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Budgetary Participation's Antecedent of Information Asymmetry and its Outcomes

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ABSTRACT

The purpose of this study is to investigate the antecedents and outcomes of budgetary participation. More specifically, I propose that a lack of information fosters budgetary participation. A high degree of participation allows the managers to have a favourable attitude toward budget attained and in turn, this leads to a low degree of budgetary creation slack. The questionnaire data obtained from 115 Vietnamese managers was used to test the proposed model. The results suggest that highly asymmetric information demands high participative budgeting. When participating more in the budgeting process, the managers' attitude toward the budget attained was favourable, and in turn, this leads to the decrease of budgetary slack creation. These findings contribute to the budgeting literature in a threefold manner. First, this study supports the argument that the demand for participation is high when there is highly asymmetric information. Second, the results suggest that the managers' attitude toward the budget attained mediates the relationship between budgetary participation and the managers' creation of budgetary slack. Third, by using the theory of planned behaviour, this study has explained how and why a favourable attitude toward the budget attained leads to the low creation of budgetary slack.

Keywords: Budgetary participation; budgetary slack; information asymmetry; managers' attitude.

INTRODUCTION

Budgetary participation is usually defined in accounting literature as a process in which managers are involve with, and have an influence on, the determination of their budget's settings (Shields & Shields 1998). This practice has been one of the most examined topics in management accounting studies (Brownell 1981; Brownell 1982; Chong & Johnson 2007; Heinle et al. 2013; Kren 1992; Maiga et al. 2014; Nouri & Parker 1996; Yuen 2007).

Research on budgetary participation can be divided into two main streams. In the first stream, many studies focus on the question of how budgetary participation can reduce the budgetary slack created by managers (Govindarajan 1986; Lau & Eggleton 2003; Maiga et al. 2014; Merchant 1985a; Onsi 1973). This question is based on the argument that budgetary participation serves as a motivational mechanism, which alters the managers' mental state (e.g. the belief that the subordinate's budget is not achievable) and as such, this leads to the reduction or elimination of the managers' creation of budgetary slack (Argyris 1952; Argyris 1953; Maiga & Jacobs 2007b).

In the second stream, the studies focus on the antecedents of budgetary participation (Chong & Johnson 2007; Shields & Young 1993; Wong-On-Wing et al. 2010; Yuen, 2007) since Brownell (1980) suggested that researchers should examine the conditions that lead to effective budgetary participation rather than the consequences of budgetary participation. In this stream, it is suggested that information asymmetry is a crucial antecedent of budgetary participation and that researchers should pay more attention to this variable (Shields & Shields 1998).

However, the results of this research are mixed. In the first stream, the link between budgetary participation and budgetary slack was shown to have a positive relationship (Govindarajan 1986; Kren & Maiga 2007; Lau & Eggleton 2003; Linn et al. 2001; Merchant 1985a) while other researchers have indicated there to be a negative relationship (Lukka 1988; Young 1985) or no relationship (Chong & Strauss 2017; Linn et al. 2001; Maiga 2005; Maiga et al. 2014). In the second stream, the findings indicate that there is a significant correlation between information asymmetry and budgetary participation (Shields & Young 1993) while the results of other studies show there to be no correlation (Jermias & Yigit 2012; Kyj & Parker 2008; Zainuddin et al. 2008).

Thus, the purpose of this study is to investigate the aforementioned issues. Regarding the first issue, instead of examining the direct link between budgetary participation and budgetary slack, I expected that the link between budgetary participation and budgetary slack was driven by a mediator such as the managers' attitude toward the budget attained (see Covaleski et al. 2006). In association with the second issue, this study in line with Shields and Shields (1998), who suggested that the demand for budgetary participation is higher when there is highly asymmetric information.

The remainder of this paper is as follows. The next section provides the theoretical background and hypotheses development. The subsequent section presents the data collection and methodology. The section after shows the results of this study. The last two sections describe the discussions, and conclusions.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

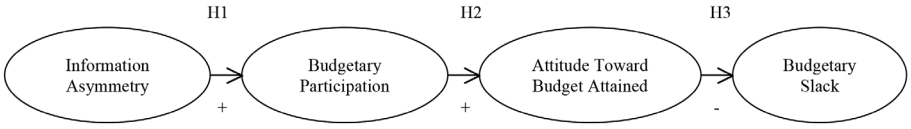

FIGURE 1. Research Model

ANTECEDENTS OF BUDGETARY PARTICIPATION

Information asymmetry describes the situation where information is unequally distributed between two parties (Inma 2005). In the budgeting context, asymmetric information occurs when the managers hold more information than their superiors (Baiman 1990). This is due to the managers being in charge of the local management and as such, they hold accurate information about the factors influencing the performance of their responsible areas (Chow et al. 1988; Chow et al. 1994; Evans III et al. 2001; Kren & Liao 1988; Waller 1988). In contrast, a superior lacks this information because the superiors delegate the management right to the managers themselves. The superiors can only gain access to this local information by incurring significant costs (Kyj & Parker 2008).

