

A Relationship Between Budgeting Practices and Organizational Culture in the Thai Agriculture and Food Industry*

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ABSTRACT

This research study aims to explore a relationship between budgeting practices and organizational culture in different organizational settings across the agriculture and food industry in Thailand. A preliminary survey method was adapted from the budgeting practice survey by Libby and Lindsay (2010) and the Organizational Culture Assessment Instrument (OCAI) by Cameron and Quinn (2006), respectively. The study sample includes ten medium-to-large-sized publicly listed firms in the agriculture and food industry. The response rate is 20%. The results reveal that budgeting practices are perceived as a control mechanism in particular and a value-added mechanism in general. They are significantly pragmatic when there is a

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high involvement with managers whose main role is to facilitate proper resource acquisition in response to market changes. The budget value is much leveraged upon which the strategy implementation and the budgeting process are closely linked. It is also found that different levels of budget practices are varied by different types of organizational culture. The research contribution has broadened the scholar's horizons toward budgeting practices and their relational variables, all of which are detectably influenced by organizational culture. The implication of the study has addressed a possibility to take organizational culture as a key element of management control system especially in the process of change navigation.

Keywords: Budgeting Practice, Organizational Culture, Organizational Culture Assessment Instrument (OCAI)

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บทคัดย่อ

บทความวิจัยนี้มีวัตถุประสงค์ เพื่อศึกษาความสัมพันธ์ระหว่างแนวทางการจัดทำงบประมาณกับวัฒนธรรมองค์กรของกลุ่มบริษัทในอุตสาหกรรมเกษตรและอาหารที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย วิธีการสำรวจเบื้องต้นได้ประยุกต์มาจากแบบสำรวจการจัดทำงบประมาณโดย Libby and Lindsay (2010) และเครื่องมือประเมินวัฒนธรรมองค์กรโดย Cameron and Quinn (2006) กลุ่มตัวอย่างประกอบด้วยบริษัทจดทะเบียนในอุตสาหกรรมเกษตรและอาหารจำนวน 10 บริษัทซึ่งมีอัตราตอบกลับที่ 20% ผลการศึกษาพบว่า แนวทางการจัดทำงบประมาณถือเป็นกลไกที่เจาะจงเฉพาะบริบทการควบคุม และเป็นกลไกที่เอื้อต่อการเพิ่มคุณค่าในมุมมองทั่วไป การใช้งบประมาณเพื่อการควบคุมจะมีคุณค่าเพิ่มมากขึ้น เมื่อผู้บริหารมีส่วนเกี่ยวข้องมากขึ้น ซึ่งผู้บริหารมีบทบาทหลักในการใช้อำนาจการได้มาซึ่งทรัพยากร เพื่อตอบสนองต่อความผันผวนของตลาดที่เต็มไปด้วยการแข่งขัน คุณค่าของการใช้งบประมาณจะเพิ่มมากขึ้นหากนำไปใช้ให้สอดคล้องกับกลยุทธ์องค์กรที่ได้กำหนดไว้อย่างเคร่งครัด นอกจากนี้ ผลการศึกษายังพบว่า

ระดับแนวทางการจัดทำงบประมาณต่างกันนั้นแปรผันไปตามวัฒนธรรมองค์กรแต่ละประเภท งานวิจัยนี้ขยายขอบเขตความเข้าใจของแนวทางการจัดทำงบประมาณและตัวแปรที่เกี่ยวข้อง ซึ่งได้รับอิทธิพลจากวัฒนธรรมองค์กร งานวิจัยนี้จึงเปิดให้เห็นความเป็นไปได้ในการนำตัวแปรด้านวัฒนธรรมองค์กรมารวมเป็นองค์ประกอบหลักของระบบการควบคุมการบริหาร โดยเฉพาะในช่วงที่องค์กรมีการเปลี่ยนแปลงอย่างรวดเร็ว

คำสำคัญ: แนวทางการจัดทำงบประมาณ วัฒนธรรมองค์กร เครื่องมือประเมินวัฒนธรรมองค์กร

1. Introduction

A plethora of budgeting practice studies has gained their popularity over the past decades. It is, in essence, a reflection of how budgeting practices have played a pivotal role in managerial systems, especially those pertaining to the course of behavioral studies, such as organizational culture, trust and the like. Previous studies suggest that executives in strategy-driven organizations focus on their resources allocation (Kaplan & Norton, 2001) by which budgeting practices, one component of Management Control System (MCS; Flamholtz, 1983; Janka *et al.*, 2019; Wheelen & Hunger, 2012), are considered as a critical tool for enhancing their understanding toward strategic resource allocation and competitive advantage creation (Barney, 1991; Raduan *et al.*, 2009). Choices and practices in budgeting are plausibly related to organizational culture because it generally defines how decisions are made and how organizational issues are handled (Aktaş *et al.*, 2011). This is in line with the work of Autchariyaausa (2010) and Youngbantao & Rompho (2015), stating that organizational culture in the Thai companies drives work efficiency and operational consistency. Although organizational culture is perceived as an important element in MCS, empirical evidence to support a relationship between MCS and organizational culture is sparse (Bhimani, 2003). Moreover, there is no extant research particularly addressing such a relationship across any industry-specific firms. It is therefore intriguing to explore a linkage, or no linkage thereof, between budgeting practices and organizational culture in the medium-to-large-sized listed companies of the Thai agriculture and food industry.

This research serves as a preliminary study of the subject by which a quantitative method is adapted from the budgeting practice survey and Organizational Culture Assessment Instrument (OCAI), in the works of Libby and Lindsay (2010) and Cameron and Quinn (1999, 2006), respectively. It provides both academic and practical implications of the organizational and managerial accounting research. That is to say, a better understanding of the relationship between organizational culture and budgeting practices tends to allow executives to leverage the value of organizational resource allocation, budgeting optimization and cross-functional collaboration. Nonetheless, this research puts much emphasis on the mainstream budgeting practices while leaving their potentially influencing factor, such as stages of organizational life (Su *et al.*, 2017), unaddressed. And that leads to a future research avenue by including some underexplored variables into the study. The operationalization and measurement of organizational culture and budgeting practices are subject to the methodological assumptions and debates. Therefore, an interpretation and generalizability are admittedly reserved to the quantitative paradigm.

The paper is structured into four major parts. First, the literature review on MCS and budgeting, budgeting practices and organizational culture, as well as organizational culture and the Competing Value Model (CVM), is highlighted. Second, the research method is presented to justify the research data collection and analysis. Third, the findings are revealed for explanation. Lastly, the paper ends with discussion and conclusion, inclusive of limitations and future research.

2. Literature Review

2.1 Management Control Systems (MCS) and Budgeting

Flamholtz (1983) presents an organizational control system as a cybernetic structure in which organizational culture, organizational structure and core control system are bounded by organizational environments. Although Flamholtz (1983) depicts organizational culture as the outmost circle of the MCS, it serves as a starting point and influences MCS in the realm of organizational design, planning and control (Harrison *et al.*, 1994). Many accounting research studies have been in an enduring quest to indicate accounting systems as a potentially useful tool of MCS when implemented in an appropriate organizational culture. In this regard, accounting is generally viewed as a socio-technical system, rather than a technological control mechanism, whereas budgeting is considered a crucial tool commonly utilized in the accounting systems.

