

Mediating Factors That Influence The Relation Between Budget Congruence and Managerial Performance in Public Services Universities in Indonesia



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ABSTRACT: This study aimed to examine whether budget goal commitment, psychological capital, and management accounting system were able to play a role in mediating the relation between budget congruence and managerial performance in public services universities in Indonesia. This study used a quantitative survey approach; the sample of the study consisted of 82 leaders from State Islamic Universities in the province of East Java, Indonesia. The data were analyzed by using a causal mediation analysis procedure. The result found that psychological capital and management accounting systems were able to mediate the budget congruence-managerial performance relation. Meanwhile, budget goal commitment in the context of public sector budgeting has not succeeded in proving its role as a mediating variable. Further analysis showed that contingency theory is still relevant to be used in business and public budgeting in relation to different behavioural conditions. In addition, this research has implications for evaluating the managerial performance of leaders in public services universities in Indonesia to pay attention on managerial involvement at lower levels in achieving organizational goals.

KEYWORDS: Managerial performance, Budget congruence, Budget goal commitment, Psychological capital, Managerial accounting system

1. INTRODUCTION

Almost every company, regardless of size, complexity or sector, relies heavily on budgets and budget system to achieve strategic goals. Budget is a part of management controls designed to promote efficient use of resources and to provide support for other important functions (Helpap, 2017; Raghunandan, Ramgulam, & Raghunandan-Mohammed, 2012). The ability of managers to manage budgets perfectly can provide harmonization, motivation, and business control (Cho, No, & Park, 2020). This is certainly supported by conducive environment and employee encouragement to achieve organizational goals.

The budgeting process involves setting strategic goals, objectives, predicting revenues, costs, production levels, cash flows, and other important factors (Bonner, 1999). Budgeting is not only done by top manager, but it can also be done by lower-level manager (Linn, Casey, Johnson, & Ellis, 2001) which is commonly referred to as budgetary participation. This participation aims to reduce information asymmetry and leads to a higher commitment than previously (Lyne, 1988, 1992). In budgeting, there is an approach that can be applied to non-business organizations, namely budget congruence (Nouri & Parker, 1998; Parker, 1979). The success of organizational control depends on the actions of top management and their appreciation on the relations between various hierarchical levels (Franklin, Ho, & Ebdon, 2009; Mærøe, Norta, Tsap, & Pappel, 2021). Budget congruence measures the relevance of managers' perceptions of participation and proportion in budgeting (Pereira & Roder Figueira, 2021). Several studies found that a high level of budget participation will improve work performance. In Ghana, it was found that organizational culture and environment could not explain the relation between budget participation and managerial performance (Tsamenyi & Mills, 2003). Meanwhile in Hong Kong, there was a positive relation between budgetary participation and managerial performance at the highest decentralization level which had implications for the design of an effective control subsystem (Gul, Tsui, Fong, & Kwok, 1995). Furthermore, in Africa, it was found that the majority of community members were rejected and not considered in the budgeting process (Mbambo, Thakhathi, & Oyelana, 2016). Whereas in Vietnam, it was found that managers needed to focus on setting budget goals and financial performance (Le & Nguyen, 2020).

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In addition to the business sector, several studies have shown forms of community involvement regarding budget participation in the public sector. As what the governments of the United States and South Korea did, they involved the public in the budget process for local government accountability (Gordon, Osgood, & Boden, 2017; Kim & Schachter, 2013; E. Y. Lu & Willoughby, 2015). Loruswannarat's research (2017) showed that budgetary participation was used as a typology of public participation budgeting for guidance on budget reform in Thailand. In addition to budget congruence, managerial performance can be measured by various other determinants, such as commitment to budget goals (Breux, Finn, & Jones, 2011; Macsporrán & Tucker, 1996; Maiga & Jacobs, 2007; Melek, 2009; Miller, Robbins, & Keum, 2007), various aspects of psychology (Marginson & Ogden, 2005; Rego, Sousa, Marques, & Cunha, 2012; Sweetman, Luthans, Avey, & Luthans, 2011; Venkatesh & Blaskovich, 2012) which attached to individual characteristics, and in aspects of management accounting systems (Fry, Steele, & Saladin, 1998; Linn et al., 2001).

