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Performance implication of budgetary participation and learning goal orientation: Empirical evidence from Vietnam

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ABSTRACT

This study develops and empirically validates a Participation–Learning–Innovation–Performance chain by integrating employees' budgetary participation, learning goal orientation, innovative behaviors, and job performance. In particular, this study evaluates the mediating effect of employees' learning goal orientation on the relationship between their budgetary participation and innovative behaviors, and then examines the performance effect of these innovative behaviors on subsequent job performance. The hypotheses were empirically tested using a sample of 337 mid- and low-level managers from business organizations in Vietnam. Partial least squares-structural equation modeling was performed to test the hypotheses. The findings indicate that: (1) Employees' learning goal orientation acts as a transmitting device that connects their budgetary participation and innovative behaviors, and (2) these behaviors in turn lead to enhanced job performance. From these findings, this study proposes theoretical and managerial implications regarding designing a favorable budgetary environment for positive employees' performance outcomes.

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1. Introduction

Over the past thirty years, positivist accounting researchers have extensively studied the relationship between employees' participation in budgeting and their subsequent performance. Comprehensive reviews by Luft and Shields (2003) and Herschung et al. (2017) show that the consequences of budgetary participation center on employees' job satisfaction and performance. Budgeting research conducted before 2000 at the organizational and sub-unit levels includes more budgeting variables at the individual level, but uses them in a different theoretical context and relates them to a different set of non-accounting variables (e.g., technology or organizational structure rather than individual satisfaction or stress). Management accounting variables are often the same budgeting variables that appear in the budgeting literature at the individual level, such as budgetary participation (Shields & Young, 1993) and budget emphasis (Dunk, 1989). Typical budgeting research at the organizational and sub-unit levels shows that organizational size, diversification, and decentralization increase budgetary participation, and that budgetary participation has a larger influence on performance in larger organizations. The studies also reveal that higher levels of budgetary participation are associated with more budget-based compensation, which in turn leads to higher firm performance (Shields & Young, 1993). These relationships between budgetary participation and its performance outcomes found the accounting literature are also acknowledged in the literature in other disciplines such as general management (Hassel & Cunningham, 1996; Leach-López et al., 2009; Winata & Mia, 2005), human resource management (Cohen & Karatzimas, 2011); psychology (Brownell, 1982; Orpen, 1992) and information technology (Chalos & Haka, 1989).

Since 2000, there has been a decline in budgetary participation literature at the individual level, and few studies have assessed the subsequent performance of employees' budgetary participation. This is because a number of aspects of budgeting have moved to other budgeting-relevant contexts, such as budget-based compensation and budget slack (Fisher et al., 2002; Webb, 2002). More recent studies on budgetary participation have examined the mediating effects of psychological capital (Venkatesh & Blaskovich, 2012), job satisfaction and relevant job information (Leach-López et al., 2007), and role ambiguity (Parker & Kyj, 2006) on the link between budgetary participation and job performance.

Despite recent studies on the connection between budgetary participation and employees' behaviors in terms of budget commitments and information sharing (e.g., Parker & Kyj, 2006), there is still a lack of understanding of the interface between budgetary participation and innovative behaviors at the individual level. Many studies have investigated innovative behaviors and performance at the firm level (e.g., Calantone et al., 2002; Damanpour & Evan, 1984; Hogan & Coote, 2014) because innovation is considered a key source of organizations' competitive advantage (Weerawardena, 2003). Firms that engage in innovative behaviors (e.g., development of new products, services, and solutions) can realize positive performance outcomes (Hogan & Coote, 2014). However, the link

between innovative behaviors and performance at the individual level is still under-researched.

Further, there is debate regarding whether budgetary participation promotes or hinders employees' innovative behaviors. Budgets with more financial constraints often receive bad "press" because they are accused of stifling innovation in organizations (Marginson & Ogden, 2005). This suggests a trade-off between budgetary participation and innovation. However, some studies have found evidence for the synergy between budgetary participation and innovation orientation (e.g., Dunk, 1995; Subramaniam & Mia, 2001). For example, Subramaniam and Mia (2001) find that managers' value orientation toward innovation positively moderates the relationship between organizational commitment and budgetary participation. Dunk (1995) finds that if managers' interest in innovation is high, budgetary participation is more effective in promoting their department's performance. However, the direct link between budgetary participation and employees' innovative behaviors, as well as the path connecting them, remain unexplored in the literature.