Budgeting has been a traditional mechanism for planning the operation and control (e.g., Flamholtz, 1983; Libby & Lindsay, 2010). It is essentially one of the main tasks for accountants (Malmi *et al.*, 2001) to carry out in many organizations, albeit being slowly evolved (Granlund, 2001). Key functions of budgeting include a range of activities, namely operational planning, performance evaluation, communication of goals and strategy formulation. The functions are unique but overlapped and correlated (Hansen & Van der Stede, 2004). Purposes of planning and budgeting are: to enhance management control, to engage in long-term thinking, to achieve coordination, and to establish “challenging-but-achievable” performance targets (Merchant & Van der Stede, 2012). Planning processes serve as results, actions, and controls of organizational resources. Additionally, it helps executives to determine the cost of organization activities (Hansen, *et al.*, 2009).

Previous research has investigated current budgeting practices, their antecedents, and characteristics (e.g., Umapathy, 1987; Hansen & Van der Stede, 2004; Libby & Lindsay, 2010). The budget process consists of three sequential stages: drafting, steering, and reviewing & evaluating (Bouguin, 2010; Sponem & Lambert, 2016). During the drafting stage, budgeting is defined as a quantitative expression of a proposed plan of action (Bhimani, *et al.*, 2008). The degree of budgeting and strategy linkages is

varying in budget negotiations (Sponem & Lambert, 2016). The effort and involvement in budgeting is of interest in budgeting practices in this stage (Shields & Shields, 1998).

In the steering stage, the important characteristic is the rigidity of budget. The rigidity produces two design characteristics: budget revision and budget reforecast. Budget revisions are a possibility to change the initial budget (Sponem & Lambert, 2016). Revisions might occur on an ad-hoc basis, at a formal review, or as a rolling budget. A budget reforecast plan is drafted out when a firm decides to take a protective measure during the year. It is likely that a firm combines a rigid budget with frequent reforecasts. During the course of action, the characteristics of budgeting include predictability, reliance, effectiveness, and approaches for market changes (Libby & Lindsay, 2010).

In the review and evaluation stages, the budget emphasis is the use of budgets as targets to evaluate performance and to determine rewards (Sponem & Lambert, 2016; van Veen-Dirks, 2010).

Budgeting is perceived as a ritual for corporates (Jensen, 2001). The shortcomings of budgeting are the fact that it is soon outdated, time-consuming, and expensive, fails to add value, and eventually lacks a customer orientation (Bunce *et al.*, 2015). It is also subject to a spate of criticism, such as, game-playing, incapability of meeting the dynamic environment, impediment of efficient resource allocation, short-termism, opportunistic behaviors and conservative behaviors (e.g., Hansen *et al.*, 2003; Jensen, 2003; Libby & Lindsay, 2010; Waal, Hermkens-Janssen, & van de Ven, 2011; Sponem & Lambert, 2016). Budgeting generates adverse effects when the budget is not suitable in an uncertain environment due to its inflexibility (Sponem & Lamber, 2016).

Libby and Lindsay (2010) and Umapathy (1987) report that the majority of the North American firms continue to use budgets for control purposes, although the Beyond Budgeting approach is emerging and becomes more popular among the European firms. The roles of budgeting seem to diminish over time while the management functions (i.e., planning, control and evaluation) remain intact (Henttu-Aho & Järvinen, 2013).

2.2 Organizational Culture

The study of organizational culture has been extensively published in the academic arena, yet less posed a paradigm shift in its operationalized definition over the past years (Robbins & Judge, 2018). Quinn and Cameron (1999) propose a set of indicators to identify organizational culture. The scores from context-specific indicators can be divided into four sub-groups underlined by two major dimensions. The first dimension is a focused strategy as determined by both internal and external perspectives. The second dimension is about the environment with emphasis on flexibility and control. These dimensions categorize an organizational culture into four types. First, the *hierarchy*

culture focuses on the official hierarchy by demanding a certain regulations for operational processes. This culture emphasizes long-term values as integration, stability and efficiency. A hierarchy-culture firm is characterized as a formalized and structured place to work for. Basically, a bureaucratic work procedure defines how employees behave and work in the organization. The goal of the hierarchy culture is to maintain smooth-running operations and standardized procedures across the organization. Second, the *market culture* reflects an organization that is committed to achieving the goals clearly without adhering to an unnecessary authority or a red-tape process. The market culture focuses on the value of competitiveness and productivity. A market-culture firm functions as a market itself and is literally considered a result-oriented workplace. Organizational success is predominately defined by a portion of market share achieved through market penetration capabilities over a certain period of time. The outside-in approach is generally adopted to build competitiveness of the firm. Third, the *clan culture*, *family-type* organization gives priority to employee involvement in the organization. A clan-culture firm is driven by employees with a sense of teamwork, involvement and commitment. Customers are treated as business partners by which their demands and preferences are primarily internalized in the organizational level. Employees tend to extensively seek opportunities to develop their competencies and learn to strengthen their level of flexibility and sociability vis-à-vis customer demands. Lastly, the *adhocracy culture* encourages employees to take initiatives in creating new businesses in response to customer changes. The core of the adhocracy culture centers around the notion of adaptability, flexibility and creativity where the VUCA world (i.e., Volatility, Uncertainty, Complexity and Ambiguity) is currently dominant. In fact, this type of organizational culture fosters an emergence of entrepreneurship and innovation so as to future-proof unprecedented business challenges.

Denison and Mishra (1995) conducted a survey with 764 CEOs and reported the results supporting the work of Cameron and Quinn (1999) regarding organizational culture classification. That is to say, organizations with the flexible culture tend to be oriented toward employee engagement and adaptability, openness and responsiveness, all of which subsequently indicate a potential growth of the organization in the future. The relatively stable organizational culture characteristic and clear job responsibilities are good indicators representing an organization with a good direction, vision, and prediction. Autchariyaausa (2010) employed Cameron and Quinn (1999)'s framework to analyze organizational culture classification and performance system in the industrial companies within and outside the Stock Exchange of Thailand (SET). Two dimensions of organizational culture (flexible vs. control) were used to categorize the types of organizational culture among the Thai industrial firms. It was found that the flexible culture measured working performance with respect to market share

and customer satisfaction, including learning growth. Moreover, employees in the flexible culture had a higher job satisfaction than those in the control culture. By the same token, Youngbantao and Rompho (2015) conducted a survey with various department managers in the publicly listed Thai financial service firms. Their findings revealed that organizational culture identified by two dimensions (external vs. internal) poses no significant difference in performance measurement utilized within the firms. It is apparent that these previous works have focused on organizational culture classifications and their impact on organizational performance in general, yet left some operational activities, such as budgeting practices, underexplored in particular. And that it becomes intriguing whether different organizational culture classifications have a linkage with operations and decision making processes within the organization.