Several studies on budgetary participation indicate that there is a strong relation on managerial performance (Chang, Chang, & Chang, 2010; Chong, Eggleton, & Leong, 2005; Chong & Johnson, 2007; Clinton & Hunton, 2001; Derfuss, 2009; Gul et al., 1995; Hill & Andrews, 2005; Kenis, 1979; Loruswannarat, 2017; Y. Lu, 2011; Tsamenyi & Mills, 2003; Wang & Nayir, 2010). Furthermore, some studies used the mediating variable to ascertain the relation between budgetary participation and managerial performance (Gul et al., 1995; Lau & Eggleton, 2003; Liao & Zhang, 2012; Linn et al., 2001; Venkatesh & Blaskovich, 2012). This study aims to examine the mediating role of some variables that affect the relation between budgetary participation and managerial performance in the context of public sector organization especially in public services universities in Indonesia. Since there is little evidence regarding how and what mediating variable are correlated in public service universities in Indonesia, it is assumed that by having the evidence, it is possible to give some insight on how budgetary participation and managerial performance is correlated especially in public services universities. In addition, this study uses several basic theories to build research hypotheses directly or indirectly on the relation between variables.

The success of managerial performance can be seen from the significant business growth in the business context (F. Almasi & Pirzad, 2017). This study examines various factors to measure managerial performance in the context of congruence-based participatory budgeting in public sector entities. Islamic religious universities in Indonesia were used as our locus since it found very little evidence that discussed how the budget congruence and managerial performance is correlated in the State Islamic University as a public service university in Indonesia. Determination of the object of research is based on universities that apply the pattern of financial management of public service agencies in accordance with government regulation number 74 of 2012 concerning financial management of public service agencies that have met substantive, technical, and administrative requirements (Adhitama, 2015). According to Fishbein & Azjen (1975), organizational management design will run effectively and can be applied universally under certain conditions. Likewise, the application of budget congruence in the context of higher education will depend on several contingent variables. Thus, this study attempts to adopt some basic theories including the theory of contingency, agency, and behaviour as a basis for thinking including in the preparation of the conceptual framework of the research.

The significance of this research is to further review the usefulness of contingency theory (Fisher, 1998), agency (Kren, 1992), and behaviour (H. Almasi, Palizdar, & Parsian, 2015) on the relation between budget congruence and managerial performance through mediating variables. The mediating variable in this study is budget goal commitment which has proven its role in the participatory-performance relationship (Breux et al., 2011; Chong & Chong, 2002; Maiga & Jacobs, 2007; Melek, 2009). Meanwhile, on the psychological aspect, this study uses the mediating role of psychological capital (Gupta & Singh, 2014; Luthans, Luthans, & Luthans, 2004; Luthans, Norman, Avolio, & Avey, 2008; Marginson & Ogden, 2005; Sweetman et al., 2011; Venkatesh & Blaskovich, 2012) to be re-examined in the context of public sector entities. Moreover, this study also focuses on management accounting systems (Chia, 1995; Gul & Chia, 1994; Gul et al., 1995; Tsui, 2001) which mediate the relation between budget congruence and public sector managerial performance. Meanwhile, the practical significance of this research lies in evaluating the budgeting process in public and private universities in achieving effective and efficient managerial performance based on contingency, agency, and behavioural approaches.

2. THEORY, LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Contingency, Agency, and Behavioral Theory

The contingency approach in managerial accounting has been around for a long time. Otley (2016) stated this contingency approach arises because of the assumption that there is no problem-solving design that applies equally in every organization. Every organization has a unique control design (Fisher, 1998). In general, this contingency theory can be used to analyze the

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design of management control systems in an organization and to provide an understanding of how the control system is implemented and the reasons behind the implementation of a particular control system design in an organization (Otley, 1980). Agency theory is interpreted as a theory that explains the emergence of information asymmetry between superiors and subordinates (Bontis, 1999). This theory argues that the principal delegates authority to the company management to run the company operations efficiently (Mayer, Davis, & Schoorman, 1995) so that company goals can be achieved effectively. The relation between both is perceived as contradictory because each of them has a different motivation in carrying out an action (Abu-Tapanjeh, 2009). This can be seen in how compensation is formulated. Kren (1992) stated that in the principal view, compensation given to agents is only based on one main factor, namely the achievement of results; while their agents see that efforts in achieving results should also be considered in providing compensation to management.

