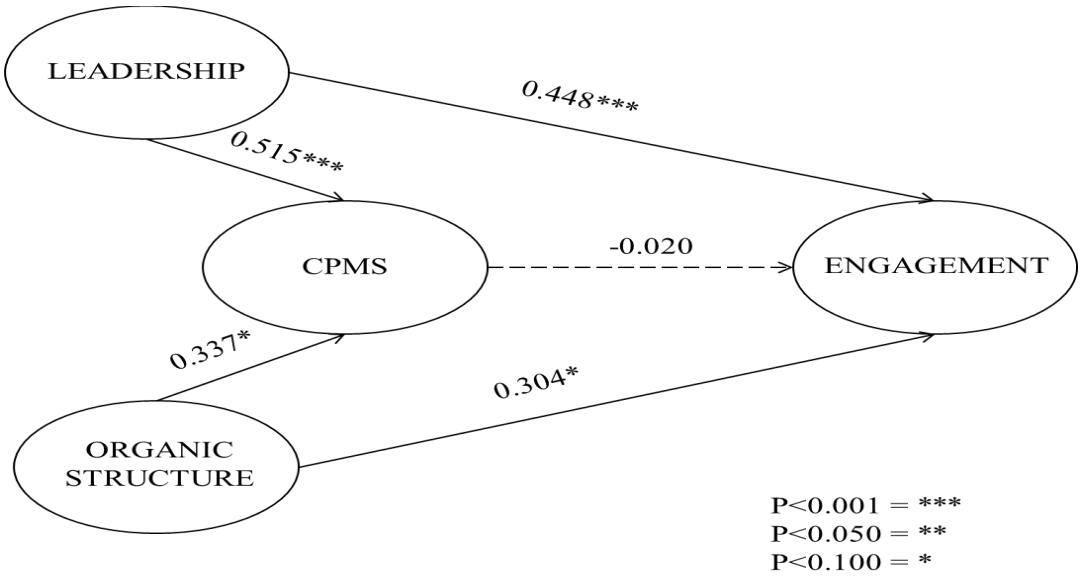


Figure 5.7 Structural Equation Modeling – Multi-Group Analysis: Educational Attainment

The results show that there is a positive correlation between comprehensive performance measurement systems and employee engagement for those with a post high school education. The path coefficient displays a significant linkage between CPMS and employee engagement ($\beta = 0.185$, $p < 0.05$). The path coefficient is much stronger and more significant than the overall general model. Conversely, the group with only a high school education displays a path coefficient between CPMS and engagement that is not significant ($\beta = -0.020$, $p > 0.10$).

The second and even more interesting finding when comparing the two educational groups involves the differences between the paths of organic structure to engagement in each group. The group with only high school education displays a significant link, different from the overall general model, from organic structure to engagement ($\beta = 0.304$, $p < 0.05$). Whereas the group with post high school education produces a weaker path coefficient that is not significant ($\beta = 0.007$, $p > 0.10$). These results individually yield some interesting insight that can be quite valuable to management and organizational behavior theorists which are discussed further in the next section.

These results indicate that employees with higher levels education respond similarly to leadership characteristics, but differently to the performance measurement systems and the organic structure of the organization. A possible explanation for these results could be that employees with lower levels of education might be more engaged in a work environment that employs fewer mechanistic controls and a higher level of organic controls and structures. On the other hand, employees with higher levels of education could be assumed to be higher achievers, and therefore might be more strongly motivated by a more comprehensive PMS.

6.4 Direct and Indirect Analysis

Although not formally hypothesized, the results of indirect effects of comprehensive PMS on leadership and organic structure were analyzed. In order to test for the intervening effects of comprehensive PMS, it is imperative to calculate the direct and indirect effects noted above. The standardized direct effects, standardized indirect effects, as well as the standardized total effects of the various relationships are gathered from the SEM output.

The results indicate that, first, transformational leadership is positively and significantly related to employee engagement as indicated by the total standardized effect of 0.605 ($p<0.050$). Of this total effect, the direct effect is 0.547 and the indirect effect through comprehensive performance measurement systems is 0.058 (See Table 5.7). These results support the fact that comprehensive performance measurements systems increase the total effect that transformational leaders have on overall employee engagement. However, evidence does not support a statistical significance on the direct or indirect effects of organic structure through comprehensive PMS and employee engagement. As such, conclusions cannot be drawn on this particular area.

TABLE 5.7 Direct/Indirect Effects for SEM (Figure 5.3)

	Leadership	CPMS	Organic
Direct			
CPMS	.507***		.059
ENGAGE	.547***	.115**	.074
Indirect			
CPMS	.058*		.004
ENGAGE			
Total			
CPMS	.507***		.059
ENGAGE	.605*	.115**	.078

*** Significant at p-value < 0.01
** Significant at p-value < 0.05
* Significant at p-value < 0.10

CHAPTER VI. DISCUSSION

This chapter includes major conclusions of the research, implications for practice and possibilities for future research. Anthony Hopwood's (1974) seminal work contributed significantly to the advancement of human behavior regarding accounting research. This research adds to the scant literature which explores the relationship between comprehensive PMS, and ignores organizational background and delves into how systems influence individual behavior.

The study formulates two main research questions. First, what effect does the level of comprehensiveness of PMS have on employee engagement within the organization? Second, what effects do the contextual factors, such as leadership and organizational structure, have on employee engagement? The discussion of key findings regarding these two questions is organized around the hypotheses put forth earlier in this manuscript.