2.3 Budgeting and Organizational Culture

Budgeting requires executives and employees to gather information to complete the planning processes (Jensen, 2003). Libby and Lindsay (2010) conducted a survey from a sample group of managers in some medium-to-large-sized enterprises in North America and found that budgeting played a vital role in adding value to the organization. A set of budgeting activities contribute to value creation of the organization in certain domains, namely an inquiry about the budget system within the enterprise, a managerial decision making in the organization, an amount of time spent in the budget process, and the performance of the budget system in contributing to achieve the goals¹.

Prior research investigates organizational culture and budgeting (Flamholtz, 1983), organizational culture and budget participation (O'Connor, 1995), and organizational culture and performance measurement systems (Henri, 2006). The theoretical construct of organizational culture has been operationalized in different terms. Flamholtz (1983) concludes that budgeting is a component of a carefully designed MCS and that culture plays an important role in budgeting. Flamholtz (1983) does not focus on any cultural model but discusses the organizational culture as sales emphasis or the value system or the informal socialization system. O'Connor (1995) follows Hofstede's (1980) cultural

¹ Several factors in budgeting consist of a period of preparation, (Umapathy, 1987; Hope & Fraser, 2003; Hansen, Otley & Van der Stede, 2003; Libby & Lindsay, 2010; Wheelen & Hunger, 2012), using data in budgeting (Hansen et al., 2003;) and technology (Uyar & Kuzey, 2016). The second factor is targeting, which consists of the budgeting format (Hansen, et al., 2003; Libby & Lindsay, 2010) and clarity (Wheelen & Hunger, 2012). The third factor is participation (Milani, 1975; Shields & Young, 1993; Denison & Mishra, 1995; Libby & Lindsay, 2010) and the fourth factor is follow-up the working performance, including motivation, problem solving, (Hansen et al., 2003; Libby & Lindsay, 2010) and external factors (Libby & Lindsay, 2010; Wheelen & Hunger, 2012; Uyar & Kuzey, 2016).

dimensions, particularly, power distance to compare budgetary participation in local firms and foreign firms. Henri (2006) operationalizes the organizational culture as the continuum of flexibility value and control values, the flexibility-control competing values (Quinn & Rohrbaugh, 1983). The results explicated that flexibility-value firms were more likely to integrate Performance Measurement Systems (PMS) with their organizational processes and use more performance measures than those in the control-value firms.

The extant research acknowledges criticality of organizational culture toward business success over the long run (Odiakaose, 2018). It is inextricably complicated by nature, yet contributing to a large part of organizational growth. Generally, organizational culture is the foundation for employees to share values and behaviors, both within and outside the organization, toward a common goal (Schein, 2004). Once organizational culture becomes completely institutionalized, it is simply demonstrated through a certain set of behaviors being enacted upon so as to achieve performance (Tan, 2019). That subsequently leads to organizational climate creation (Luthan, 2002, Martin, 1992). Organizational culture can influence MCS in terms of organizational design, planning and control (Harrison *et al.*, 1994). Prior research provides empirical evidence on the fact that the flexibility-and-control-value model has been explored in the formation of organizational culture which has a significant impact on MCS, especially budgeting practices. It also serves as an integral part of other management activities in the organizations. Nonetheless, there is a research gap to be identified. That is, under different circumstances and industries, it is hypothetical to examine how the organizational culture classifications, underlined by the Competing Value Model² (Quinn & Rohrbaugh, 1983; Quinn & Cameron, 1999; Cameron & Quinn, 2006), will play out in budgeting practices.

² The Competing Value Model (CVM) delineates the major conceptions underlying organizational effectiveness (Quinn and Rohrbaugh, 1983). Two dimensions, organizational focus and organizational preference for structure, form four quadrants, that is, four management models: human relations model, open systems model, rationale goal model, and internal process model. Quinn (1988) argues that effective managers are able to play multiple and competing roles. The CVM is used as a diagnostic tool to understand existing and preferred organizational culture. In addition, it is used to interpret and understand organizational functions and processes. Organizational members can learn and understand their organizational culture, organizational gaps to gear toward desired changes.

3. Research Method

A survey method was adopted to collect data about organizational culture and budgeting practices.

3.1 Sample and Survey Procedure

The studied sample includes the Thai companies in the agriculture and food industry listed in the Stock Exchange of Thailand (SET). The agriculture and food industry is specifically chosen for study because it is a key industry of the Thai economy. This sample represents diversity in organizational culture which is suitable for the study objectives. As of November 2016³, there were fifty publicly listed firms in the agriculture and food industry. The survey/questionnaire was sent out to high-ranked executives in relevant departments, namely Accounting, Finance, Budgeting, and the like, and those who have an authority over or a high involvement with budgeting practices within the organizations.

The response rate is 22% (11 out of 50 survey sets were completed and returned) which is relatively acceptable and comparable to the 15% – 25% range of response rates in previous research⁴ (e.g., Hansen & Van der Stede, 2004; Henri, 2006; Autchariyaausa, 2010; Youngbantao & Rompho, 2015). On average, the respondents have five years of working experience in the roles of budgeting with their current organizations. The average working experience is 8.09 years. The range of consolidated revenue is from one to fifteen billion THB. Of 11 respondents, one organization was excluded from the sample because it does not use budgeting.

3.2 Research instruments

The survey/questionnaire is designed on a basis of the budgeting practice survey by Libby and Lindsay (2010) and the Organizational Culture Assessment Instrument (OCAI) by Cameron and Quinn (2006), respectively. The budget practice survey questions are separated into four sections. The first section deals with budget value, firm's weeks to budget, manager's time spent on budgeting and touch (i.e., participation and involvement). The second section revolves around adaptability in budgeting, reliance, effectiveness, methods for adapting to market changes, resources, fast track approval and operating budgeting. The third section examines critical issues on a linkage between strategy and its implementation. The last section addresses the notion of budget emphasis and gaming. In this study,

³ The timeframe of data collection may limit the relevancy of the current business environments.

⁴ That is, 20.15% and 26.90% were reported in the works of Autchariyaausa (2010) and Youngbantao and Rompho (2015), respectively

all questions, scales and anchoring words reprinted in the Appendix of Libby and Lindsay (2010)⁵ are adopted.

Regarding the OCAI, a number of previous research works have validated its statistical efficiency. For instance, Quinn and Spreitzer (1991) tested it with 796 executives from 86 firms. The Cronbach's alpha tests were conducted to prove the reliability of the survey under each organizational culture classification: Clan Culture = 0.74, Adhocracy Culture = 0.79, Hierarchy Culture = 0.73 and Market Culture = 0.71. Moreover, Yeung *et al.* (1991) reported the reliability of study from 10,300 executives across 1,064 firms by using the OCAI. Its Cronbach's alpha coefficients of each culture are 0.79, 0.80, 0.76 and 0.77 for Clan Culture, Adhocracy Culture, Hierarchy Culture, and Market Culture, respectively.