This gap is considered important in developing countries, including Vietnam, where budgeting practices being adopted in Vietnamese business firms are still limited the context of increasing competition (Doan et al., 2011). Although budgeting practices (e.g., sales budgeting, profit budgeting/planning, budgeting for controlling costs, budget variance analysis, production budgeting, cash budgeting) of the large and medium Vietnamese business firms have the highest adoption rates to those of other Western management accounting techniques (e.g., costing, performance evaluation), the rates (around 90 percent) are still smaller compared to those of other transitional economies such as China and India (Doan et al., 2011). Bridging this gap is also relevant in the Vietnamese context due to the importance of budgeting practices in Vietnamese firms. The study by Pomberg et al. (2012) shows that in the context of Vietnamese hospitals, managers' perceived usefulness of budget setting and budget control is mostly at the adequate or good level. Moreover, there is a potential relevant link between budgeting practices and firms' innovation. Using innovation diffusion theory, Doan et al. (2011) explain the link between innovation (e.g., new idea, practice or product) and adoption rates of management accounting practices in Vietnam. However, the link has not been empirically tested and little is known about the performance implication (in term of innovation and job performance) of budgeting practices and employees' budgetary participation in the context of Vietnam.

To fill this gap, this study investigates the mediating role of learning goal orientation (LGO) on the relationship between budgetary participation and innovative behaviors. This study contributes to the extant literature by introducing the Participation–Learning–Innovation–Performance (PLIP) chain, which is an organizational mechanism that can be used to enhance employees' positive work behaviors and performance in the participative budgeting context. Specifically, this study unpacks the budgetary participation–job performance relationship by using a multi-mediator model to examine how budgetary participation enhances job performance through LGO and innovative behaviors in a sequential manner. In studying the underlying process, this study uses goal-setting theory

(Locke & Latham, 1990), self-efficacy theory (Bandura, 1977, 1991), and goal orientation theory (Dweck, 1986) to build the research model. It proposes that employees who participate in the budget process are more likely to engage in learning and to develop their innovative behaviors, which in turn enhances their job performance. This study aims to contribute to the budgeting and innovation literature by uncovering a mechanism to manage budgetary participation to enhance employees' innovation and job performance in the context of firms in Vietnam, an emerging market.

This study is presented as follows. First, it uses goal-setting theory (Locke & Latham, 1990), self-efficacy theory (Bandura, 1977, 1991), and goal orientation theory (Dweck, 1986) to develop the PLIP path that connects budgetary participation directly to innovative behaviors, and indirectly via LGO. The study then examines the performance effect of these innovative behaviors. It then presents the research design and analysis, followed by the results and discussion.

2. Theoretical background, model, and hypotheses

2.1. Direct effect of budgetary participation on innovative behaviors

Budgetary participation refers to the active involvement of employees in the process of preparing the budgets they are responsible for implementing (Brownell, 1982). It relates to the extent to which employees are involved in formulating the budgets and influencing the budget goals of their responsibility and accountability (Shields & Shields, 1998; Subramaniam & Mia, 2001). Employees' innovative behaviors are defined as a multi-stage process in which employees recognize a problem for which they generate new ideas and solutions, promote and champion them, and produce applicable methods for the use and benefit of the organization or departments within it (Carmeli et al., 2006; Scott & Bruce, 1994).

The direct effect of budgetary participation on innovative behaviors can be explained using goal-setting theory (Locke & Latham, 1990) and self-efficacy theory (Bandura, 1977). Goal setting theory refers to the effects of setting goals on subsequent performance. This theory is based on the premise that employees make a commitment to accomplish their goals (Locke & Latham, 1990). In the context of budgetary participation, employees can develop budgets that reflect their commitments and innovation proposals, as well as expected performance outcomes (Damanpour, 1991). In such circumstances, employees' participation in setting budget targets can provide them with an effective interface that bridges the operational level of the organization (where their interest in innovation is articulated) and the financial level (where budget targets are formulated for various responsibility centers) (Dunk, 1995). Budgetary participation enables employees to discuss their ideas and proposals for innovation with their superiors. Therefore, innovation can be enhanced with open communication channels within organizations (Dunk, 1995). Moreover, budgetary

participation shows employees that their ideas are valued by their organization, thereby instilling the perception in employees that they are innovative (Yahya et al., 2008).

From the self-efficacy theory (Bandura, 1977), this study argues that the budgetary participation can promote innovative behaviors. Self-efficacy theory refers to individuals' belief in their ability to organize and carry out courses of action required to achieve goals (Bandura, 1991). In the budgeting context, employees who have beliefs about the successes in their budgetary tasks can have higher levels of budget goal commitment (Busch, 1998) and be more proactive in learning and sharing information. Then these outcomes of self-efficacy are fruitful for innovative behaviors (Hammond et al., 2011). Accordingly, this study hypothesizes that:

H_1: Budgetary participation has a positive effect on innovative behaviors.