1. Interpretation of Key Findings

Before discussing each hypothesis, it is important to address briefly the relationship between the overall model of leadership, organic structure, comprehensive PMS and employee engagement. Adopting the findings of previous research, the model was designed to show the direct relationship between leadership and engagement, with indirect relationship through the construct of comprehensive performance measurement systems. In other words, leaders affect engagement through the demonstration of genuine caring for employees, as well as their focus on

measurement processes that help motivate and inspire employees. In addition, the organic structure creates an environment in which there is a direct relationship with engagement and an indirect relationship through the performance measurement system process adapted to that environment.

Consistent with H1, the results indicate that a more comprehensive PMS results in a higher level of employee engagement. These results are in accord with the argument that the utilization of performance measurement systems serve as a tool for managers in their efforts to increase engagement in their organizations (Mone & London, 2009). Also a firm that properly utilizes the performance measurement systems can provide a better explanation regarding its fulfillment of psychological contracts within the employer-employee relationship (Morrison & Robinson, 1997; Rousseau, 1995).

One interpretation is that employees who believe they can influence outcomes at work are more likely to feel engaged and satisfied with work. Comprehensive PMS by nature are richer in information and provide more complete feedback about operations and results of operations (Chenhall, 2005), thus giving the individual more ownership in the results. The effectiveness of employees is enhanced when they have flexibility to adapt to changing situations and create measurement systems that create improved task strategies (Thomas & Velthouse, 1990).

Results from H2 provide insight into the role leadership plays in using certain types of PMS. The way in which leaders communicate is an integral part of their leadership style (Bolton, Brunnermeier, & Veldkamp, 2008). Transformational leaders are able to communicate their vision as well as articulate the way in which that vision is translated into goals and strategies. A

comprehensive PMS is a tool or resource that leaders use to communicate this information. The comprehensive PMS is typically more interactive and facilitates communication between the direct supervisor and the employee. This finding indicates that transformational leaders will successfully implement and use PMS that will assist in their participative and consultative management style.

The link between organic structure and PMS (H3) is positive but not statistically significance in the general model. However, organic structure was found to have a significant influence on PMS for participants with lower levels of educational attainment. Mintzberg & Waters (1985) found that organizational cultures will be supportive of innovation if they are more adaptive and responsive, having open communication and a free flow of information, and engage employees. For example, organizations are going to use more comprehensive PMS if there are few barriers to communication and management allows sharing of ideas in a manner that cooperation is fostered with each other. A main feature of organic structures is that it utilizes decentralized authority and control to encourage widespread communication. These features create greater information processing requirements for proper coordination, communication and control at lower levels (Gordon & Narayanan, 1984).

The results of H4 indicate that leadership in fact has a strong relationship to an employee's overall engagement in a firm. These results hold true regardless of job task level or educational attainment. The results found in this study are consistent with a long line of research on this topic. In particular, it supports Bass's (1985) finding that employees were more likely to devote additional effort when they reported to a transformational leader who led by influencing

them and inspiring their trust. Also supported is Avolio and Bass (1990) who found that leaders who were transformational in their style of influence often engaged the whole person.

Transformational leaders are committed to the ongoing development of employee skills. This trait is consistent with the definition of organizational support. Saks (2006) noted that organizational support is an antecedent of employee engagement. Transformational leaders develop a sense within the employees that the organization genuinely values the contributions of the employee and cares about his/her well-being. Kahn (1990) found that the condition of safety, driven by management style, predicts employee engagement. Transformational leaders create the kind of open and supportive environment that fosters a sense of psychological safety employees need for engagement.

H5 suggests that organic structure will have a positive relationship with employee engagement. Thus when the organization is more organic, employees will become engaged more in their work. These organic cultures are very much concerned with an environment that encourages the development of new ideas, a free flow of information, learning and sharing lessons, and informal signaling of potential problems (Kahn, 1990). In addition, May et al (2004) also found that this environment was positively related to psychological safety. Another interpretation would be that organic approaches to management ensure that individuals participate in creative decision making, and there is a free flow of information essential to motivate employees. The linkages between organic structure and employee engagement were not statistically significant within the general model, which did not support H5.

Interestingly this particular construct had differing results when multi-group analysis was performed. Specifically, when the sample was divided into groups based on educational attainment, organic structure had a significant positive linkage between comprehensive PMS and employee engagement for employees who had only a high school diploma. Organic work cultures are often perceived as flat with little or no respect for hierarchy. Research has indicated that individuals with less education appreciate equal respect shown to all, through an informal environment, and may want to be treated with the equal respect shown to someone at a higher level of education in the hierarchy (Deal, 2007). An informal culture provides the opportunity for all employees to feel wanted and needed.

2. Major Conclusions

In recent years, employee engagement has received much attention from academics and is particularly popular in the press and among consulting firms (Gruman & Saks, 2011). Schaufeli and Salanova (2007) claim that employee engagement is "essential" for contemporary organizations given the many challenges they face. This research shows that employee engagement, which has been shown to lead to a number of business benefits, including increased productivity, performance and organizational commitment, is correlated with transformational leadership and comprehensive PMS.

This study provides collaborating evidence that the employee's supervisor's leadership characteristics may play an important role in cultivating the engagement of employees. This study also offers some evidence that an accounting process, such as comprehensive PMS, may have a correlation to a heighten engagement of an employee. Findings from this study indicate

that transformational leaders utilizing a more comprehensive PMS have a positive relationship with the level of employee engagement. This is particularly true for employees in supervisory/managerial/professional tasks which are more complex and may be less easily observable by both the employee and top management. On the other hand, for employees involved in technical production processes, and for less highly educated employees, the PMS seems to be less important to employee engagement, even though leadership characteristics strongly influence engagement regardless of task or education level.