In this study, the survey questions stem from a combination of both OCAI and budgeting practice questions. Pilot tests were conducted with a sample of the graduate students in accounting who have had some experiences with budget practices at their own organizations. They are appropriate proxies of the target respondents since they have an understanding in this study topic (Van der Stede *et al.*, 2005)⁶. The survey was revised to ensure the content validity and comprehensibility. Then, it was mailed out to the target respondents. Survey questions are reprinted in Appendix A.

4. Results

Table 1 presents the descriptive statistics of variables: mean, median and range. Due to the small sample size, the parametric statistic analysis is not plausibly executed.

4.1 Budgeting practice

Use of budgeting. Ten respondent firms reported that budgeting is served for control purposes⁷. They intended to continue using the budget for control purposes and had no plan to change their budgeting practice. The budgeting system provides value to the management's decision making. In general, the finding is consistent with the work of Libby and Lindsay (2010).

⁵ This paper adopts the survey and its anchoring words without any major changes. The original survey questions contain different types of scale as well as different scale points and anchoring words.

⁶ Although the demographic data of the graduate students (pilot-test participants) were not comparable to those of the actual target participants, they are complemented by having multiple budgeting practice experts involved in reviewing the instrument so as to ensure its validity. Moreover, the items in the instrument were developed and validated from the works of Libby and Lindsay (2010) and Cameron and Quinn (2006) which have been statistically proven.

⁷ The figures are not tabulated.

Time in budgeting. A number of weeks that firms spend in budgeting are from less than one week to twelve weeks. Managers tend to spend one to ten weeks in budgeting (see Panel A, Table 1). A level of involvement and participation in budgeting (Touch) is relatively high (median = 4, mean = 3.7).

Reliance on budget and adaptability. In terms of predictability, the firms rated their level of predictability in market activities by competitors, revenue, costs, customer preferences and tastes, technology and advancement, and suppliers' availability on a six-point scale. The predictability score is a summation of all ratings (total possible points = 36). The median of predictability at 21 (mean = 21.6, (18, 26)) indicates a somewhat predictable factor in preparing budgets (see Panel B of Table 1). All sample firms in this study reported that they placed the degree of reliance on the budget so as to adapt to market changes, ranging from some reliance to considerable reliance (see Panel B of Table 1). Two respondents rated that the budgetary process to market changes was effective. Three respondents rated their budget process as somewhat effective. Another three respondents viewed that their budgetary process was neither effective nor ineffective. Two respondents thought their budgetary process was somewhat ineffective.

Regarding the item addressing methods for adapting to market changes, six firms agreed that they were able to obtain resources outside the budgeting process so as to cope with market changes. Seven firms reported that the fast-track approval process was in place to ensure resource availability. One firm reported that its budgeting practice was relatively fixed. Five firms revised the budget only at the formal budget reviews, while three firms reported that they revised their budget on an ad-hoc basis. Only one firm updated its budget when the next rolling budget is prepared.

Budget and strategy linkage. All respondents agreed that their budgets were explicitly linked to the strategic objectives (median = 6, Panel C of Table 1). They also agreed that setting budget causes them to deliberate their strategy. Managers were expected to identify tactical initiatives to bridge a discrepancy between current performance and desired performance. Overall, many firms reported a high level of linkages between budget practices and strategy implementation (mean = 16.6, median = 17 of total 21 possible points).

Budgeting emphasis. Budgeting emphasis is the degree of emphasis placed on meeting budget targets in the performance evaluation. The results showed that the budget emphasis is high (median = 17.5, (13, 25)) among the studied sample (see Panel D of Table 1).

Budget gaming. The majority of the studied sample reported that the budget gaming incidents were observed (median = 4, Panel D of Table 1). Figure 1 presents subcategories of gaming incidents. Only one firm reported that the budget gaming never occurs. The prominent gaming behavior is deferring necessary expenditures to meet targets (80% report that this occurs occasionally, or frequently) thereby

being consistent with Libby and Lindsay (2010). Six firms reported that engaging in spending budgets to avoid any loss, accelerating sales near year end, and sandbagging occur occasionally. Only forty percent of the respondents reported that taking a big bath occurs occasionally.

Table 1 Descriptive Statistics of Budgeting Practice Variables

| Panel A: Budget Value and Effort | | | |
|--|-------------|---------------|--------------|
| | Mean | Median | Range |
| Budget Value (score from 0 to 100) | 72 | 75 | (50, 80) |
| Firm weeks to budget | 5.6 | 5 | (0, 12) |
| Manager weeks to budget | 4.2 | 4 | (1, 10) |
| Touch (1 = light to 5 = heavy, reverse) | 3.7 | 4 | (3, 5) |
| Panel B: Budget and Adaptability | | | |
| | Mean | Median | Range |
| Predictability | 21.6 | 21 | (18, 26) |
| Total scores of 6 items measuring predictability in marketing activities, revenue, cost, consumer preference, technology and supplier. Six items were rated and reverse coded. (1 = easy to predict, 2 = mostly predictable, 3 = somewhat predictable, 4 = fairly difficult to predict, 5 = difficult to predict, 6 = impossible to predict) | | | |
| Reliance | 3.4 | 3.5 | (2, 4) |
| Reliance on the budget to adapt to market changes. (1 = no reliance to 5 = exclusive reliance) | | | |
| Effectiveness | 0.5 | 0.5 | (-1, 2) |
| Effectiveness of the budget in adapting to market changes (-3 = highly ineffective, -2 = ineffective, -1 = somewhat ineffective, 0 = neither effective nor ineffective, 1 = somewhat effective, 2 = effective, 3 = highly effective) | | | |

Table 1 Descriptive Statistics of Budgeting Practice Variables (Cont.)

| | Mean | Median | Range |
|--|------|--------|----------|
| Methods for adapting to market changes resource It is easy to obtain new resources outside of the budgeting process to deal with market changes. (1 = strongly disagree to 7 = strongly agree) | 4.5 | 5 | (1, 6) |
| Fast-Track approval “Fast-Track” approval processes exist to ensure timely availability for initiatives requiring significant resources that were not incorporated in the approved budget. (1 = strongly disagree to 7 = strongly agree) | 4.9 | 5 | (2, 7) |
| Operating budgeting Choose one of the following alternatives. 1 = Once accepted, budgets are fixed. There are no changes made to them. Budgets change and adapting in the year as below: 2 = Revisions occur when the next formalized budgetary review takes place 3 = Revisions occur when the next rolling budget is prepared 4 = The budget is revised on an ad hoc basis | 2.6 | 2 | (1, 4) |
| Panel C: Strategy Linkage | | | |
| | Mean | Median | Range |
| Linkage The budget process is explicitly linked to strategic objectives/targets. (1 = strongly disagree to 7 = strongly agree) | 5.9 | 6 | (5, 7) |
| Implementation linkage a. Setting the budget causes us to talk about and reflect upon our strategy. b. We sometimes change our strategy based on the feedback derived from going through the budgeting process. c. Within the budget process, managers are expected to identify tactical initiatives to close the gap between current performance and the desired level of performance. (1 = strongly disagree to 7 = strongly agree). The score is the sum of three items. | 16.6 | 17 | (13, 20) |