Behavioral theory is related to the influence of behavior when setting organizational goals using a motivational approach (Woodman, Sawyer, & Griffin, 1993). Almasi, et al. (2015) stated that behavior-based research is increasingly facing complex contingency models. How participatory budgeting and management control are implemented in an organization and achieve effective results is influenced by various factors that exist in the organization (Gupta & Singh, 2014). The implication of this is that the existing management control system will be influenced by the behavior of individuals within an organization or even the behavior of the organization as a whole.

2.2 Budget Congruence, Budget Goal Commitment and Managerial Performance

Budget is an important instrument of management control system (Anthony & Govindarajan, 2007). Furthermore, Govindarajan (2019) identified three approaches on how budgets are developed including top down, bottom up, and participatory budgeting. Organizations use participatory budgeting for several reasons. One of the factors that encourages participatory budgeting is uncertainty. This budgeting is considered being able to reduce uncertainty (Chong & Johnson, 2007). Organizations attempt to absorb information from all levels of employees so that the budget prepared has a fairly good level of accuracy (Shields & Shields, 1998).

Implementing participatory budgeting can improve performance (Chang et al., 2010; Clinton & Hunton, 2001; Kenis, 1979; Wang & Nayir, 2010). Meanwhile, Milani (1975) stated that the relation between participatory budgeting and performance is extremely weak. Wentzel (2002) explained the importance of budget goal commitment for manager's productivity. The reason is that with a high commitment, determining the achievement of organizational goals becomes more effective. Budget target commitment is the intention of individuals within the organization to achieve sustainable budget goals (Jatmiko, Laras, & Rohmawati, 2020; Tosi, Locke, & Latham, 1991). Budget suitability provides an opportunity for individuals to participate in budgeting. On the other hand Shield & Shield (1998) stated that participation in budgeting can increase subordinates trust, desire to control, and ego to be involved in achieving organizational goals, all of which tends to reduce resistance to change and are more receptive to commitment to budget decisions.

Various studies also show that budget goal commitment can be a mediating variable between participatory budgeting and performance (Breux et al., 2011; Chong & Chong, 2002; Maiga & Jacobs, 2007; Melek, 2009). This study indicated that that budget congruence can affect budget goal commitment and will have an impact on managerial performance. Thus, the following hypotheses are proposed:

- H_{1a} : Budget congruence affects budget goal commitment
- H_{1b} : Budget goal commitment affects managerial performance
- H_{1c} : Budget congruence affects managerial performance through budget goal commitment

2.3 Budget Congruence, Psychological Capital and Managerial Performance

This study attempts to use a psychological approach in the relation between participatory budgeting and performance. Luthans, et al. (2007) offered psychological capital as an untapped human resource for organizational competitive advantage. The level of participatory budgeting can be related to the level of individual psychological capital (Larson & Luthans, 2006; Luthans & Youssef, 2007; Nguyen & Ngo, 2020). In addition, participatory budgeting is considered contribute to the level of management resilience at lower levels (Luthans, Vogelgesang, & Lester, 2006). The psychological approach in this study seeks to evaluate the level of managerial performance at all levels that participate in budgeting.

Several studies have shown that psychological capital has a mediating role in the relation between participatory budgeting and performance (Gupta & Singh, 2014; Luthans, Avolio, Walumbwa, & Li, 2005; Marginson & Ogden, 2005; Rego et al., 2012; Sweetman et al., 2011). Positive dimensions owned include self-efficacy, optimism, hope, and resilience which are believed to affect the level of managerial performance. The study of Venkatesh & Blaskovich (2012), stated that psychological capital can be a full mediation of the relation between participatory budgeting and work performance. This study indicates that budget

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congruence can affect psychological capital and will have an impact on managerial performance. Thus, the following hypotheses are proposed:

- H_{2a} : Budget congruence affects psychological capital
- H_{2b} : Psychological capital affects managerial performance
- H_{2c} : Budget congruence affects managerial performance through psychological capital

2.4 Budget Congruence, Management Accounting System and Managerial Performance

Based on the contingency theory, conflicts of interest that occur between the principal and agent are based on conditions of high environmental uncertainty (Cheng, 2012). Furthermore, Brownell (1982) showed that accounting data can function as an evaluation of organizational performance and effectiveness. Fisher (1998) in his view, argued that every company can implement the same management control system as other companies as long as the underlying condition such as business characteristics and business size are similar. Kren (1992) showed that participatory budgeting and management control are influenced by several factors. One of them is the existence of a good management accounting system in the company (Fry et al., 1998).