3. Implications for Practice

This research supports previous research that establishes an important connection between the leadership behavior of immediate supervisors and the engagement of their direct reports (Corporate Leadership Council, 2004). In addition, the findings of this study suggest that the leadership behavior of immediate supervisors has an indirect effect on employee engagement through the use of a comprehensive PMS, particularly for more highly educated employees and those in supervisory positions. These results indicate that it may be useful for leaders to not only understand and develop proper characteristics of transformational leadership but also understand systems and processes necessary to effectively engage employees at all levels.

Of particular interest are the results of the additional analysis that was performed utilizing SEM. As implied by the current research, transformational leaders are important regardless of the task being performed by the employee or the educational attainment of the employee. However, organizations commonly make the mistake of perceiving that the PMS should be

blanketed to the overall organization. This research also points toward a measurement system that is adapted to the task being performed.

As part of the research conducted, a qualitative interview was conducted with a CEO of a major online education provider. Results from this particular interview substantiate this concept. As part of the performance measurement systems employed at this company, direct supervisors sit down with direct reports and collaborate on a unique performance measurement system that is customized to each job classification the employees are involved in. The technical/production/hourly jobs often have developed metrics that are more quantitative and measure direct objectives, whereas supervisory/management/professional type job classifications are often measured using metrics that are dynamic and tailored to the goal, strategies and objectives of that particular division and ultimately the organization as a whole. These metrics are more diverse and broad with not only direct measures but indirect measures of performance. He reported that employee turnover is low and employees are typically satisfied and engaged within their particular employment.

4. Future Research

Despite these limitations, this study provides some valuable insights into the constructs under investigation. The scales developed by Hall (2008) on comprehensive PMS were tested using data collected and showed good reliability and adds validity to these scales. In addition, this research is one the few empirical studies indicating that level of comprehensive PMS has a direct association with employee engagement.

Merchant et al (2003) noted that many accounting researchers have an apparent limited awareness of developments and insights into other disciplines. This research leads toward a research agenda that consists of a multi-discipline approach. Mensah et al (2004) found that there was very little cross-fertilization of ideas and findings with other disciplines. They found that there was decreasing incidence of citation of management accounting in other disciplines.

Many researchers believe there are large potential contributions to other academic areas (Kinney, 2001). Kinney highlighted the unique contribution that accounting has in the measurement area and considered knowledge of business measurement as one of the core competencies of accounting. This study provides a juncture between economic theory and organizational theory and can lead to the percolation of ideas from both fields. Future research could include this specific model in examining the differences between various groups, such as industry, national culture and organizational size.

One final proposition when considering directions for future research relates to conducting field studies that would allow a deeper understanding of the complexities surrounding the relationships between more comprehensive PMS, leadership, organic structure and employee engagement. For instance, field work could shed some light on some issues raised by this study relating to the use of PMS with employees: (i) What circumstances and for what kind of decisions does management use PMS intensively? (ii) What is the influence of the informational characteristics of performance measures, such as information availability, timeliness, and quality measurement, on the use of PMS for organizational behavioral issues? The use of comprehensive PMS in organizational behavioral settings is a fertile area for future research.

5. Limitations

These findings are subject to several limitations. First, it is important to acknowledge that the present research was conducted from a cross-sectional survey of subjects within 18 businesses. One of the limitations of such data is it can be difficult to disentangle the direction of relationships between constructs. Two competing models were proposed which focused on the relationship of the three constructs; (1) Comprehensive PMS, (2) Transformational Leadership and (3) Organic Organizational Structure which were based on a theoretical argument regarding the relationship between these constructs. One model was preliminarily supported as fitting the data better. This does not mean there could not be other models that might fit as well but they may have less basis for support in terms of previous theory.

It is possible that the direction of this relationship may be reversed and one could argue that the comprehensive PMS likely affects the perceived characteristics of the organization and the leaders. Also one could possibly argue that engagement of employees likely affects their perception of their leader and measurement system. In fact, Luthans and Peterson (2001) argue that engaged employees provide added stimuli to the environment that affects the psychological arousal of leaders, which, in turn, influences their self-efficacy. This study has attempted to mitigate this particular limitation through utilization of existing theory, qualitative analysis and comparison of competing models through alternative model testing. Further longitudinal research might help resolve this as a temporal relationship and may be required to provide a more complete test.

Second, while great care was taken to validate the survey instrument, the difficulty of obtaining reliable data relating to the constructs through the use of a survey instrument is acknowledged. In addition, some of the scales, particularly the CPMS and organic structure scale, may need additional validation in the future.

Last, the study included 312 employees from various companies and industries. Due to the limited resources (i.e. time and money) and the exploratory nature of the study, the sample size consisted of a convenience sample. In an attempt to mitigate this limitation and obtain a sample that was representative of overall population, the target population consisted of companies that was a well-chosen sample of unrelated characteristics (Van der Stede et al., 2005). Although techniques were used to mitigate non-random sampling, the findings of this research may not be considered by some to be generalizable to the overall population.

Appendix A. Recent Agency Literature relating to Performance Measurement in Accounting

This overview is not intended to be an exhaustive review of Agency research in accounting, but instead is intended to provide evidence that Agency Theory is a widely recognized theoretical underpinning of Performance Measurement System research.