Participation is defined as the joint decision-making undertaken by the various parties involved in the process (see Locke et al. 1986). These parties are assumed to hold local and incomplete information. The management may provide a discussion platform for these parties to pool their local information and as a consequence, the parties gain complete information (see Stasser & Titus 1985).

Information asymmetry may be an important antecedent of budgetary participation. Shields and Shields (1998) stressed that the most important role of budgetary participation is to foster an information-sharing atmosphere between superiors and managers. The information allows the superiors to measure the managers' performance accurately, and as such, facilitate them in allocating the right budget (Covaleski et al. 2003; Magee 1980; Murray 1990). In addition, Shields and Young (1993) and Kyj and Parker (2008) proposed that when there is high degree of asymmetric information between the superiors and managers, it is more likely that the organisations will increase the degree of budgetary participation to allow their superiors to gain access to the local information held by the managers. Shields and Young (1993) found that there is a correlation between information asymmetry and budgetary participation. In line with their findings, I propose the first hypothesis as follows.

H1: A high degree of asymmetric information between superiors and managers is positively associated with a high degree of budgetary participation.

OUTCOMES OF BUDGETARY PARTICIPATION

One of the outcomes of budgetary participation is the managers' creation of budgetary slack (Shields & Shields 1998). The link between these two variables is unclear (see Govindarajan 1986; Lau & Tan 1998; Linn et al. 2001; Lukka 1988; Merchant 1985a; Onsi 1973; Young 1985). The mixed results suggest that the link between budgetary participation and budgetary slack may be driven by intervening variables (see Covaleski et al. 2006; Shields & Shields 1998).

Participatory theorists assume that the link between participation in decision making and its desired outcomes is driven by motivational mechanisms (Locke & Schweiger 1979; Wentzel 2004). This kind of mechanism enables the employees to have a higher degree of goal setting and goal acceptance (Latham 2000; Locke et al. 1986). Employees are less likely to resist difficult targets and they are more likely to accept challenging targets (Locke & Schweiger 1979).

Thus, this paper hypothesises that budgetary participation fosters motivational mechanisms which enhance the managers' attitude toward the budget attained and that results in the low degree creation of budgetary slack.

THE LINK BETWEEN BUDGETARY PARTICIPATION AND THE MANAGERS' ATTITUDE TOWARD THE BUDGET ATTAINED

In the budgeting literature, prior studies reveal that some of the positive effects of budgetary participation on the managers. First of all, Brownell and Hirst (1986) and Kenis (1979) found that budgetary participation reduces the managers' job-related tension. Second, Searfoss and Monczka (1973) and Searfoss (1976) reported that budgetary participation enhances the managers' motivation to attain their budget. Third, Mia (1988) and Milani (1975) showed that the managers participating in the budgeting process deploy a positive attitude toward their job. Thus, it can be summarised that the participative budgeting process has a positive impact on the managers' attitude and motivation.

To explain how and why the participative process influences the managers' attitude and motivation, it is necessary to examine the participatory literature. According to participatory theorists, participation in decision-making has a substantial impact on the participants' attitude and motivation (Argyris 1964; Durant et al. 2006; Franca & Pahor 2014; Likert 1961; McGregor 1989). Particularly, when the employees participate in decision making, their job satisfaction increases (Lowin 1968; Scott-Ladd et al. 2006; Vroom 1962). Such participation enhances job satisfaction because the participation satisfies the

participants' psychological need for autonomy at work, which refers to their control over their job (Driscoll 1978). In addition, participation in decision-making also inflates the participants' motivation (Durant et al. 2006; Lawler & Hackman 1969; Patchen 1970; Siegel & Ruh 1973). The participatory process improves motivation because this process provides the participants with the opportunity to have influence and control over their tasks and as such, they accept dealing with challenging tasks more (Locke et al. 1986). Taken together, participation in decision making positively alters the participants' attitude toward their job because it provides them with a sense of job control.

In the same vein, this paper argues that budgetary participation positively alters the managers' attitude toward the budget that has been attained. Budgetary participation provides the managers with the opportunity to have influence and control over their budgets, referring to the extent to which they negotiate their budget allocations with their superiors (Fisher et al. 2002). This participation fosters the managers' motivation to accept and commit to difficult budget targets because the participative process allows them to have an influence over the budgets themselves (Tiller 1983). Thus, they perceive that the budget allocations are attainable and they have a positive attitude toward the budgets themselves. This argument leads to the second hypothesis, which is as follows.

H2: A high degree of budgetary participation is positively associated with a high degree of managers' attitude toward budget attained.