2.2. *Mediating role of LGO on the relationship between budgetary participation and innovative behaviors*

Drawing upon the goal orientation theory (Dweck, 1986), this study unpacks the budgetary participation–innovation link. Goal orientation reflects employees' self-development beliefs and how these beliefs result in enhanced work engagement. One of distinct goal orientations commonly identified is learning goal orientation (LGO), which focuses on the development of competence and task mastery (Hirst et al., 2009). This study suggests that LGO is relevant to innovative behaviors because LGO can generate employees' creativity and intrinsic interest in their tasks as their challenging work motivates them to develop new knowledge and creative-relevant skills (Hirst et al., 2009).

Therefore, in the budgeting context, this study argues that budgetary participation can enhance employees' innovation via their engagement in the learning process. In this regard, budgetary participation promotes the gradual acquisition of knowledge, which in turn promotes innovative behaviors. In the participative budgeting context, financial and non-financial information and ideas about tasks, targets, and measures can be exchanged within organizations that support the emergence of self-efficacy in employees' activities (Macinati et al., 2016). Therefore, this study expects that sharing this information during budgetary participation will influence employees' belief in their ability to perform their tasks successfully, which will in turn promote their learning orientation. This is because LGO can help employees to accumulate experience and knowledge to achieve positive outcomes (Gong et al., 2009). Therefore, a positive relationship between budgetary participation and LGO is expected. This study hypothesized that:

$H2_a$: Budgetary participation has a positive effect on LGO.

Individual goal orientation is an important intrinsic motivation factor. Previous studies have found that employees with strong learning orientation are more likely to engage in role innovation or implement changes in their work because they typically view these initiatives as challenges that can foster learning (e.g., Porath & Bateman, 2006). In addition, LGO

emphasizes mastering new aspects, and employees with high LGO may prefer challenging and risky situations (Montani et al., 2014). These activities are fruitful for innovative behaviors (e.g., searching for new technologies, processes, techniques, and/or product ideas; generating creative ideas and promoting and championing them to others) (Scott & Bruce, 1994). Accordingly, previous studies have suggested that learning orientation is conducive to acquiring novel skills and behaviors (e.g., Gong & Fan, 2006). Therefore, a positive relationship between employees' LGO and their innovative behaviors is expected. Accordingly,

H_{2b}: LGO has a positive effect on innovative behaviors

Hypotheses $H2_a$ and $H2_b$, therefore, can be combined and expressed as follow:

H_2: LGO partially mediates the relationship between budgetary participation and innovative behaviors.

2.3. Performance effect of innovative behaviors

There is a notion that people innovate in the workplace to achieve performance gains (Yuan & Woodman, 2010), thereby supporting a potential positive association between innovative behaviors and perceived subsequent job performance at the individual level. Although research linking employees' innovative behaviors to task performance is sparse, a positive relationship has been found between innovative behaviors and job performance (Gong et al., 2009). Gong et al. (2009) show that organizations that use creative methods (e.g., developing custom-made product/service packages for clients, developing new clients through different means and channels) have better supervisor-rated employee job performance. Innovative employees tend to collect and use a broad range of information to promote and champion new ideas and improve existing processes (Tesluk et al., 1997). As such, these employees are more willing to realize new ideas to solve problems, thereby enhancing their job performance (Amabile et al., 2005). Therefore, this study expects a positive association between employees' innovative behaviors and their job performance. Accordingly:

H_3: Innovative behaviors have a positive effect on job performance.

The proposed model and corresponding hypotheses are shown in Figure 1.