TITLE	JOURNAL	SUMMARY
Agency and structure in budgeting: Thesis antithesis and synthesis (Kilfoyle & Richardson, 2011)	Critical Perspectives in Accounting	The accounting literature has used agent-centered and structure-centered theories to explain the design, operation and consequences of budgeting systems. These perspectives have traditionally been presented as alternative and mutually exclusive approaches to understanding budgeting phenomena – as thesis and antithesis. The authors reexamine the relationship between agency and structure in management accounting research and explore the emerging synthesis that could provide new directions for research on budgeting
Norms, Conformity and Controls (Taylor & Bloomfield, 2011)	Journal of Accounting Research	Research in behavioral economics suggests that, in addition to their traditional incentive effects, formal control systems can influence psychological motivations. We extend this literature by demonstrating experimentally that formal controls directly influence people's sense of what behaviors are appropriate in the setting (personal norms), and indirectly alter people's tendency to conform to the behavior of those around them (descriptive norms). The results support those who are incorporating psychological factors into principal-agent models and suggest that those models should be further modified to incorporate correlations between personal norms and conformity to descriptive norms.
Nonfinancial performance measures and physician compensation(Evans III et al., 2010)	Journal of Management Accounting Research	This study examines the use of non-financial performance measures in physician compensation contracts. Based on Agency Theory, we develop hypotheses predicting that such measures are more likely to be used in settings in which the measures are more informative, when alternative control mechanisms are complements rather than substitutes to non-financial performance measures, and when external pressures for quality of care and cost-containment are greater.
Informativeness, Incentive Compensation, and the Choice of Inventory Buffer (Baiman, Netessine, & Saouma, 2010)	The Accounting Review	Previous research in accounting and economics has noted the potential for complementarities between the firm's performance measurement system and its other organizational design choices. The authors add to this literature by studying how the informativeness and incentive properties of a performance metric can be influenced by one particular organizational design choice—the size of the firm's inventory buffers. The authors report the conditions under which reducing the inventory buffer enhances/degrades the informativeness of the performance metric and, hence, mitigates/exacerbates the agent's incentive problem.
A moral solution to the moral hazard problem	Accounting, Organizations	In Agency Theory, offering a flat salary contract under unobservable effort creates a moral hazard problem because the agent is motivated to shirk and provide less than a

(Stevens & Thevaranjan, 2010)	and Society	previously agreed-upon level of effort. The authors present a principal-agent model where the agent possesses some level of moral sensitivity that causes him disutility if he provides less than the agreed-upon level of effort. They highlight the benefits of the agent's moral sensitivity to both the principal and the agent, and thereby, point out the potential cost of ignoring this moral sensitivity. They conclude that adding moral sensitivity increases the descriptive, prescriptive, and pedagogical usefulness of the principal-agent model.
Agency Theory and participative budgeting experiments (Brown, Evans III, & Moser, 2009)	Journal of Management Accounting Research	The authors analyze previous participative budget experiments in terms of the insights they offer regarding Agency Theory. They develop a classification scheme that can be used to organize hypotheses in terms of whether they rely on an Agency Theory prediction, a competing behavioral prediction, or a combination of the two. The classifications illustrate why studies that test both an Agency Theory prediction and a competing behavioral prediction are more likely to advance the development of theory than those that do not.
Interrelated Performance Measures, Interactive Effort, and Optimal Incentives (Dikoli, Hofman, & Kulp, 2009)	Journal of Management Accounting Research	This study uses principal agent analysis to investigate how the principal's use of performance measures in the agent's compensation contract are affected by (1) links between performance measures and (2) substitute and complementary characteristics of an agent's efforts. They show that differences in the combination of performance measure interrelations and effort interactions affect profits in distinctly different ways.
Reciprocity and the effectiveness of optimal agency contracts (Kuang & Moser, 2009)	The Accounting Review	The authors use experimental labor markets to examine (1) how employees respond to an optimal versus a suboptimal reciprocity-based contract when each contract is the only contract available, (2) how employees respond to these contracts when firms choose which one to offer, (3) whether the firms' contract offers depend on employees' reactions to those offers, and (4) how employees and firms react to a hybrid contract that incorporates features of both contracts. They find that the optimal contract is less effective than agency analysis predicts, the reciprocity-based contract can be equally effective, and the hybrid contract dominates a market in which all three contracts are available. Implications of these results are discussed
A path model examining the relations among strategic performance measurement system characteristics, organizational justice, and extra-and in-role performance (Burney et al., 2009)	Accounting, Organizations, and Society	In this study, the authors obtain data from an organization that uses an SPMS as the basis for the allocation of bonuses and investigate whether characteristics of the SPMS are associated with perceived organizational fairness. They provide evidence that heightened levels of organizational justice are the mechanism though which the perceived characteristics of the SPMS are associated with employee performance. The implication is that firms do not necessarily need to introduce subjectivity into the incentive contracting system, but can enhance performance by linking incentive contracts to their SPMS if the system contains characteristics that enhance employees' perceptions of justice.

Appendix B. Survey Materials

Please read the following instructions carefully:

I would like to know how you think and feel about some of the different aspects of your employment, including the performance measurement system, your supervisor and your organizational culture.

Please respond to all of the statements to the best of your ability, being as honest and accurate as possible.