Table 1 Descriptive Statistics of Budgeting Practice Variables (Cont.)**Panel D: Budget Emphasis and Gaming**

| | Mean | Median | Range |
|---|------|--------|----------|
| Budget emphasis | 18.8 | 17.50 | (13, 25) |
| Use of budgets as a fixed performance contract | | | |
| a. A manager's performance is judged by her superiors predominantly on the basis of attaining budget goals. | | | |
| b. In the eyes of one's superiors, achieving the budget is an accurate reflection of whether one is succeeding in business. | | | |
| c. A manager's promotion prospects depend heavily on her ability to meet the budget. | | | |
| d. In the eyes of upper management, not achieving the budget reflects poor performance. | | | |
| (1 = strongly disagree to 7 = strongly agree). The score is the sum of four items. | | | |
| Gaming | 3.6 | 4 | (0, 6) |
| Sum of the budget gaming incidents in recent two years. | | | |
| a. Lapsing budget | | | |
| b. Deferring necessary expenditure | | | |
| c. Accelerating sales | | | |
| d. Taking a "big bath" | | | |
| e. Gaming or sandbagging | | | |
| (0 = never occurs, 1 = occur occasionally, 2 = occurs frequently) | | | |
| The score is the sum of five items. | | | |

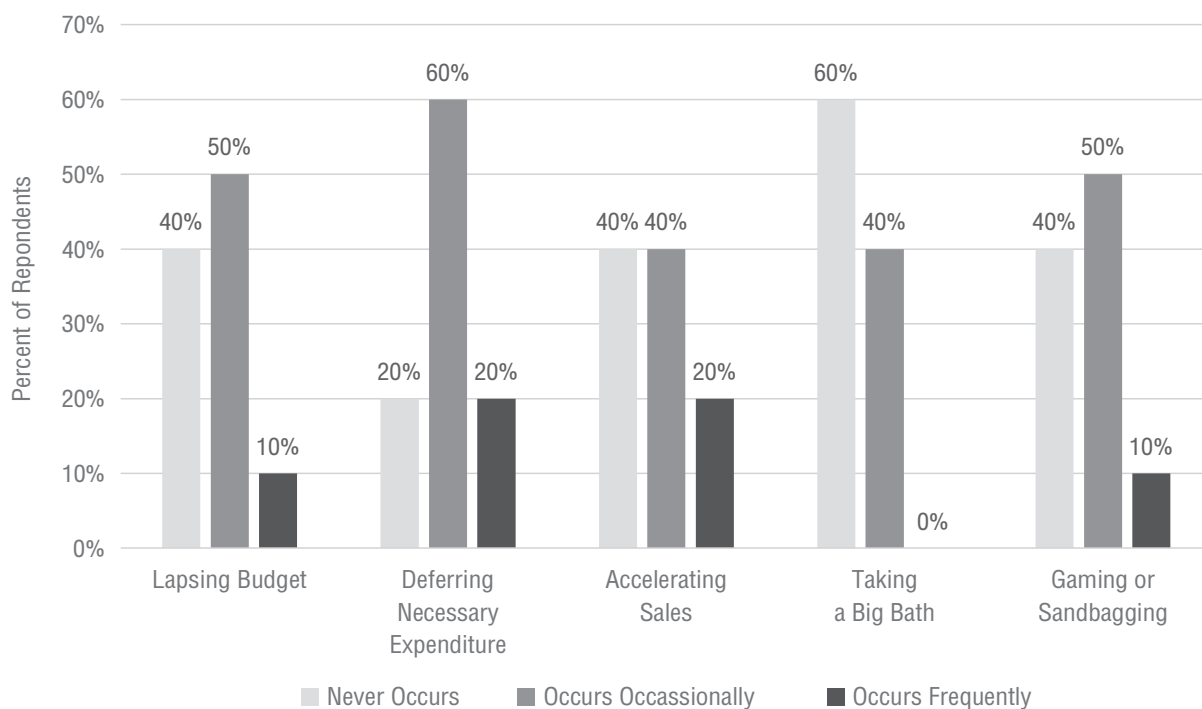


Figure 1: Budgetary gaming incidents in recent two years

Factors associated with budget value. The authors correlate the perceptions of budget value with the OCAI scores reprinted in Appendix B. Table 2 presents the Spearman's ρ correlation matrix. Neither the number of weeks spent by firms on budgeting practices nor the number of weeks that managers spend on budgeting practices significantly correlate with budget value. The correlation between Budget Value and Touch is positive ($r_s = .57, p = .044$). Also, budget value is significantly correlated with reliance on budgeting processes to changes ($r_s = .68, p = .015$) and strategy implementation linkage ($r_s = .64, p = .023$). Budget value does not significantly relate to predictability, budget emphasis, and gaming.

In addition, the findings reveal that the strategy implementation linkage correlates with Touch ($r_s = .57, p = .042$), reliance on the budgeting process to market changes ($r_s = .84, p = .001$), effectiveness of the budgeting process to market changes ($r_s = .71, p = .011$), predictability ($r_s = .64, p = .023$). As expected, budget emphasis is positively related to both the number of weeks managers spent on budgeting ($r_s = .67, p = .017$) and the fast-track approval ($r_s = .69, p = .013$).

In sum, the linkage between strategy implementation and budgeting processes is of particular importance to the budgeting process. In other words, such a linkage is highly regarded in explaining how the budgeting process is valued in managerial practices.