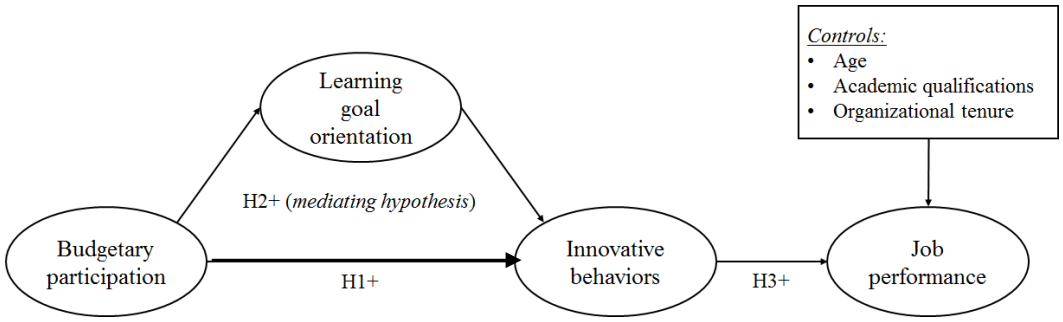

Figure 1. Proposed model

3. Research method

3.1. Sampling and data collection

This study was conducted in Vietnam–an emerging economy–with a data set of 337 mid- and low-level managers in business firms. The reason why top-managers were excluded is that budgetary participation context is only relevant to low and middle management. Budgetary participation, which is also known as bottom-up budgeting, gives chance to lower and middle management influence their budget targets (Lau & Tan, 2012; Shields & Young, 1993) and communicate these targets to top-management level. To include these specific informants in the sample, a convenience-sampling approach was used to identify potential informants, and qualifying questions were asked at the commencement of the survey to identify relevant informants. The selection criteria included: (1) being a mid- (head or vice head of departments/functions/projects) or low-level manager (supervisor or front-line manager); (2) having organizational tenure of at least two years, and (3) having at least two-year budgetary experience/responsibilities. These selection criteria ensured that the chosen informants were knowledgeable about the budgeting issues in their respective organizations. The informants represented various functional areas that are usually involved in budget practices, including sales, marketing, finance/accounting, and manufacturing/production (e.g., human resources, information technology). These managers should be chosen from such diversified areas because all these organizational functions must be integrated in the budgeting process, which requires cross-functional coordination (Dunk & Kilgore, 2004). The representativeness of the sample in term of job position, in which the informants had been selected from different functional areas, is consistent with previous budgetary participation studies (e.g., Agbejule & Saarikoski, 2006; Mia, 1988; Nouri & Parker, 1998).

The author distributed email surveys to the target informants. The sampling frame comprised 5,353 potential informants (who might meet the inclusion criteria) from the principal researcher's personal LinkedIn social network. Following the procedure suggested by Brislin (1970), the original survey items in English were translated into Vietnamese and back-translated by two academics who were competent in both English and Vietnamese. To ascertain the validity of the survey, the translated Vietnamese survey items were pretested by managers and academics (with and without an accounting background) for wording, relevancy, and comprehension. The final version of the survey questionnaire was circulated to the potential informants via SurveyMonkey, which is an online survey administration tool. Invitations were personalized to enhance the response rate and informed consent was implied by answering the survey. The survey was closed in May 2017 after one email invitation followed up by an email reminder after one-week. Of the 5,353 potential informants, 891 responses were received. After eliminating 212 that had no budget experience, 186 incomplete responses, 136 top-level managers and employees, and 20 careless responses with a response duration of less than five minutes (which is far less than

the reasonable time required to complete the survey), the final sample consisted of 337 valid responses.

Table 1 shows the demographics of the participating firms and informants. The final sample comprised 78.6% mid-level managers and 21.4% low-level managers. All informants had a bachelor degree, and 30.0% had a master's degree or above. The informants' average tenure (4.53 years) and budget experience (3.91 years) indicated that they had adequate experience to respond to the survey and were knowledgeable about budgeting issues. In relation to age, 82.0% of the informants were aged between 25 and 39. The informants worked in sales and marketing (42.8%), research and development (16.9%), manufacturing (14.4%), finance/accounting (11.3%), and other departments such as purchasing, human resource management, and information technology (11.6%). In terms of firm characteristics, 52.5% of informants worked in the service industry, 27.0% worked in manufacturing, and 20.5% worked in the trade industry. The informants worked for foreign companies (69.7%) and local companies (30.1%). In terms of firm size, 74.8% of informants worked in firms with total assets of more than VND100 billion. In addition, 75.1% of informants worked in firms with more than 100 full-time equivalent employees.

Given that the final response rate was low (6.3%), a non-response bias test was conducted following the procedure recommended by Armstrong and Overton (1977). The independent *t*-tests revealed no statistically significant differences in all key measures among the first (earliest) and fourth (latest) quartiles of responses, signifying no response bias in this study.

Table 1

Demographics of the participating firms and informants

Demographics	Frequency (n = 337)	Percent	Demographics	Frequency (n = 337)	Percent
Gender			Department/ Responsibility		
Male	202	59.9	Marketing	43	12.8
Female	135	40.1	Finance/ accounting	38	11.3
Job position			Research and development	57	16.9
Mid-level managers	265	78.6	Sales	108	32.0
Low-level managers	72	21.4	Manufacturing	52	15.4
Age			Others	39	11.6
< 25	8	2.4	Ownership structure		
25 – 29	76	22.6	With foreign capital	235	69.7
30 – 34	105	31.2	Without foreign capital	102	30.3
35 – 39	95	28.2	Industry type		
40 – 44	38	11.3	Manufacturing	91	27.0