SECTION A: About You

1. What is your current age in years?

2. What is your gender:
   a. Male
   b. Female

3. How long have you worked for your company?
   a. Less than 3 months
   b. 3 months – 1 year
   c. 1 – 3+ years
   d. 4 – 6+ years
   e. 7 - 10+ years
   f. 11+ years

4. How long have you worked in your current position at your company?
   a. Less than 3 months
   b. 3 months – 1 year
   c. 1 – 3+ years
   d. 4 – 6+ years
   e. 7 - 10+ years
   f. 11+ years

5. What is your highest level of formal education?
   a. High School Degree
   b. Associate Degree
   c. Bachelor Degree
   d. Master Degree
   e. Doctorate Degree

6. What business sector do you belong to?
   a. Manufacturing
   b. Service
   c. Retail
   d. Banking/Finance
   e. Government
   f. Other

7. What category BEST describes your job?
   a. Officer/Director/Manager/Supervisor
   b. Professional (salaried non-mgt. business & technical)
   c. Technical/Production (hourly)
   d. Sales Representative
   e. Administrative Support
   f. Customer Service

SECTION B: Performance Measurement System

For the purposes of this survey, a performance measurement system is the set of metrics used to quantify both the efficiency and effectiveness of actions by the employees. This process may either be a specific software application or a combination of various technologies to gather the metrics.

I am interested in the extent to which your performance measurement system provides information about the operation of your division/department/business unit. Please indicate the extent to which the following characteristics are provided by your business unit's performance measurement system. (1= not at all, 5=to a great extent).

Statement	1	2	3	4	5
The performance measurement system provides a broad range of performance information about different areas of the business unit.					
The performance measurement system is produced in a fully documented form, which provides a record for evaluating performance.					
The performance measurement system provides a diverse set of measures related to the key performance areas of the business unit.					
The performance measurement system provides consistent and mutually reinforcing links between the current operating performance of your business unit and the long term strategies of the organizations.					
The performance measurement system provides information on the different dimensions of the business unit's performance.					
The performance measurement system links together the activities of your business unit to the achievement of the goals and objectives of the organization.					
The performance measurement system provides a variety of information about important aspects of the business unit's operation.					
The performance measurement system shows how the activities of your business unit affect the activities of the other units within the organization.					
The performance measurement system provides a range of measures that cover the critical areas of the business unit's operation.					

Which of the following better represents your performance measurement system? (Please circle most appropriate description)

a. The performance measurement system consists of a diverse set of measures (financial and non-financial) which capture the key performance areas of the business unit. It represents information about different aspects of the business unit's operations, which provides an integrative and complete view of the business unit's performance.
b. The performance measurement system provides measures, primarily financial, which cover some, but not all of the key performance areas of the business unit. It represents mainly financial information and only focuses on a few aspects of the business unit's operations.

SECTION C: Your supervisor's leadership characteristics

The following statements are used to describe the leadership style of your direct supervisor as you perceive it during the past year. Please answer all items.

My supervisor……	Not at All	Once in a while	Sometimes	Fairly Often	Frequently, if not always
Re-examines critical assumptions to question whether they are appropriate					
Talks about his/her most important values and beliefs					
Seeks differing perspectives when solving problems					
Talks optimistically about the future					
Instills pride in me for being associated with him/her					
Talks enthusiastically about what needs to be accomplished					
Specifies the importance of having a strong sense of purpose					
Spends time teaching and coaching					
Goes beyond self-interest for the good of the group					
Treats me as an individual rather than just as a member of the group					
Acts in ways that builds my respect					
Considers the moral and ethical consequences of decisions					
Displays a sense of power and confidences					
Articulates a compelling vision of the future					
Considers me as having different needs, abilities and aspirations from others					
Gets me to look at problems from many different angles					
Helps me to develop my strengths					
Suggests new ways of looking at how to complete assignments					
Emphasizes the importance of having a collective sense of mission					
Expresses confidences that goals will be achieved					

SECTION D: Organizational Culture

The following are characteristics of an organization. While considering your organization, please respond to the following statements.

The organization I am working at provides:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
An emphasis on consensus seeking, staff participative decision making					
An emphasis on adaptation without concern for past practice					
Open channel of communication and free flow of information					
An emphasis on initiative, and adaptation to the local situation rather than specialization and top level coordination					
Managers are encouraged to develop new ideas even if they fall outside the individuals area of responsibility					
Tolerance of manager's mistakes, learning and sharing lessons from them.					
Managers share information with colleagues					
Fast reaction to take advantage of unexpected opportunities					
Current corporate culture encourages informal signaling of potential problems					

SECTION E: Firm Structure

To what extent is your strategic plan understood (1 = not at all, 5 = to a great extent)

	1	2	3	4	5
By middle-managers					
By first-line managers					
By non-management personnel					

How much are the following personnel empowered to make a decision?
(1 = not at all, 5 = to a great extent)

	1	2	3	4	5
Line Managers					
Non-Management					

What is the level of centralization regarding the organizational structure of your firm?
(1 = Highly Centralized, 5 = Highly Decentralized)

	1	2	3	4	5
Overall Company					
Individual Operations					
Individual Departments					

SECTION F: Involvement in Your Job

Please record your level of agreement with the following statements as they pertain to yourself.