THE LINK BETWEEN THE MANAGERS' ATTITUDE TOWARD THE BUDGET ATTAINED AND THE MANAGERS' CREATION OF BUDGETARY SLACK

Budgetary slack is the excess of the optimal resource that managers need to accomplish their managerial tasks or objects (Kren 2003). Managerial attitude has a strong impact on this behaviour. First, Onsi (1973) reported that managers who have a negative attitude toward the budgets intend to insert slack into the budgets. Second, Collins (1978) also indicated that there was a negative correlation between the managers' attitude to attempts to achieve the budget target and their intention to create slack. Third, Nouri (1994) found that managers who highly commit to their organisation or who have a high degree of job involvement are less likely to create budgetary slack. Fourth, Maiga and Jacobs (2007a) demonstrated that managers who are highly committed to their budget goal have a lack of intention to create budgetary slack. Finally, De Baerdemaeker and Bruggeman (2015) revealed that managers who effectively commit to their organisation will undertake their actions in line with the organisational goals, and as such, this reduces the creation of budgetary slack. The theory of planned behaviour may provide an insight into the relationship between the managers' attitude and their intention to create budgetary slack. This theory posits that an individuals' intention reflects their willingness to conduct a specific behaviour and it is thus the best indicator to predict an individuals' behaviour (Ajzen 1991). According to this theory, one of the factors strongly influencing the individuals' intention to conduct a specific behaviour is their attitude [1](Ajzen & Fishbein 1977; Montano & Kasprzyk 2015). For example, Ajzen (1989) illustrated an example that if an individual exerts a negative attitude toward medical professionals, this individual will refuse to be hospitalised or only make an appointment with a doctor in emergency situations. In contrast, if this individual exerts a positive attitude, then the individual expresses the intention to donate the money to fund a new hospital or indicates an interest in reading about advances in medicine.

Based on this theory, this paper argues that a positive attitude toward the budget attained decreases the managers' creation of budgetary slack. It is suggested that the managers create slack due to pressure (Hartmann & Maas 2010). One of these pressures results in the crucial need of budget attainments (Merchant 1990). If the managers have a positive attitude toward the budget attained, then they will perceive the budget to be attainable. This attitude allows the manager to be free from the pressure to attain the budget. Thus, they are less likely to insert slack into the budget. This argument leads to the third hypothesis.

H3: A high degree of managerial attitude is negatively associated with a low degree of the creation of budgetary slack.

THE MEDIATING ROLE OF MANAGERS' ATTITUDE TOWARD TO BUDGET ATTAINED ON THE LINK BETWEEN BUDGETARY PARTICIPATION AND MANAGES' CREATION OF BUDGETARY SLACK

Studies on the theory of planned behaviour suggest that attitudes toward certain behaviours are a mediator between the external variable and the behavioural outcomes. First, Alexandris et al. (2007) found that the attitude toward physical activities mediates the relationship between the elders' perceived constraints and their intention to exert activities. Second, Ismail et al. (2007) showed that the auditors' attitude is a mediator between the explanatory variables (e.g. perceived usefulness and rule observant behaviour) and their behavioural intention to accept the Practice Review System. Third, Amin et al. (2017) revealed that the association between the factors such as service quality and product choices, and the consumers' preferences, was mediated by their attitude. Thus, it is proposed that the managers' attitude toward the budget attained plays the role of mediator regarding the link between the budgeted variables as budgetary participation and the managers' creation of budgetary slack. This leads to the fourth hypothesis.

H4: The impact of budgetary participation on the managers' creation of budgetary slack is mediated by the managers' attitude toward the budget attained.

Data Collection and Methodology

Data Collection

The data was collected using a survey sent to 115 managers working at companies in the Mekong Delta of Vietnam. There were three criteria for the sample selection. First, the respondents had to be managers. The previous studies' sample characteristics indicated that they can belong to any management level including the lower, middle and top levels (Chong & Leung Tak-Wing 2003; Gago-Rodríguez & Purdy 2015). Second, the respondents had to have budget responsibility (Chong & Leung Tak-Wing 2003). Third, the respondents had to be responsible for the departments of accounting and finance, general management, HR, sales and marketing, supply chain and IT. They were selected because these types of managers are believed to have budget responsibilities, which is an essential condition for examining the creation of budgetary slack (Chong & Leung Tak-Wing 2003; Merchant 1985a; Onsi 1973).

To ensure high-quality data, clarity and to avoid misunderstandings of the translated questionnaire, I conducted interviews with two managers who were familiar with budget processes in order to identify any possible problems with the wording when the questionnaire was translated into the local language. During the interviews, some issues with unclear terms and ambiguous word choices were identified. Modifications were made to improve the construct validity, and an adapted version of the questionnaire was tested using two other managers. After this, revisions were made and the questionnaire was sent out to the target respondents.

Measures

Information Asymmetry (IA)

The information asymmetry instrument was adapted from Dunk's study (1993). Information asymmetry arises when the managers have more private information than their superiors. I asked the respondents to indicate whether or not their superiors were in possession of information relating to the following 6 aspects: (1) the respondents' areas of responsibility, (2) the input-output relationships inherent in the internal operations of the respondents' area of responsibility, (3) the performance potential of the respondents' area of responsibility, (4) the technical work of the respondents' area of responsibility, (5) assessing the potential impact of the external factors on the activities of the respondents' area of responsibility and (6) understanding what can be achieved in the respondents' area of responsibility. All of the questions were reversed scored.