Table 2 Spearman’s ρ correlation matrix

| | A | B | C | D | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. |
|----------------------------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|-----|------|------|------|-----|
| A Clan | | | | | | | | | | | | | | | | | |
| B Adhocracy | .42 | | | | | | | | | | | | | | | | |
| C Market | -.66† | -.79‡ | | | | | | | | | | | | | | | |
| D Hierarchy | -.30 | -.73‡ | .44 | | | | | | | | | | | | | | |
| 1. Budget value | .85‡ | .34 | -.42 | -.08 | | | | | | | | | | | | | |
| 2. Firm weeks | .57† | .27 | -.23 | -.59† | .45 | | | | | | | | | | | | |
| 3. Manager weeks | .25 | -.13 | .01 | .07 | .38 | .17 | | | | | | | | | | | |
| 4. Touch | .32 | .09 | .02 | -.15 | .57† | .49 | .17 | | | | | | | | | | |
| 5. Predictability | .15 | .55† | -.32 | -.18 | .42 | -.03 | .10 | .32 | | | | | | | | | |
| 6. Reliance | .28 | -.04 | .23 | .13 | .68† | .31 | .46 | .51 | .26 | | | | | | | | |
| 7. Effectiveness | -.00 | .52 | -.10 | -.29 | .39 | .05 | .22 | .51 | .69† | .57† | | | | | | | |
| 8. Operating budget | .44 | .44 | -.74† | -.20 | .26 | -.11 | -.20 | -.13 | .01 | .07 | -.12 | | | | | | |
| 9. Resource acquisition | .69† | .27 | -.42 | -.08 | .74‡ | .56† | .30 | .16 | .30 | .53 | .11 | -.18 | | | | | |
| 10. Fast track approval | .08 | -.21 | .45 | -.08 | .25 | .45 | .42 | .09 | .04 | .63† | .10 | -.10 | .38 | | | | |
| 11. Linkage | .31 | -.29 | .06 | .40 | .45 | .25 | .51 | .42 | .21 | .34 | -.08 | .69† | .37 | .36 | | | |
| 12. Implementation linkage | .16 | .10 | .11 | .21 | .64† | .10 | .39 | .57† | .64† | .84‡ | .71† | .35 | .42 | .43 | .53 | | |
| 13. Budget emphasis | .01 | -.09 | .17 | -.09 | .11 | .24 | .67† | -.24 | .06 | .44 | .13 | -.30 | .47 | .69† | .10 | .22 | |
| 14. Gaming | -.23 | .07 | .28 | -.25 | -.25 | .13 | -.42 | -.41 | -.01 | .06 | -.07 | -.47 | .12 | .54 | -.35 | -.08 | .31 |

This table presents Spearman’s ρ correlation coefficients. † and ‡ denotes the significant levels at .05 and .01, respectively.

4.2 Budgeting Practice and Organizational Culture

Under the OCAI framework and its scoring method, it is found that two firms are classified as hierarchy-culture; two in the market culture, five in the clan culture and one in the adhocracy culture. The classifications of organizational culture aim not to point out any superiority over one another because each organization culture has its own distinctive characteristics (Robbins & Judge, 2018).

As per Table 2, the A scores representing the clan culture positively correlates with the budget value ($r_s = .85, p = .001$), the number of weeks firms spending on budgeting ($r_s = .57, p = .042$) and the resource acquisition ($r_s = .69, p = .013$). Firms with the higher B scores representing the adhocracy culture are more oriented toward market activities taken by major competitors and revenue generation ($r_s = .55, p = .05$). Firms with the hierarchy culture (high D scores) tend to spend less time in budgeting ($r_s = -.59, p = .035$). Firms with the market culture (high C scores) tend to be more rigid in operating budget revisions ($r_s = -.74, p = .015$).

Table 3 presents the median test by comparing variables in budgeting practices across four types of organizational culture. The finding identifies a significant difference in budget value ($\chi^2 = 10, p = 0.02$) among four types of organizational culture. It is suggested that different budget systems implemented in the organization can add different values to many managerial activities, such as decision making processes and operational procedures. Furthermore, different types of organizational culture have diverse implications in budgeting practices. The Kruskal-Wallis tests⁸ reveals the budget value are perceived by the hierarchy culture (mean = 65) and by the clan culture (mean = 80) differently ($\chi^2 = 5.83, p = 0.016$) whereas the market culture (mean = 60) is much different from the clan culture ($\chi^2 = 5.83, p = 0.016$). By the same token, there is a difference between the clan culture and the adhocracy culture (mean = 70), $\chi^2 = 5.00, p = 0.025$. The median test does not detect any significant difference in other budget practice variables possibly due to a relatively small sample size applied in this study, notwithstanding.

⁸ The results are not tabulated.

Table 3 Median Test: Comparisons of budgeting practices among organizational culture classifications

| Variables | Mean (range) | | | | Median Test | |
|----------------------------|------------------|----------------------|-------------------|----------------------|----------------------|-----|
| | Clan (n = 5) | Adhocracy (n = 1) | Market (n = 2) | Hierarchy (n = 2) | χ^2 (df = 3) | p |
| 1. Budget value | 80 (80, 80) | 70 (70, 70) | 60 (50, 70) | 65 (60, 70) | 10 | .02 |
| 2. Firm weeks | 7.2 (4, 12) | 8 (8, 8) | 5 (4, 6) | 1 (0, 1) | 3.20 | .36 |
| 3. Manager weeks | 5.2 (4, 10) | 1 (1, 1) | 4 (4, 4) | 3.5 (3, 4) | 1.11 | .77 |
| 4. Touch | 4 (3, 5) | 4 (4, 4) | 3.5 (3, 4) | 3 (3, 3) | 1.11 | .77 |
| 5. Predictability | 22.2 (18, 26) | 21 (21, 21) | 20.5 (20, 21) | 21.5 (18, 25) | 2.91 | .40 |
| 6. Reliance | 3.8 (3, 4) | 3 (3, 3) | 3.5 (3, 4) | 2.5 (2, 3) | 4.80 | .18 |
| 7. Effectiveness | .8 (-1, 2) | 1 (1, 1) | .5 (0, 1) | -.5 (-1, 0) | 3.20 | .36 |
| 8. Operating budget | 2.6 (2, 4) | 3 (3, 3) | 1.5 (1, 2) | 2.5 (2, 3) | 2.92 | .40 |
| 9. Resource acquisition | 5.4 (3, 6) | 4 (4, 4) | 4 (3, 5) | 3 (1, 5) | 6.66 | .08 |
| 10. Fast track approval | 5.4 (4, 7) | 4 (4, 4) | 5.5 (5, 6) | 3.5 (2, 5) | 1.90 | .59 |
| 11. Linkage | 6.2 (5, 7) | 5 (5, 5) | 5.5 (5, 6) | 6 (6, 6) | 2.50 | .47 |
| 12. Implementation linkage | 17.8 (16, 20) | 16 (16, 16) | 15.5 (13, 18) | 15 (13, 17) | 1.90 | .59 |
| 13. Budget emphasis | 19.6 (15, 25) | 13 (13, 13) | 23 (21, 25) | 15.5 (13, 16) | 5.20 | .15 |
| 14. Gaming | 3.2 (1, 5) | 5 (5, 5) | 4.5 (3, 6) | 3 (0, 6) | 1.2 | .75 |

This table presents a means and a range given in parentheses across four types of organizational culture. The median test scores are shown in the last two columns.

5. Conclusion and Discussion

The extant studies in budgeting practices demonstrate that some enterprises take their budgeting activities for granted (Hope & Fraser, 2003). Yet, there are a large number of organizations strategically deploying certain budgeting practices as part of effective management control toolsets. They well serve the benefits of planning and improvement functions within the organization. This is in line with the previous studies conducted in North America by which budgeting systems prove practical in adding value to managerial activities in particular and organizational operations in general (Libby & Lindsay, 2010).