	Never	Rarely	Sometimes	Most of the time	Always
When I get up in the morning, I feel like going to work					
At my work, I feel bursting with energy					
At my work, I always persevere, even when things do not go well					
I can continue working for very long periods of time					
At my job, I am very mentally resilient					
At my job I feel strong and vigorous					
To me, my job is challenging					
My job inspires me					
I am enthusiastic about my job					
I am proud of the work that I do					
I find the work that I do full of meaning and purpose					
When I am working, I forget everything else around me					
Time flies when I am working					
I get carried away when I am working					
It is difficult to detach myself from my job					
I am immersed in my work					
I feel happy when I am working intensely					

SECTION G: Your personal attributes

Please consider your personal attributes when reading the following statements.

	Not True	Hardly True	Moderately True	Exactly True
I can always manage to solve difficult problems if I try hard enough				
If someone opposes me, I can find means and ways to get what I want				
It is easy for me to stick to my aims and accomplish my goals				
I am confident that I could deal efficiently with unexpected events				
Thanks to my resourcefulness, I know how to handle unforeseen situations				
I can solve most problems if I invest the necessary effort				
I can remain calm when facing difficulties because I can rely on my coping abilities				
When I am confronted with a problem, I can usually find several solutions				
I can usually handle whatever comes my way				

SECTION H: Individual Performance

I am interested in how you believe you perform on the job. Compare yourself with an average employee in your position and rate your own productivity and quality of your work.

	Upper 5%	Upper 10%	Upper 20%	Upper 30%	Middle 50%	Lower 30%	Bottom 20%
Productive time spent working on the tasks assigned to me							
Meeting targets, quotas and other goals							
Overall productivity in getting the job done							
The overall quality of service that I provide							

Appendix C. Sample Survey Distribution Email

May 14, 2012

Dear Employee:

I am a current PhD Student at University of Hawaii and Assistant Professor in Accounting at Dixie State College. I am conducting research regarding how certain accounting and organizational practices influence individual behavior. I am surveying employees from various industries and regions and have selected your company to participate. Your response to this survey is very important in providing the necessary information to formulate useful accounting and organizational behavioral practices.

Companies often measure the efficiency and effectiveness of actions by the employees by using a set of metrics to quantify their performance. This practice is referred to as the use of a performance measurement system. The purpose of this survey is to record your perception of the current performance measurement system at your organization as well as other organizational characteristics. Results from the survey will provide data that will give insight on how these performance measurement systems affect employees.

Please click on the link at the end of this email and the survey will launch. The results are completely anonymous and will not reveal employee or company proprietary information. Your response and time is greatly appreciated.

Sincerely,

Nate L. Staheli, PhD Candidate

Appendix D. Sample Employer Endorsement

Dear Employee,

Our firm has been selected to participate in an academic survey. The intent of the survey is not to obtain information about our company only but to provide information for comparison about various industries and their accounting practices.

In the next day or so, you should receive an email from Nate L. Staheli, a PhD candidate at the University of Hawaii and current Accounting Faculty at Dixie State College. I support his request for our participation in the survey.

I have reviewed the survey and find no questions that are unacceptable. Please note you will be allowed 15 minutes of company time to participate in the survey and should be able complete the entire survey.

Thank you for willingness to further the academic research process. Should you have questions or concerns regarding this email, please contact myself or a member of the management team. Should you have concerns regarding the actual survey please email Nate at nstaheli@dixie.edu or nstaheli@hawaii.edu.

Thanks,

Management

Appendix E. Test of Non-Response Bias (Using Late Respondents)

VARIABLE	Early Respondent (n= 60)	Late Respondents (n=58)
Construct of Interest	***Mean***	***Mean***
CPMS	2.91	2.96
Transformational Leadership	3.46	3.39
Organic Organizational Structure	3.30	3.43
Employee Engagement	3.64	3.71

****, * Means are significantly different at p-value <0.05, 0.010**

Appendix F. Items and Descriptive Statistics (n=312)

Construct	Item	Mean (sd)	Min, Max
CPMS1	The performance measurement system provides a broad range of performance information about different areas of the business unit.	**3.33 (1.180)**	**(1,5)**
CPMS2	The performance measurement system is produced in a fully documented form, which provides a record for evaluating performance.	**3.50 (1.255)**	**(1,5)**
CPMS3	The performance measurement system provides a diverse set of measures related to the key performance areas of the business unit.	**3.32 (1.178)**	**(1,5)**
CPMS4	The performance measurement system provides consistent and mutually reinforcing links between the current operating performance of your business unit and the long term strategies of the organizations.	**3.24 (1.191)**	**(1,5)**
CPMS5	The performance measurement system provides information on the different dimensions of the business unit's performance.	**3.26 (1.176)**	**(1,5)**
CPMS6	The performance measurement system links together the activities of your business unit to the achievement of the goals and objectives of the organization.	**3.35 (1.228)**	**(1,5)**
CPMS7	The performance measurement system provides a variety of information about important aspects of the business unit's operation.	**3.37 (1.201)**	**(1,5)**
CPMS8	The performance measurement system shows how the activities of your business unit affect the activities of the other units within the organization.	**3.12 (1.250)**	**(1.5)**
CPMS9	The performance measurement system provides a range of measures that cover the critical areas of business unit's operation.	**3.35 (1.196)**	**(1,5)**
LEAD1	Re-examines critical assumptions to question whether they are appropriate	**3.14 (1.129)**	**(1,5)**
LEAD2	Talks about his/her most important values and beliefs	**3.06 (1.229)**	**(1,5)**
LEAD3	Seeks differing perspectives when solving problems	**3.40 (1.164)**	**(1,5)**
LEAD4	Talks optimistically about the future	**3.68 (1.263)**	**(1,5)**
LEAD5	Instills pride in me for being associated with him/her	**3.39 (1.342)**	**(1,5)**
LEAD6	Talks enthusiastically about what needs to be accomplished	**3.63 (1.154)**	**(1,5)**
LEAD7	Specifies the importance of having a strong sense of purpose	**3.46 (1.280)**	**(1,5)**
LEAD8	Spends time teaching and coaching	**3.09 (1.251)**	**(1,5)**
LEAD9	Goes beyond self-interest for the good of the group	**3.44 (1.266)**	**(1,5)**
LEAD10	Treats me as an individual rather than just as a member of the group	**3.75 (1.182)**	**(1,5)**
LEAD11	Acts in ways that builds my respect	**3.53 (1.257)**	**(1,5)**
LEAD12	Considers the moral and ethical consequences of decisions	**3.68 (1.230)**	**(1,5)**
LEAD13	Displays a sense of power and confidences	**3.56 (1.180)**	**(1,5)**
LEAD14	Articulates a compelling vision of the future	**3.36 (1.260)**	**(1,5)**
LEAD15	Considers me as having different needs, abilities and aspirations from others	**3.36 (1.245)**	**(1,5)**
LEAD16	Gets me to look at problems from many different angles	**3.37 (1.193)**	**(1,5)**
LEAD17	Helps me to develop my strengths	**3.31 (1.272)**	**(1,5)**
LEAD18	Suggests new ways of looking at how to complete assignments	**3.32 (1.181)**	**(1,5)**
LEAD19	Emphasizes the importance of having a collective sense of	**3.37 (1.217)**	**(1,5)**