Budgetary Participation (PART)

This study adapted the instrument from Milani's research (1975) to measure the degree to which the managers participated in the budgeting processes. This instrument measured the degree of budgetary participation by examining the 6 aspects associated with the budgeting processes: (1) the importance of the managers' involvement in the budget setting, (2) the reasons provided to the managers when the budget was revised, (3) the frequency of the budget discussion initiated by the managers, (4) the managers' influence on the final budget, (5) the importance of the managers' contribution to the budget and (6) the frequency of the budget discussion initiated by their superiors.

Managers' Attitude Toward Budget Attained (ATT)

Chow and Chen (2009) suggested that an attitude toward a specific behaviour is the individuals' evaluation of the behaviour (e.g. good, beneficial, pleasant). Thus, the instrument asked the respondents to rate the evaluation of their feelings and beliefs (e.g. agree/disagree) when they performed a specific behaviour associated with attaining the departmental entity's budgets. In particular, the instrument asked the respondents whether they agreed or disagreed with the three following criteria: (1) attaining the departmental entity's budget is good, (2) attaining the departmental entity's budget is beneficial and (3) attaining the departmental entity's budget is pleasant. The respondents' opinion on the attainment of the budgets is the proxy measuring their attitude toward the budget attained.

Managers' Creation of Budgetary Slack (SLACK)

To measure the degree of the managers' creation of budgetary slack, I relied on the instrument of Dunk (1993). The definition of budgetary slack used in this study focuses on the ease with which the budgetary targets can be achieved (De Baerdemaeker & Bruggeman 2015). In particular, these instruments measure 6 aspects relating to the ease of budget attained: (1) successfully submitting budgets that are easily attainable, (2) budget targets inducing high departmental productivity, (3) budget targets requiring costs to be managed carefully in the department, (4) effort to attain the budget targets, (5) budget targets not requiring the managers to be particularly concerned with improving efficiency in the department and (6) the specifications of the budget targets. This instrument was determined to be valid and reliable because it was used in previous studies examining budgetary slack (De Baerdemaeker & Bruggeman 2015; Dunk 1993; Van der Stede 2000).

Controlled Variables

Becker (2005) recommended that it is necessary to include variables if the prior evidence reveals that they have an influence on the dependent variable. As a result, this study included two controlled variables in the tested model, namely a superiors' ability to detect budgetary slack (S_DT) and budget emphasis (B_EMPS). First, the previous authors revealed that the creation of budgetary

slack is negatively associated with the superiors' ability to detect slack (Merchant 1985a; Onsi 1973). Thus, it is expected that there is a negative relationship between this variable and the managers' creation of budgetary slack. This variable was measured using the three-item measure developed by Onsi (1973).

Second, Linn et al. (2001) reported there to be a positive association between budget emphasis and the managers' creation of budgetary slack. Thus, it is expected that budget emphasis has a positive impact on the creation of budgetary slack. This variable was measured using the two-item measure developed by Lau and Tan (1998).

ASSESSMENT OF COMMON METHOD BIAS

All of the measures used in this study were gathered from the same survey. This may create an issue of common method bias. Hence, the study employed Harman's single-factor test (Podsakoff & Organ 1986). In the test, it is assumed that if a considerable amount of a common method variance exists, then the result of the factor analysis using all of the data is a single factor, which accounts for the majority (the threshold of 50%) of the covariance in the independent and dependent variables. Principal Axis Factoring (PAF) analysis was performed on the items measuring all of the constructs (IA, PART, ATT, SLACK, S_DT, and B_EMPS). The results[2] suggest that no single factor constitutes the majority of the variance in the measures. Hence, this study does not need to take into account this type of bias.

RESULTS

DESCRIPTIVE STATISTIC

Table 1 displays the respondents' characteristics and the companies' background. According to Panel A, 53.91% of the respondents reported their gender as male, 55.65% of them indicated their position as lower managers and 33.91% stated that they were middle-level managers. In addition, 54.55% of them described their working functions as in the sale and marketing departments. Panel B illustrates that their companies operate in a wide range of different sectors including processing, wholesale and retail trade, servicing, energy and water, banking, and IT industries. More than half of them hire more than 1,000 employees. The majority of them have operated in their respective industry for more than six years. About one-third of them are controlled by the state.

The results from the descriptive statistics also show that the majority of the respondents are lower managers with a background of sales and marketing from within state-owned companies. This does not affect the results of this study for the following three reasons. First, Gago-Rodríguez and Purdy (2015) indicated that the respondents being lower managers accounted for 42.8%, which is similar to this study. Second, managers having the background of sales and marketing are suggested to participate in the budgeting process and to have an influence on the budget (Walker & Johnson 1999), thus the inclusion of these managers in the sample is appropriate. Lastly, Sjöholm (2006) indicated that state-owned firms dominate the Vietnamese market and thus there is a high possibility that the respondents work for these type of firms.