Demographics	Frequency (n = 337)	Percent	Demographics	Frequency (n = 337)	Percent
> 45	15	4.5	Trading	69	20.5
Academic qualifications			Services	177	52.5
Undergraduate	236	70.0	Firm size (assets) in VND billion		
Post-graduate	101	30.0	≤ 100	85	25.2
Organizational tenure			101 – 200	23	6.8
2 – 5 years	242	71.8	201 – 500	31	9.2
6 – 10 years	64	19.0	501 – 1,000	58	17.2
11 – 20 years	29	8.6	> 1,000	140	41.5
> 20 years	2	0.6	Firm size (full time equivalent employees)		
Budget experience			≤ 100	84	24.9
2 – 5 years	269	79.8	101 – 300	63	18.7
6 – 10 years	55	16.3	301 – 1,000	75	22.3
11 – 20 years	12	3.6	1,001 – 5,000	62	18.4
> 20 years	1	0.3	5,001 – 10,000	30	8.9
			> 10,000	23	6.8

3.2. Measurement scales and reliability and validity tests

This study adopts and adapts existing and well-established scales in the literature to measure the variables in the research model. The main variables measured in the questionnaire were budgetary participation, individual learning orientation, individual innovative behaviors, and job performance. Budgetary participation was measured following previous studies (e.g., Milani, 1975; Nouri & Parker, 1998; Parker & Kyj, 2006). The scale for LGO was adapted from VandeWalle (1997). Employees' innovative behaviors were measured following a scale that was first developed by Scott and Bruce (1994) and subsequently used in other studies (e.g., Janssen, 2001; Yuan & Woodman, 2010). Employees' job performance was measured based on a widely accepted scale adopted from Hall (2008) and Kren (1992), which had been used in subsequent studies from Asian emerging markets such as South Korea (Leach-López et al. (2009), Malaysia (Yahya et al., 2008) and Taiwan (Cheng et al., 2014). This study uses self-reports in addition to observer-scores, or subjective scores, to evaluate innovative behaviors and job performance because "a worker's cognitive representation and reports of his or her own" innovative behaviors and job performance "may be more subtle than those of his or her supervisor, since a worker has much more information about the historical, contextual, intentional and other

backgrounds of his or her own work activities" (Janssen, 2001). Following previous studies (e.g., Janssen, 2001), this study incorporates three demographic variables of the informants (age, academic qualifications, and organizational tenure) as control variables of job performance. All measures (except that of innovative behaviors) used a Likert scale in which 1 = "strongly disagree" and 7 = "strongly agree." See Table 2 for the scales of the main constructs.

Table 2

Scale items and latent variable evaluation.

Construct and items	Outer loading	*t*-test
Budgetary participation (AVE = 0.61, CR = 0.90)		
The portion of the budget I am involved in setting	0.80	27.38
The amount of reasoning provided to me by a superior when the budget is revised	0.65	13.21
The frequency of budget-related discussions with superiors initiated by me	0.78	22.42
The amount of influence I feel I have on the final budget	0.90	59.00
The importance of my contribution to the budget	0.87	53.17
The frequency of budget-related discussions initiated by my superior when budgets are being set	0.65	11.98
Learning goal orientation (AVE = 0.69; CR = 0.93)		
I often read materials related to my work to improve my ability	0.76	22.04
I am willing to select a challenging work assignment that I can learn a lot from	0.84	33.49
I often look for opportunities to develop my skills and knowledge	0.85	40.09
I enjoy challenging and difficult tasks at work where I'll learn new skills	0.89	61.03
For me, development of my work ability is important enough to take risks	0.81	31.85
I prefer to work in situations that require a high level of ability and talent	0.82	36.71
Innovative behaviors (AVE = 0.57; CR = 0.89)		
I search out new technologies, processes, techniques, and/ or product ideas	0.63	13.62
I generate creative ideas	0.81	33.48
I promote and champion ideas to others	0.76	26.64
I investigate and secure funds needed to implement new ideas	0.74	22.96
I develop adequate plans and schedule for the implementation of new ideas	0.80	36.21
I am innovative	0.75	22.80

Construct and items	Outer loading	*t*-test
Job performance (AVE = 0.59; CR = 0.93)		
Planning for my area of responsibility	0.79	29.47
Coordinating my area's activities	0.82	35.78
Evaluating my subordinates' activities	0.82	29.23
Investigating issues in my area of responsibility	0.85	49.52
Supervising staff	0.73	15.83
Obtaining and maintaining suitable staff	0.62	12.17
Negotiating	0.75	26.86
Representing the interests of my area of responsibility	0.70	13.89
Overall performance	0.79	27.87

Notes: AVE: Average variance extracted; CR: Composite reliability

The measurement scales were first tested for reliability. Table 2 shows that the outer loadings of all observed variables for all of the main constructs ranged between 0.62 and 0.90, which was higher than the cut-off value of 0.50 (Hulland, 1999). All corresponding *t*-bootstrap values were well above 1.96 to be statistically significant (ranged between 11.98 and 61.03). The average variance extracted (AVE) values of all latent variables were acceptable because they were higher than 0.50 (ranged between 0.57 and 0.69). In addition, the composite reliabilities of the latent variables ranged between 0.89 and 0.93. These results indicate a high level of reliability of the measurement scales used in the model.