	mission		
LEAD20	Expresses confidences that goals will be achieved	**3.58 (1.216)**	**(1,5)**
ORG1	An emphasis on consensus seeking, staff participative decision making	**3.90 (0.713)**	**(3,5)**
ORG2	An emphasis on adaptation without concern for past practice	**3.80 (0.657)**	**(3,5)**
ORG3	Open channel of communication and free flow of information	**3.97 (0.701)**	**(3,5)**
ORG4	An emphasis on initiative, and adaptation to the local situation rather than specialization and top level coordination	**3.88 (0.716)**	**(3,5)**
ORG5	Easy informal access to senior managers	**4.02 (0.737)**	**(3,5)**
ORG6	Managers are encouraged to develop new ideas even if they fall outside the individuals area of responsibility	**3.89 (0.720)**	**(3,5)**
ORG7	Tolerance of manager's mistakes, learning and sharing lessons from them.	**3.83 (0.699)**	**(3,5)**
ORG8	Managers share information with colleagues	**3.91 (0.696)**	**(3,5)**
ORG9	Fast reaction to take advantage of unexpected opportunities	**3.85 (0.696)**	**(3,5)**
ORG10	Current corporate culture encourages informal signaling of potential problems	**3.83 (0.688)**	**(3,5)**
ENG1	When I get up in the morning, I feel like going to work	**3.56 (1.028)**	**(1,5)**
ENG2	At my work, I feel bursting with energy	**3.24 (0.930)**	**(1,5)**
ENG3	At my work, I always persevere, even when things do not go well	**4.09 (0.732)**	**(1,5)**
ENG4	I can continue working for very long periods of time	**4.06 (0.820)**	**(1,5)**
ENG5	At my job, I am very mentally resilient	**3.92 (0.814)**	**(1,5)**
ENG6	At my job I feel strong and vigorous	**3.60 (0.954)**	**(1,5)**
ENG7	To me, my job is challenging	**3.40 (1.047)**	**(1,5)**
ENG8	My job inspires me	**3.37 (1.101)**	**(1,5)**
ENG9	I am enthusiastic about my job	**3.54 (1.113)**	**(1,5)**
ENG10	I am proud of the work that I do	**4.12 (0.927)**	**(1,5)**
ENG11	I find the work that I do full of meaning and purpose	**3.73 (1.069)**	**(1,5)**
ENG12	When I am working, I forget everything else around me	**3.08 (1.073)**	**(1,5)**
ENG13	Time flies when I am working	**3.56 (0.953)**	**(1,5)**
ENG14	I get carried away when I am working	**3.04 (0.951)**	**(1,5)**
ENG15	It is difficult to detach myself from my job	**2.75 (1.094)**	**(1,5)**
ENG16	I am immersed in my work	**3.27 (0.991)**	**(1,5)**
ENG17	I feel happy when I am working intensely	**3.66 (0.966)**	**(1,5)**

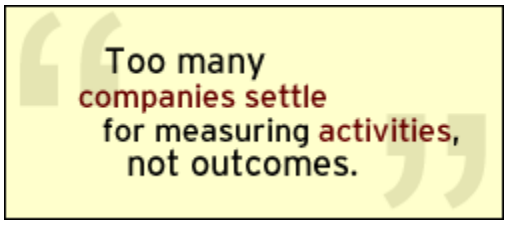
Appendix G. Practitioner Article

by Guido M.J. de Koning

John K. was one of the more efficient store managers in his region. He ran a smooth operation with high per-person productivity. His shelves were properly stocked, accidents were rare, and his store was always clean and well-organized.

Customers, however, didn't always feel welcome. John was more focused on making the supply-chain process work than on delivering excellent service and helping his customers. Because of this, he was one of the many managers who kept his CEO awake at night. The organization's strategy was to increase market share through superior customer service. But how, the CEO asked himself, could he communicate and reinforce that strategy with managers such as John in a way that would actually change their behavior?