HYPOTHESIS TESTING

This study used SmartPLS, a structural equation modelling tool, to test the proposed hypothesis. First, it assessed the psychometric properties of the measurement model. Second, it estimated the parameters of the structural model. Partial least squares (PLS) was used in this paper because it requires minimal data assumptions and a small sample size (Hair et al. 2011).

MEASUREMENT MODEL

Accessing the measurement model required two steps. In the first step, exploratory factor analysis was run to examine the unidimensionality of all of the constructs. First, principal axis factoring was conducted with Oblimin rotation to analyse the dimensionality of all of the constructs (Fabrigar et al. 1999). Seven components were extracted, corresponding to the number of intended constructs. Next, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were analysed. The KMO measure (0.729) was above the suggested rule-of-thumb threshold of 0.6, which indicates an adequate sample size. The Chi-square value for Bartlett's test was large (1,922.332) and significant ($p < 0.001$), implying that the correlation matrix is not an identity matrix. Summarily, these two tests indicate that it is safe to proceed with and interpret the results (Cascardi et al. 1999). Next, poorly performing items (i.e. loadings below the 0.50 threshold) were removed (Hair et al. 2010). After the removal of an item, a new principle axis factoring with Direct Oblimin rotation was conducted and the previously mentioned steps were repeated. This process allowed me to rigorously assess the construct dimensionality (Rook & Fisher 1995). In total, two items were deleted: SLACK_1 and SLACK_3. Secondly, confirmatory factor analysis (CFA) was conducted to examine the factor loadings of the measurement items on their respective latent constructs as well as their cross-loadings. The results, presented in Table 2, show that each item's loading on its respective construct was highly significant ($p < 0.001$)

In the second step, the measurement model was evaluated by investigating the convergent validity, discriminant validity, internal consistency and multicollinearity among the variables. To assess the convergent validity, the average variance extracted (AVE) was examined. An AVE value higher than 0.50 indicates a sufficient degree of convergent validity. This means that the latent variable explains more than half of its indicators' variances (Fornell & Larcker, 1981). Table 3 shows that the AVE of all of the constructs was higher than the 0.50

TABLE 1. Descriptive statistics

Panel A: Respondents' characteristics		%
Gender		
	Male	
	Female	53.91
	Not specified	46.09
Education		
	Professional diploma or less	2.02
	Associate degree	4.04
	Bachelor	83.84
	Master	26.26
Professional level		
	Lower-management level	55.65
	Middle management level	33.91
	Top management level	8.70
	Not specified	1.74
Function		
	General management	27.27
	Accounting and Finance	22.22
	Human resources	5.05
	Sales and Marketing	54.55
	Supply chain	3.03
	Information technology	2.02
	Not specified	2.02

Panel B: Companies' backgrounds		
Industry		
	Processing industry (textiles, food, beverages).	14.78
	Wholesale and retail trade.	6.96
	Hotel, restaurant, tourism, consultancy and other service industries.	13.91
	Energy and water.	2.61
	Banking and insurance.	60.00
	IT	1.74
	Other	
Size		
	<=50	3.03
	101 to 250	24.24
	251 to 500	9.09
	501 to 1.000	11.11
	1.001 to 2.000	36.36
	2001 to 5.000	23.23
	5.001 to 10.000	9.09
Founded year		
	<= 5	7.07
	6-10	64.65
	11-15	18.18
	16-20	2.02
	>=21	24.24
State-owned percentage		
	0%	15.15
	<=25%	13.13
	more than 25% - less than 50%	53.54
	more than 50% - less than 100%	32.32
	100%	2.02

threshold. Moreover, Table 2 shows that all items loaded the highest on their respective construct with a lower bound of 0.690. These loadings confirm the convergent validity of all constructs because according to Fornell and Larcker (1981) suggestion, these items also load higher on their respective construct than on any other construct.

Discriminant validity was assessed to ensure that all of the construct measures were empirically unique and that they represent the phenomena of interest that other measures in the structural equation model do not capture (Hair et al. 2010). To determine the discriminant validity, the AVE values from Table 3 were used and, in line with Fornell and Larcker (1981), it was found that the square root of the AVE for each latent variable was bigger than any correlation among any pair of latent variables (see Table 4). Therefore, it is safe to conclude that discriminant validity has been established (Chin 1998).

After establishing the discriminant validly, the internal consistency reliability of the measurement model was assessed by calculating the composite reliability (CR) and Cronbach's Alpha. Table 3 shows that all of the composite reliability scores and Cronbach's Alpha were above the 0.70 threshold (Hair et al. 2011).