The discriminant validity of the measurements was evaluated following the procedure proposed by Fornell and Larcker (1981). Table 3 shows that the square roots of the AVE of the main constructs (excluding those of the control variables) ranged between 0.75 and 0.83, which were well above the corresponding bootstrapped correlations between these constructs (ranged between -0.01 and 0.57), thereby indicating the discriminant validity of the measurements. In addition, discriminant validity was demonstrated when the correlation between two constructs (the off-diagonal entries) was not higher than their respective composite reliability (Fornell & Larcker, 1981). Table 3 shows that no individual correlations (ranged between -0.01 and 0.57) were higher than their respective composite reliabilities (ranged between 0.89 and 0.93), thereby indicating satisfactory discriminant validity. In addition, most of the correlations were consistently smaller than the cut-off value of 0.70, suggesting acceptable discriminant validity (Tabachnick et al., 2001). This study also employed the Heterotrait–Montrait (HTMT) test, which is more stringent than that of Fornell and Larcker (1981), to evaluate discriminant validity (Henseler et al., 2015). Table 3 shows that the HTMT values, which were computed based on the bootstrapping routine,

ranged between 0.03 and 0.63. These values were significantly below 1.00, thereby providing evidence of discriminant validity.

This study also examined the corresponding variance inflation factor (VIF) values of the independent variables to ensure there was no multicollinearity (O'Brien, 2007). Inner VIF values for each relationship between the independent variables in the proposed model were computed to detect potential multicollinearity. The results showed that the inner VIF values ranged between 1.16 and 1.63, which were well below the threshold criterion of 10 (Joseph et al., 1992), thereby indicating no multicollinearity problems in this study.

Table 3

Construct means, standard deviations, and correlations

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1)Budgetary participation	4.83	1.11	**0.78**						
(2)LGO	6.15	0.79	0.30**	**0.83**					
			0.34						
(3)Innovative behaviors	4.02	0.61	0.34**	0.49**	**0.75**				
			0.40	*0.57*					
(4).Job performance	5.65	0.76	0.41**	0.57**	0.54**	**0.77**			
			0.47	*0.63*	*0.62*				
(5).Age	3.38	1.19	0.10	0.05	0.05	0.18**	**1.00**		
			0.11	*0.05*	*0.06*	*0.18*			
(6).Qualification	2.29	0.49	0.15**	0.05	0.06	0.02	0.08	**1.00**	
			0.16	*0.06*	*0.10*	*0.06*	*0.08*		
(7).Tenure	4.53	3.98	(0.02)	(0.01)	0.05	0.11	0.38**	0.06	**1.00**
			0.03	*0.03*	*0.06*	*0.11*	*0.38*	*0.06*	

Notes: SD: Standard deviation; 1st value = Correlation between variables (off diagonal); 2nd value (italic) = HTMT ratio; Square root of AVE (bold diagonal); **: Correlation is significant at the 1% level (2-tailed *t*-test).

3.3. Common method bias

Given that cross-sectional data were collected using a single-informant approach, there could be common method bias effects that lead to spurious relationships among the variables (Podsakoff et al., 2003). Thus, this study used SPSS 22.0 to conduct a Harman's single-factor test for common method bias and found that no single factor accounted for the majority of the variance (the first factor accounted for 37.12% of the 65.97% explained variance). Hence, common method bias was not a serious issue in this study. Common method bias was also tested using the non-statistical and statistical remedies suggested by

Podsakoff et al. (2003), and it was not found to be a serious problem in the data set. Further, the study used Lindell and Whitney's (2001) marker-variable technique to control for common method bias. The item "do you want to go overseas for this year's national holiday?" was chosen as a marker variable. The mean change in the correlations of the key constructs ($rU-rA$) when partialling out the effect of rM was 0.11 (p = 0.20). Thus, there was no evidence of common method bias in this study.