This research study reinforces the aforementioned contributions from the work of Libby & Lindsay (2010). That is to say, executives in the publicly listed Thai companies across the agriculture and food industry carry out different budgeting practices, such as the amount of time spent on and the degree of involvement in budgeting processes. They seem to give high values to budgeting practices, although their processes need to be revitalized in the future. A good-governance-driven management tends to demand a right combination of the MCS elements to be put in place. Organizations with the control culture are more oriented toward dictating a predictable and stable budgeting process (Simons, 1995). This is also aligned with this study's findings; the Thai organizations with the control culture are prone to consider budgeting practices as typical business rituals to be carried out over time.

Moreover, the findings from this study highlight the fact that different types of organizational culture define different levels of value given to budgeting processes and controls. Such findings extend the implication of the Competing Value Model (CVM) put forth by Cameron and Quinn (2006) over the Thai organizational contexts. The cultural classifications based on the CVM provide insight into the budgeting practices. Firms with clan culture highly value the effectiveness of budgeting systems so as to achieve their objectives as well as spend the significant amount of time in the budgeting process. The clan-culture respondents indicate that it is difficult to acquire new resources outside of the budget process. The adhocracy-culture firm is associated with the notion of predictability when it comes to preparing the budget. The respondents from firms with market culture report that they mostly stick to the budget and, subsequently, the revisions are quite rigid. The hierarchy-culture firms spend significant less time in preparing budgets relative to other cultural groups.

The study also provides practical implications for organizations. First, to enhance value of the budgeting, the budgeting must be properly linked to strategy implementation and requires management effort and involvement. Secondly, the congruency and interdependency of budgeting practices and organizational culture are critical for organization success. Organizational culture influences how the budgets are prepared and how organizational members involve in the budgeting process. Another way around, the budgeting practices with proper strategy linkage can shape how organizational members think

and behave. Organizational culture, therefore, should be addressed as a key element of Management Control System when innovation and changes are introduced in any organizations.

This study is not without limitations, yet sheds some light to future research. The studied sample is small in number and only confined with a scope of the agriculture and food industry. The generalizability of the findings hence is inevitably bounded. It is intended to illuminate a preliminary study of how different organizational cultures may have an influence on budgeting practices, *vice versa*. Also, an organizational life cycle has not been incorporated into a set of variables studied. One may argue that organizations at different stages of the organizational life cycle tend to impose different budget practices as their managerial complexity grows in scale. It is then suggested that the future studies include the concept of organizational life cycle stages into their variables since it provides a clearer picture of how the isomorphism of organizational culture plays out in certain organizational settings (Cameron & Quinn, 2006) and organizational controls (Sue *et al.*, 2017). Another caveat is related to an operationalized definition of organizational culture. There is no universally accepted definition of organizational culture (Henri, 2006; Cameron & Quinn, 2006). However, this study essentially relies on the validated definition of organizational culture from a single source of the extant research under the OCAI. Thus, the interpretation and generalizability of practical contributions from this research are to be pursued with full discretion.

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APPENDIX A**Part 1: Organizational Culture Assessment Instrument (Cameron & Quinn, 2006)**

| 1. Dominant Characteristics | Now | Preferred |
|--|-----|-----------|
| A The organization is a very personal place. It is like an extended family. People seem to share a lot of themselves. | | |
| B The organization is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks. | | |
| C The organization is very results-oriented. A major concern is with getting the job done. People are very competitive and achievement-oriented. | | |
| D The organization is a very controlled and structured place. Formal procedures generally govern what people do. | | |
| Total (100) | | |

| 2. Organizational Leadership | Now | Preferred |
|---|-----|-----------|
| A The leadership in the organization is generally considered to exemplify mentoring, facilitating, or nurturing. | | |
| B The leadership in the organization is generally considered to exemplify entrepreneurship, innovation, or risk taking. | | |
| C The leadership in the organization is generally considered to exemplify a no-nonsense, aggressive, results-oriented focus. | | |
| D The leadership in the organization is generally considered to exemplify coordinating, organizing, or smooth-running efficiency. | | |
| Total (100) | | |

| 3. Management of Employees | Now | Preferred |
|--|-----|-----------|
| A The management style in the organization is characterized by teamwork, consensus, and participation. | | |
| B The management style in the organization is characterized by individual risk taking, innovation, freedom, and uniqueness. | | |
| C The management style in the organization is characterized by hard-driving competitiveness, high demands, and achievement. | | |
| D The management style in the organization is characterized by security of employment, conformity, predictability, and stability in relationships. | | |
| Total (100) | | |

| 4. Organizational Glue | Now | Preferred |
|---|-----|-----------|
| A The glue that holds the organization together is loyalty and mutual trust. Commitment to this organization runs high. | | |
| B The glue that holds the organization together is commitment to innovation and development. There is an emphasis on being on the cutting edge. | | |
| C The glue that holds the organization together is the emphasis on achievement and goal accomplishment. | | |
| D The glue that holds the organization together is formal rules and policies. Maintaining a smooth-running organization is important. | | |
| Total (100) | | |

| 5. Strategic Emphases | Now | Preferred |
|--|-----|-----------|
| A The organization emphasizes human development. High trust, openness, and participation persist. | | |
| B The organization emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued. | | |
| C The organization emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant. | | |
| D The organization emphasizes permanence and stability. Efficiency, control, and smooth operations are important. | | |
| Total (100) | | |

| 6. Criteria of Success | Now | Preferred |
|--|-----|-----------|
| A The organization defines success on the basis of the development of human resources, teamwork, employee commitment, and concern for people. | | |
| B The organization defines success on the basis of having the most unique or newest products. It is a product leader and innovator. | | |
| C The organization defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is key. | | |
| D The organization defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical. | | |
| Total (100) | | |

Part 2: Use of Budgets for Control (Lindsay & Libby, 2010)

We are interested in exploring whether the budget is used for control in your business unit. By “control” we mean the use of budgets for managerial motivation and as a standard for performance evaluation purposes. Please note: if a budget is not used for control purpose it may still be used for resources allocation, planning and coordination purposes.

Do you currently use budgets as a tool for control in your business unit? No____ Yes ____

Planning to abandon

Within the next two years, will your business unit abandon the use of budgets as a tool for control?

___ No. It is likely that we will continue to use the budget for control purpose.

___ Possibly. We consider abandoning the use of budget for control purpose.

___ Yes. We are planning to abandon the use of budgets for control purpose.

Planning to change

Do you intend to make any changes to your budgeting system over the next two years?

No___ Yes___

Panel A: Budget Value and Effort

1. Budget value

We wish to explore how much VALUE the budgeting system adds to the management of your business unit. Taking into account the management time spent on the budgeting process, as well as the budget system’s effectiveness in assisting the business unit to achieve its various objectives and any dysfunctional behavior it may or may not cause, what overall grade would you assign to the budgeting system/process. Use the scale below to help you assign a grade:

Grade (from 0 to 100) _____

0 = Disaster, 50 = no value, 100 = outstanding

2. Firm weeks to budget

On average, how many weeks does the annual, formalized budgeting process take to complete in your company (from the time managers are asked to start the process).

a. State the number of weeks _____

b. Not applicable because we use a rolling budget _____

3. Manager time to budget

Please provide a rough estimate of the total time the manager spends on budget-related tasks in the typical budget year (including management time to develop the initial budget, revisions, prepare budget reports, analyze budget variances, answer queries connected to the budget, etc.).