Lastly, multicollinearity among measurement items and latent variables was assessed by examining the VIF scores. Tables 2 and 5 indicate that all of the VIFs were less than the threshold value of 5, which suggests the absence of multicollinearity among both the measurement items and latent variables (Hair et al. 2011).

STRUCTURAL MODEL

The purpose of assessing the structural model was to estimate the specified structural equations. The path coefficients demonstrate the strength and direction of the relationships among the latent variables. Following the suggestion of Hair et al. (2011), the statistical significance of the parameter estimates was assessed using a bootstrap procedure with 5,000 replacements. Also, in line with the prior research (Hartmann & Slapničar 2009), I also examined the predictive validity of the parameter estimates. Tenenhaus et al. (2005) and Vandenbosch (1996) argued that in order to provide sufficient evidence of model fit, it is necessary to examine the Stone-Geisser Q^2-test because PLS models lack an index. This provides the goodness of fit statistics used in covariance-based structural equation models. Q^2 values larger than zero for a certain endogenous latent variable indicate the path model's predictive relevance for this particular construct (Chin 1998; Hair et al. 2011). The Q^2 values of the endogenous variable are greater than zero, suggesting sufficient evidence of model fit. Table 6 shows that the Q^2 values of all endogenous variables are greater than zero. Thus, it is safe to conclude that the model fit is sufficient. The R values have also been reported in Table 6.

Next, the magnitude and strength of the hypotheses and controlled path were examined (see Figure 2). The results suggest that all of the paths are significant. More specifically, the path between IA and PART is significant

TABLE 2. Cross-loadings and VIFs

	ATT	B_EMPS	IA	PART	SLACK	S_DT	VIF
ATT_1	**0.905**	-0.075	-0.035	0.277	-0.239	0.154	2.243
ATT_2	**0.854**	-0.021	-0.074	0.116	-0.298	0.043	1.883
ATT_3	**0.830**	-0.034	-0.070	0.151	-0.245	0.195	1.775
B_EMPS_1	-0.098	**0.922**	0.230	0.093	0.459	-0.020	1.624
B_EMPS_2	0.017	**0.876**	0.263	0.133	0.369	0.187	1.624
IA_1	-0.025	0.231	**0.755**	0.209	0.412	0.047	2.071
IA_2	-0.019	0.265	**0.903**	0.348	0.357	-0.004	2.808
IA_3	-0.039	0.218	**0.816**	0.181	0.315	-0.032	2.401
IA_4	-0.007	0.254	**0.749**	0.195	0.262	-0.061	1.837
IA_5	-0.169	0.223	**0.690**	0.016	0.337	0.023	2.048
IA_6	-0.208	0.080	**0.739**	0.185	0.290	-0.117	1.977
PART_1	0.184	0.058	0.173	**0.840**	0.099	0.121	3.075
PART_2	0.189	0.108	0.336	**0.925**	0.207	0.103	4.219
PART_3	0.228	0.147	0.255	**0.799**	0.068	0.027	2.182
PART_4	0.227	0.050	0.204	**0.848**	0.173	0.061	2.967
PART_5	0.110	0.139	0.245	**0.910**	0.145	0.127	4.530
PART_6	0.160	0.126	0.270	**0.805**	0.049	0.305	2.528
SLACK_2	-0.326	0.405	0.271	0.087	**0.886**	-0.106	2.835
SLACK_4	-0.277	0.516	0.387	0.077	**0.900**	-0.193	2.765
SLACK_5	-0.090	0.255	0.280	0.161	**0.736**	-0.100	1.716
SLACK_6	-0.247	0.301	0.429	0.213	**0.780**	-0.129	1.688
S_DT_1	0.105	-0.010	-0.088	0.127	-0.134	**0.888**	2.738
S_DT_2	0.140	0.102	-0.044	0.180	-0.178	**0.911**	2.332
S_DT_3	0.164	0.120	0.053	0.049	-0.123	**0.917**	3.407

TABLE 3. AVE, $\sqrt{\text{AVE}}$, Composite Reliability and Cronbach's Alpha

	Cronbach's Alpha	CR	AVE	$\sqrt{\text{AVE}}$
ATT	0.829	0.898	0.746	0.864
B_EMPS	0.765	0.894	0.808	0.899
IA	0.878	0.901	0.606	0.778
PART	0.927	0.943	0.733	0.856
SLACK	0.848	0.897	0.686	0.828
S_DT	0.892	0.932	0.819	0.905

TABLE 4. Discriminant validity (inter-correlations) of constructs

		ATT	B_EMPS	IA	PART	SLACK	S_DT
ATT	Correlation						
	p-value						
B_EMPS	Correlation	-0.052					
	p-value	0.586					
IA	Correlation	-0.068	.271**				
	p-value	0.474	0.004				
PART	Correlation	.218*	0.123	.295**			
	p-value	0.02	0.195	0.001			
SLACK	Correlation	-.303**	.466**	.413**	0.150		
	p-value	0.001	0.000	0.000	0.109		
S_DT	Correlation	0.150	0.080	-0.033	0.140	-0.165	
	p-value	0.111	0.397	0.724	0.136	0.079	