4. Hypothesis testing and discussion

The partial least squares (PLS) method using SmartPLS3 was employed to analyze the data and test the proposed model and hypotheses. Compared to the traditional covariance-based structural equation model, PLS tends to achieve higher levels of statistical power under equal conditions (Reinartz et al., 2009) because it is a non-parametric approach based on ordinary least squares regression, and it is designed to maximize explained variance (Ringle et al., 2015). Moreover, PLS does not require a large sample, and it estimates quite precisely the parameters in the context of a small sample size (Reinartz et al., 2009). A sample size of 337 is acceptable according to the often-cited rule of thumb for robust partial least squares-structural equation modeling estimations, which suggests using a minimum sample size of ten times the maximum number of path relationships directed at any construct in the outer and inner models (Barclay, et al., 1995). PLS is also a widely accepted statistical technique adopted in various management accounting studies (Lau & Roopnarain, 2014; Nitzl, 2016).

4.1. Hypotheses-testing results

To provide evidence for testing the proposed hypotheses, this study evaluated the strength and significance of individual paths in relation to the predictive relevance of these individual paths in the proposed model. Table 4 reports the indices used to evaluate the predictive relevance of the individual paths, including β coefficients and t-values, along with the adjusted R^2 for each endogenous construct. The indices were calculated based on 500 bootstrapping sampling times. The results indicate that the adjusted R^2 values for all predicted variables (LGO, innovative behaviors, and job performance) were equal to or greater than the recommended level of 0.10.

Hypothesis H_1 conjectured that budgetary participation would positively affect innovative behaviors. This hypothesis was confirmed because the β coefficient for the path between budgetary participation and innovative behaviors was 0.23 and significant at the 1% level (t = 4.25). Hypothesis H_2 proposed that LGO would partially mediate the relationship between budgetary participation and innovative behaviors. This hypothesis was supported because the β coefficient of the path between budgetary participation and LGO was 0.30 and significant at the 1% level (t = 5.70), and the β coefficient of the path between LGO and innovative behaviors was 0.43 and significant at the 1% level (t = 8.23). Thus, when LGO was removed from the proposed model and did not act as the mediating

variable, the direct positive effect of budgetary participation on innovative behaviors (β = 0.38, t = 7.59) became weaker (β = 0.23) but was still significant (t = 4.25). The reduction in the direct effect indicates evidence of partial mediation (Kline, 2015). Thus, LGO partially mediates the relationship between budgetary participation and innovative behaviors, thereby supporting hypothesis H_2.

This study employed the Sobel test following the suggestion of Preacher and Hayes (2004) to further test H_2. It used a bootstrap technique using SPSS 22.0 with the Process Macro add-in (Model 4) and computed the correlations between the dependent and independent variables with their corresponding confidence intervals (Preacher & Hayes, 2004). The results indicated that the correlation of the indirect effect of budgetary participation on innovative behaviors was 0.07 (p < 0.05; confidence intervals ranged between 0.04 and 0.11), Sobel statistics = 4.80 (p < 0.01). Thus, LGO partially mediates the effect of budgetary participation on innovative behaviors, thereby supporting hypothesis H_2.

Hypothesis H_3 posited that innovative behaviors have a positive effect on job performance. This hypothesis was supported because the β coefficient for the path between innovative behaviors and job performance was 0.54 and significant at the 1% level (t = 13.27).

Table 4

Partial least squares results for theoretical model.

	Dependent variable	LGO		Innovative behaviors		Job performance	
		β	t-value	β	t-value	β	t-value
Hypothesis	Independent variable						
H_1, H_2	Budgetary participation	0.30	5.70***	0.23	4.25***		
	LGO			0.43	8.23***		
H_2	Innovative behaviors					0.54	13.27***
	Control variable						
	Age					0.14	2.83***
	Qualifications					-0.02	0.44
	Tenure					0.03	0.55
Adjusted R^2		0.10		0.30		0.31	

4.2. Model fit

To evaluate the fitness of both inner-structural and outer-measurement models to the data simultaneously, the goodness-of-fit index (GoF) was computed following Henseler and Sarstedt (2013). The *GoF* was calculated by taking the square root of the product of the average communality of all constructs and the average R^2 value of the endogenous constructs. Drawing upon the categorization of R2 effect sizes by Cohen et al. (2013) and using the 0.50 threshold for communality (Fornell & Larcker, 1981), the *GoF* criteria for small, medium, and large effect sizes were 0.10, 0.25, and 0.36 respectively. The computed GoF for the model was 0.61, demonstrating good fit of the proposed model to the data. Further, the standardized root mean squared residual (SRMR) value of the composite model was examined. The SRMR of 0.05 was lower than the recommended value of 0.08, indicating a good model fit (Henseler et al., 2016). Next, this study performed confirmatory factor analysis (CFA) using AMOS as a robustness check of the measurement model fit. The results were satisfactory with comparative fit index (CFI) = 0.96; Tucker Lewis index (TLI) = 0.95; root mean square error of approximation (RMSEA) = 0.047; Chi-square/df = 1.74.