- a. less than 1 week
- b. 1 to 2 weeks
- c. 3 to 4 weeks
- d. 5 to 8 weeks
- e. 9 to 12 weeks
- f. 13 to 16 weeks
- g. Greater than 16 weeks
- h. Don't know

4. Touch

Please rate the extent of effort and involvement managers in your business unit expend on developing budgets using the following scale:

Scale from 1 through 5 with the following anchors:

1 = Heavy (detailed budget is prepared. Take weeks to prepare. Involve all responsibility centers and their managers.)

5 = Light (broad brush picture of key financial results. Take hours not weeks to prepare. Only involve finance staff and higher-level managers.)

Panel B: Budget and Adaptability

5. Predictability (adapted from Govindarajan (1984) and Umapathy (1987))

When constructing the budget (for forecast), how easy is it to predict that the following factors will change during the period covered by the budget?

- a. Market actions by key competitors (e.g., pricing, new product/service introductions, marketing programs etc.)
- b. The business unit's revenues (i.e., customer demand and prices)
- c. The business unit's costs
- d. Customer preferences and tastes
- e. Technical development or advancements in the industry impacting the design of new products
- f. Availability of required input materials purchased from suppliers

Scale:

- 1 = easy to predict
- 2 = mostly predictable
- 3 = Somewhat predictable
- 4 = fairly difficult to predict
- 5 = difficult to predict
- 6 = impossible to predict

6. Reliance on the budget to adapt to market changes

How much reliance does your business unit place on the budget process to adapt to market changes relative to other tools or approaches?

Scale:

- 1 = no reliance
- 2 = some reliance
- 3 = moderate reliance
- 4 = considerable reliance
- 5 = exclusive reliance

7. Effectiveness of the budget to adapting to market changes

Rate the effectiveness of the budgetary process in adaption to market changes

Scale:

- 3 = highly ineffective
- 2 = ineffective
- 1 = somewhat effective
- 0 = neither effective nor ineffective
- +1 = somewhat effective
- +2 = effective
- +3 = highly effective

Methods for adapting to market changes

Please indicate the degree to which you agree with each of the following statements as they apply to resource allocation in your business unit:

8. Resource acquisition

- a. Outside of the budget process, it is difficult to obtain new resources to support unforeseen opportunities designed to accomplish strategic initiatives

9. Fast track approval

- b. “Fast-track” approval processes exist to ensure timely availability for initiatives requiring significant resources that were not incorporated in the approved budget

10. Operating budgeting

Please select the response that best describes how the operating budget gets updated within your business unit.

- a. Once accepted, budgets are fixed. There are no changes made to them.
- b. The budget is revised on an ad hoc basis.
- c. Revision occur when the next formalized budgetary review takes place.
- d. Revisions occur when the next rolling budget is prepared.

Scale:

- 1 = strongly disagree
- 2 = moderately disagree
- 3 = somewhat disagree
- 4 = neither agree nor disagree
- 5 = somewhat agree
- 6 = moderately agree
- 7 = strongly agree

Panel C: Strategy linkage

11. Linkage

Please indicate the degree to which you agree with the following statements as they apply to strategy implementation within your business unit:

“the budget process is explicitly linked to strategic objectives/targets.?”

Scale:

- 1 = strongly disagree
- 2 = moderately disagree
- 3 = somewhat disagree
- 4 = neither agree nor disagree
- 5 = somewhat agree
- 6 = moderately agree
- 7 = strongly agree

12. Implementation linkage

Please indicate the degree to which you agree with the following statements as they apply to strategy implementation within your business unit:

- a. Setting the budget causes us to talk about and reflect upon our strategy.
- b. We sometimes change our strategy/tactics based on the feedback derived from going through the budgeting process.
- c. Within the budget process, managers are expected to identify tactical initiatives to close the gap between current performance and the desired level of performance.

Scale:

- 1 = strongly disagree
- 2 = moderately disagree
- 3 = somewhat disagree
- 4 = neither agree nor disagree
- 5 = somewhat agree
- 6 = moderately agree
- 7 = strongly agree

13. Budget emphasis (adapted from Van der Stede (2001))

Please indicate the degree to which you agree with the following statements as they apply to your business unit:

- a. A manager's performance is judged by his/her superiors predominately on the basis of attaining budget goals.
- b. In the eyes of one's superiors, achieving the budget is an accurate reflection of whether one is succeeding in business.
- c. A manager's promotion prospects depend heavily on his/her ability to meet the budget.
- d. In the eyes of upper management, not achieving the budget reflects poor performance.

Scale:

- 1 = strongly disagree
- 2 = moderately disagree
- 3 = somewhat disagree
- 4 = neither agree nor disagree
- 5 = somewhat agree
- 6 = moderately agree
- 7 = strongly agree

(HIGH budget emphasis = total score of 20 or greater on these four items (Lindsay & Libby, 2010))

14. Gaming (adapted from Merchant (1985), Umapathy (1987), and Bart (1988))

Using the two years as a point of reference, how often do you think the following practices occur in your business unit?

0 = never occurs 1 = occurs occasionally 2 = occurs frequently

- a. “Spending” unspent money at the end of the budget period so as not to lose it in the next budget period.
- b. Deferring necessary expenditures (e.g. maintenance, advertising, R&D, employee training) to assist in meeting budget targets.
- c. “Accelerating” sales near the end of the reporting period in order to make the budget. These sales would normally have been made in the next budget period.
- d. When a manager knows the target is not going to be attained, taking a “big bath” by incurring expenditures in the current period that normally would be incurred in the next budget period so as to make it easier to attain the budget next year,.
- e. Negotiating easier targets than one actually thinks can be accomplished to make the budget easier to attain and increase the odds of receiving a favorable evaluation and/or bonus. Some people might call this behavior “gaming” or “sandbagging.”

APPENDIX B

Descriptive statistics of the OCAI scores

| OCAI dimensions | Organizational culture | Median | Range |
|-----------------|------------------------|--------|----------------|
| A Now | Clan | 29.50 | (0, 42) |
| B Now | Adhocracy | 18.00 | (0, 36) |
| C Now | Market | 27.50 | (18, 53) |
| D Now | Hierarchy | 20.00 | (15, 47) |
| A Preferred | Clan | 31.42 | (23.33, 40) |
| B Preferred | Adhocracy | 20.00 | (10, 31.67) |
| C Preferred | Market | 25.42 | (17.50, 33.33) |
| D Preferred | Hierarchy | 20.00 | (6.67, 25) |

A, B, C, and D are the average scores of the OCAI dimensions. That is, A represents the clan culture. B represents the adhocracy culture. C represents the market culture. D represents the hierarchy market. Please see Cameron and Quinn (2006) for the items based on the Competing Value Framework.