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

TABLE 5. VIFs between latent variables

	ATT	B_EMPS	IA	PART	SLACK	S_DT
ATT					1.074	
B_EMPS					1.028	
IA				1.000		
PART	1.000				1.080	
SLACK						
S_DT					1.042	

TABLE 6. R^2 and Q^2

	R^2	Q^2
ATT	0.047	0.026
B_EMPS	-	-
IA	-	-
PART	0.087	0.053
SLACK	0.350	0.209
S_DT	-	-

(t = 2.342, p = 0.019), which supports Hypothesis 1. The path between PART and ATT is significant (t = 2.177, p = 0.030), and so Hypothesis 2 is supported by the data. In line with Hypothesis 3, the path between ATT and SLACK is significant (t = 3.383, p = 0.01). The controlled path describing the relationship between B_EMPS and SLACK is significant (t = 7.496, p < 0.01) while the other controlled path is insignificant (t = 1.869, p = 0.062)

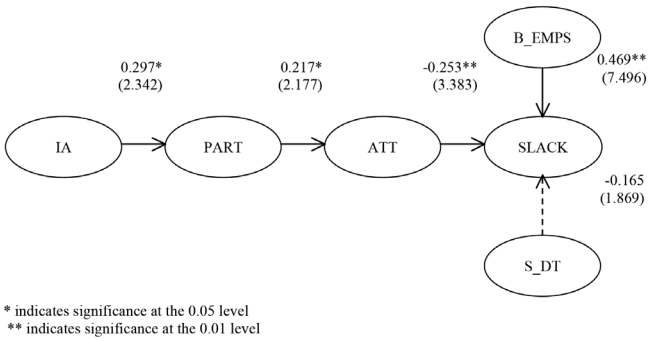

FIGURE 2. Results of the Structural Model

MEDIATING TEST

To access the effects of mediation, the procedures described by Hair et al. (2017). First, a direct effect from PART to SLACK was added to the proposed model and the model was then re-ran. The results show that the indirect effect and direct paths were all significant. Particularly, the indirect effects consisting of the path between PART and ATT and the path between ATT and SLACK are both significant ($t = 2.166$, $p = 0.030$; $t = 3.979$, $p < 0.01$). The direct effects, including the path between PART and SLACK, are also significant ($t = 2.146$, $p = 0.032$). It was also noted that other paths are also significant. Based on the results, it is safe to conclude that there is a partial mediator in the model and as such, it supports Hypothesis 4. Hence, the managers' attitude toward the budget attained is the mediator between budgetary participation and the managers' creation of budgetary slack.

DISCUSSIONS

The results of this study are consistent with the prior studies in the budgeting literature. First, regarding the link between budgetary participation and information asymmetry, Shields and Young (1993) and Kren and Maiga (2007) found there to be a correlation between budgetary participation and information asymmetry. In the same vein, the results of this paper indicate that the demand for participative budgeting is higher when there is high asymmetric information. Second, in association with the link between budgetary participation and the managers' attitude, Milani (1975) showed that budget participation motivates the managers' attitude toward the involved jobs. In the same way, Kenis (1979) demonstrated that budgetary participation has a positive influence on job-related and budget-related attitudes. Similarly, Mia (1987) revealed that participative budgeting fosters a positive attitude toward jobs. Additionally, Huang and Chen (2009) indicated that a more favourable attitude toward the budgeting process is positively correlated with a more favourable attitude toward budgetary slack, and as such, it leads to the reduction of the creation of budgetary slack. In line with the mentioned studies, the results of this study prove that when the managers participate more in the budgeting process, their attitude toward the budget attained is positive and as such, this leads to the reduction of the creation of budgetary slack. Third, Covaleski et al. (2006) argued that the link between budgetary participation and budgetary slack is driven by the intervening variables. The findings support this argument to the extent to which they show that the impact of budgetary participation on the managers' creation of budgetary slack is mediated by the managers' attitude toward budget attained.

The results between the two control variables and the managers' creation of budgetary slack are also consistent with the existing budgeting literature. Regarding the budget emphasis variable, Collins et al. (1987) suggested that managers are more likely to engage in budget games with their superiors when the superiors heavily evaluate the managers' performance based on budgets. This reflects a high budget emphasis. These games can be the cause of the managers' creation of budgetary slack (Huang & Chen 2010). However, motivational theorists suggest that when the managers are motivated, they are less likely to create slack (De Baerdemaeker & Bruggeman 2015; Maiga & Jacobs 2007a; Nouri 1994). In line with this argument, the findings show there to be a positive association between budget emphasis and the managers' creation of budgetary slack.