5. Discussion

5.1. Theoretical and managerial implications

This study has some theoretical implications. *First*, it provides empirical evidence of the performance implications of budgetary participation and LGO in the context of business organizations in an emerging market. It can be argued that in the context of Vietnam where firms are under intense competition, firms should improve their innovativeness capability (Nguyen & Nguyen, 2011). This requirement triggers firms' inter-functional coordination with exchanging innovative flows of ideas across different management levels in the organizational hierarchy. This argument implies the importance of a participative budgeting environment that allows cross-functional coordination and information sharing in firms in Vietnam with high power distance cultures (Hau et al., 2013). Therefore, it is not surprising that the relationships between budgetary, learning goal orientation, and innovative behaviors were found to be strong in this study. As the direct link between budgetary participation and employees' innovation remains unexplored in the literature, this study has bridged this gap by developing the PLIP chain. Specifically, this study examines the effect of budgetary participation on employees' innovation, the mediating effect of LGO on the relationship between budgetary participation and innovative behaviors, and the performance effect of enhanced innovative behaviors. This study provides empirical evidence for the importance of LGO, which is an organizational mechanism that can be used to connect employees' budgetary participation to their positive work behaviors.

Second, innovation and business performance are topics of growing academic interest; however, innovative behaviors as a driver of business performance at the individual level is still under-researched. This study adds to this research stream by exploring the performance implication of innovative behaviors, which is reflected in the PLIP chain. In this regard, this

study confirms the budgetary participation – job performance relationship and explains the mediating role of innovation performance in the relationship. The study results provide the performance implication of budgetary participation and innovation in Vietnamese firms, and the implication is also evidenced by previous studies in emerging markets such as Malaysia (Nor Yahya et al., 2008) and Taiwan (Cheng et al., 2014). *Finally*, findings from this study support goal-setting theory (Locke & Latham, 1990), self-efficacy theory (Bandura, 1991), and goal orientation theory (Dweck, 1986) in the participative budgeting context. Building upon these theories (Bandura, 1991; Locke & Latham, 1990), this study finds that employees who participate in developing budget targets are more likely to engage in learning and to develop their innovative behaviors, which in turn enhances their innovative behaviors and fosters their job performance. In this aspect, this study makes a unique contribution to the budgeting and innovation literature by unraveling a pathway that integrates employees' budgetary participation, LGO, and innovative behaviors through which budgetary participation is converted into positive job performance.

Beyond these expected theoretical contributions, this study has several implications for firms in Vietnam and other emerging countries. *First*, firms with budget practices should recognize the importance of budgetary participation in fostering employees' innovative behaviors and enhancing their job performance. *Second*, these organizations should actively manage the connection between budgetary participation and employees' innovative behaviors using a potential LGO mechanism. Firms should recognize that budgetary participation may not directly and fully result in high levels of innovative behaviors. Instead, firms should actively stimulate and monitor learning activities to connect budgetary participation to innovative behaviors. This study calls on managers to consider LGO as an important mediating device that can make the budgetary participation–innovation relationship more effective. These implications are significant because innovation capabilities are perhaps the most crucial capabilities for businesses in transition economies like Vietnam (Nguyen & Nguyen, 2011), and these capabilities are still limited and have plenty room for development (Hoang et al., 2006).

5.2. Limitations and future research

This study is subject to several limitations. *First*, this cross-sectional study does not consider the possibility that cause-and-effect relationships between innovative behaviors and job performance may involve certain time lags. Engaging in innovative behaviors will not immediately lead to a higher level of job performance. *Second*, cross-sectional survey data can have a serious limitation regarding inferences of causality because the data can be used to test the correlations between variables, but not to imply the causal directions assumed among them (Wiley, 2011). Therefore, cross-sectional surveys cannot suggest causal relationships. For example, some researchers may argue that employees who engage in innovative behaviors tend to be more involved in learning activities and more committed to learning. This means that a high degree of innovative behaviors can be an antecedent rather than an outcome of LGO. This alternative causal sequence may challenge the

proposed model in this study. Although this study provided a theoretical rationale in support of the relationships and their directions, future research could replicate and extend this study by using experimental and longitudinal data to explicate the causal relationships among the main constructs in the model. *Third*, the study could be more interesting if it included the potential moderating effect of decentralization on the path relationships in the model. It can be argued that the strength of the hypothesized relationships in the proposed model for well-organized firms (with a higher level of decentralization) can be higher than that of less-organized firms (with a lower level of decentralization). This argument should stimulate further research accounting for the potential moderating effect of decentralization. *Last but not least*, the generalizability of the findings is limited because the data were drawn from a sample of mid- and low-level managers in Vietnam. Further research should consider these above limitations■

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