Robert Kaplan and David Norton published a now-famous report that addressed the dilemma faced by CEOs like this one. Their 1992 *Harvard Business Review* article, "The Balanced Scorecard: Measures That Drive Performance," proposed a new approach to managing performance. It broadened performance measures beyond just financials to include process as well as customer and employee perspectives. While some companies "balanced" their performance metrics before, this article brought intense focus to formalizing that process.



Today, Kaplan and Norton's balanced scorecard process starts by translating a company's mission and vision into a detailed strategy map -- a conceptual model outlining the factors that drive performance. Next, specific objectives and measures are developed and balanced across financial, customer, internal process, and learning and growth perspectives. Those objectives are then used to drive strategy-specific actions across the organization. Since Kaplan and Norton introduced these ideas in 1992, many companies have attempted to adopt and execute them. According to the Balanced Scorecard Collaborative, no less than 60% of Fortune 500 companies use the balanced scorecard in some form.

Some surveys suggest it's working, too. The Institute of Management Accountants conducts an annual Performance Management Survey among users and nonusers of the balanced scorecard approach. The data suggest that users are far more pleased than nonusers with the effectiveness of their performance management process -- specifically when it comes to their ability to support management's business objectives and initiatives and to communicate strategy to their employees.

Still, many companies aren't seeing the impact they desire. They try the balanced scorecard approach but don't see the expected returns -- or worse, the organization becomes more bureaucratic instead of more focused. Why does this happen?

The key elements

The Gallup Organization has observed that when companies implement a balanced scorecard approach, four elements are vital -- and too often, missing. Those elements are focus, validity, connectivity, and integration. Organizations use the balanced scorecard approach in varying degrees, from the full methodology that Kaplan and Norton prescribed to basic scorecards that include some customer, process, and employee-related measures. Regardless of where companies are on that continuum, too many of their scorecards are missing one or more of the four key elements.

This article covers the first two elements: focus and validity. Part Two of this series will review connectivity and integration.

Focus

Many companies develop scorecards that are chock full of performance metrics. When you add up all the metrics, scorecards sometimes contain 15 to 20 different measures for a given workgroup or manager.
Although each measure may seem important, scorecards that include too many metrics fail to provide managers with any real focus. The scorecard ends up including every element the team could manage, without distinguishing what's essential for success and what's included because it's easy to measure.
Great companies have tremendous focus. Throughout the organization, employees know the few vital things that matter -- that make the difference between an organization that survives and one that thrives. For instance, many things are important and relevant for a typical manager, but the essence can often be distilled to building a strong team of associates and focusing them on delivering a superior customer experience. It sounds simple, but giving managers and employees just two overriding priorities provides more clarity than giving them a complex mix of processes, metrics, and initiatives. So ask yourself: Is your organization's scorecard clear about the outcomes that really matter? If not, find the essentials -- and eliminate the rest -- to increase your focus.

Validity

Many balanced scorecards contain metrics that lack validity. Organizations don't always validate whether their measures drive desired business success in a meaningful, reliable way. When this happens, organizations risk asking managers to focus on measures that don't really matter. Or companies are misled into assuming they've made progress when they haven't. The problem of a lack of validity often arises when organizations get into the following two areas:

- **Evaluating intangibles.** Balanced scorecards often attempt to evaluate not-so-tangible areas such as values, engagement, teamwork, or partnerships. These are important human capital dimensions that companies want to manage because they drive desired financial and operational performance metrics. Since these objectives need to be measured, organizations must find ways to quantify them. And most companies don't get that right.
To measure these intangible elements, companies often rely on conventional metrics, such as employee and customer satisfaction measures, that don't always link to real financial outcomes. Or companies may try to measure these dimensions by asking managers to develop and rate employee competencies. But like conventional metrics, this approach may also measure the wrong things. Many studies have shown that manager ratings are too subjective and are more a reflection of the manager's relationship with a given employee than an accurate reflection of the competencies that are being rated. (See "The Four Disciplines of Sustainable Growth" in See Also.)

- **Creating task-oriented employee objectives.** Companies often measure employees on individual objectives, or "milestones," that are to be completed by a certain date. For some organizations, evaluating employees based on their success in completing tasks or activities actually reduces their flexibility. In one company, for example, employees had to meet objectives in three areas on their balanced scorecard -- employee, customer, and shareholder. Managers would determine the activities and milestones. Then they would evaluate employees annually to determine which milestones had been met. Not only did this approach force employees to focus on "inputs" instead of "outcomes," it made the company more bureaucratic and less agile. Employees refused to work on important initiatives because they weren't part of their milestones or scorecards. What's worse, employees received milestone-related bonuses regardless of whether completing these tasks had any real impact on the business.
Companies need validated measures that reflect the performance *outcomes* that drive the organization's long-term financial success. But too many companies settle for measuring activities, not outcomes. And because the measures usually end up defining what actually gets done, the task of getting the metrics right shouldn't be taken lightly.

Focus and validity ensure that a balanced scorecard contains vital metrics that will move the organization in the right direction. For performance measures to have the desired impact, however, two more things must happen. First, each manager and workgroup must be connected to their scorecard in ways they understand and can influence. Second, scorecards must be integrated into a company's performance management practices or they won't change managers' or employees' behavior. I'll cover these two elements -- connectivity and integration -- in Part Two of this article.

Guido M.J. de Koning is a former consultant of Gallup.

Source: http://businessjournal.gallup.com/content/12208/making-balanced-scorecard-work-part.aspx

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