In association with the superiors' ability to detect budgetary slack, the results are also in line with the budgeting literature. It is suggested that although the superiors may be aware of the managerial intention to create budgetary slack, their ability to detect slack is limited (Chong & Ferdiansah 2012; Lowe & Shaw 1968; Van der Stede 2000). One of the factors limiting the ability to detect budgetary slack is the unstable and unstructured working environment (Merchant 1985b; Onsi 1973). In such environment, the superiors often fail to detect the managers' creation of budgetary slack through participative budgeting (Dunk & Nouri 1998). The results of this study support this argument to the extent to which there was found to be no association between the superiors' ability to detect budgetary slack and the managers' creation of budgetary slack.

CONCLUSIONS

The purpose of this study was to unravel the budgetary participation antecedents of information asymmetry and its

outcomes such as the managers' attitude toward the budget attained and their creation of budgetary slack. The results of the survey show that budgetary participation is higher in the condition where asymmetric information is high. A high degree of budgetary participation is positively associated with the managers' attitude toward budget attained. A high degree of their attitude is negatively associated with a low degree of the creation of budgetary slack. These results imply that participative budgeting is caused by asymmetric information between the managers and their superiors. Besides, letting managers participating in the budgeting process foster their motivation to the extent to which their attitude toward budget attained is higher and in turn, this leads to the low creation of budgetary slack.

Compared with the prior studies, the contributions of this paper to the budgeting literature are threefold. First, this study provides additional evidence to support the agency theorist argument that information asymmetry is considered to be a crucial variable to increase the need for participative budgeting for the superiors to gain access to managers' area of responsibility in order to better provide an adequate budget allocation (see Kyj & Parker 2008; Shields & Shields 1998).

Second, this study contributes to psychology-based budgeting research. By taking into account the managers' attitude toward the budget attained as a mediator between budgetary participation and budgetary slack, this study provides additional evidence that the link between budgetary participation and the managers' creation of budgetary slack is driven by the managers' attitude toward the budget attained (Covaleski et al. 2006).

Finally, this study contributes to the budgeting literature by implying the inclusion of the theory of planned behaviour to explain the significant relationship between the managers' attitude toward the budget attained and their creation of budgetary slack. Although prior budgeting studies have realised the crucial role of the managers' attitude related to their creation of budgetary slack (Huang & Chen 2009; Huang & Chen 2010; Wentzel 2004), very little research has recognised the potential of this theory in explaining this relationship. By extending the knowledge on the theory of planned behaviour as related to budgeting research, this study sheds lights on the psychological mechanism underlying the relationship between the managers' attitude and their creation of budgetary slack.

The results of this study are subject to some limitations. First, the sample size collected from the survey was rather small in this study. This may have a negative impact on the reliability of the results because it violates the assumptions of SEM. However, a PLS SEM analysis works efficiently with a small sample because only covariance-based SEM requires that assumption (Hair et al. 2011). Thus it is believed that the results of this study are reliable.

Second, the data was collected by sending the survey to the managers living in the Mekong Delta of Vietnam. Thus the generalisability of the results to other areas of Vietnam may be problematic.

Third, due to the heterogeneity of our sample, our respondents' knowledge about the budgeting process may vary. This variation might have increased the noisiness of the measurements. However, before sending the questionnaire to the respondents, the questionnaire was carefully examined by two managers who were familiar with the budgeting process. As such, it is believed that the questionnaire was appropriate for the respondents.

Fourth, due to the absence of a pilot test, it is plausible that the translated questionnaire may be difficult for the respondents to fully understand. Thus it may create a bias in the findings. However, in the translation process, two managers who were familiar with the budgeting process carefully assisted in the phrasing of the questionnaire texts. Thus, this type of bias is not a concern of this study.

Although there are some limitations, this study provides an avenue for future research. First, despite the fact that this study proves that the relationship between budgetary participation and the managers' creation of budgetary slack is mediated by the managers' attitude toward budget attained, future studies can investigate other mediators such as motivation because (Shields & Shields 1998) suggested that attitude and motivation are both psychological variables mediating the relationship. Second, Maiga and Jacobs (2007b) presented that the managers' ethical judgments moderate the relationship between budgetary participation and budgetary slack. Therefore, it may have a moderating impact on the relationship between budgetary participation and the managers' attitude toward budget attained. Future studies should investigate the moderating effects. Third, fairness in the budgeting process was shown to influence the managers' propensity to create budgetary slack (Little et al. 2002). Future studies should examine whether or not fairness in the process influences the managers' attitude toward budget attained. By doing so, it emphasises the crucial role of fairness and the extent to which it fosters a positive attitude and as such, reduces slack.

NOTES

[1] According to the theory of planned behaviour, there are three factors, namely attitude, subjective norm, and perceived behavioural control, that influence an individuals' intention to conduct the behavior itself. In this study, I only included attitude in the model because the previous studies on budgeting showed that the link between the managers' attitude and their creation of budgetary slack is well-established (Collins 1978; Onsi 1973).

[2] The total variance explained by one single factor was 20.44%.

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