Environmental uncertainty causes companies and organizations to have a good system in context of budgeting. Several studies showed that the management accounting system has an effect on performance (Chia, 1995; Gul & Chia, 1994; Gul et al., 1995; Tsui, 2001). Meanwhile, the management accounting system is able to function as a mediating variable (Agbejule, 2005; Hoque, 2011). This study indicates that budget congruence can affect the management accounting system and will have an impact on managerial performance. Therefore, the following hypotheses are proposed:

- H_{3a} : Budget congruence affects management accounting system
- H_{3b} : Management accounting system affects managerial performance
- H_{3c} : Budget congruence affects managerial performance through management accounting system

3. METHOD

This study was designed by using a quantitative survey method. This study was conducted by utilizing cross-sectional data. This approach was expected to increase the external validity of this study. Data were collected through online surveys distributed through closed community media using virtual saturated samples. The survey link was sent to two universities in East Java province that apply the pattern of financial management of public service agencies, including State Islamic University of Sunan Ampel Surabaya, and State Islamic University of Maulana Malik Ibrahim Malang. The questionnaire used was adopted from Breaux, et al. (2011), Kren (1992), Chong & Chong (2002), Luthans, et al. (2007), and Chenhall & Moris (1986). This study used the evaluation of the outer model through confirmatory factor analysis to analyze the level of validity and reliability of the latent construct.

The validity used in this study is construct validity, predictive validity, and content validity (Barclay, D., Thompson, R., dan Higgins, 1995; Chin, 2010). While, the reliability used in this study is an indicator of reliability and composite reliability (Chin, 1998; Fornell & Larcker, 1981; Hair, Risher, Sarstedt, & Ringle, 2019; J. Nunnally & Bernstein, 1994).

3.1 Measurement

The variables of this study include budget congruence and managerial performance, where budget congruence is measured by six instruments developed by Breaux, et al. (2011) with a 7-point likert scale. Meanwhile, managerial performance is measured by eight instruments developed by Kren (1992) with a 7-point likert scale. This study used mediating variables consisting of budget goal commitment, psychological capital, and management accounting system. Furthermore, budget goal commitment was measured by three instruments developed by Chong & Chong (2002) with a 7-point likert scale. Meanwhile, psychological capital was measured by 12 instruments developed by Luthans, et al. (2007) with a 7-point likert scale. In addition, the management accounting system was measured by an instrument developed by Chenhall & Moris (1986) which consists of 19 statement items with 7-point likert scale.

3.2 Data Analysis

Data were analyzed by using confirmatory factor analysis (CFA). CFA was used to test the model factors for construct validation and construct measurement (Jöreskog, 1969). In addition, the CFA provides a way to create a set of interrelated indicators, satisfying one of the conditions for construct validity. Convergent validity is accepted if the item contains a strong factor > 0.50. Meanwhile, discriminant validity will be achieved if each item contains a stronger load on the related factor than the other loadings. Indicators with a factor of 0.30 and a difference of 0.10 between their loadings on other factors were examined to determine whether the indicator conceptually measures other factors (Messick, 1990, 1995). Reliability was tested by using

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Cronbach alpha criteria > 0.70 (Cronbach, 1951; J. C. Nunnally, 1978) and composite reliability 0,70 (Chin, 1998, 2010). Furthermore, budget congruence, budget goal commitment, psychological capital, management accounting system, and managerial performance will be tested by using path analysis. The analysis shows the relations between exogenous and endogenous constructs through mediating variables (Baron & Kenny, 1986; Fanshel, 1983; MacKinnon, 2012). The hypothesis is accepted if the probability value of the variable is less than 0.05 ($p < 0.05$).

4. RESULTS AND DISCUSSION

4.1. Demographic Profile of Respondents

Table 1 presents the demographic profile of the respondents. A total of 82 respondents were participated in the study. The majority of respondents are master's degree graduates for 46.3% and women for 54.9% and in the university level, 75.6% were dominated by State Islamic University of Sunan Ampel Surabaya.

Table 1. Demographic profile of respondents

Description		Total	Percentage (%)
Gender	Male	37	45.1
	Female	45	54.9
Age	26-40	19	23.1
	41-55	59	72.0
	>55	4	4.9
Level Education	Bachelor	12	14.6
	Master	38	46.3
	Doctoral	32	39.0
University	UIN Sunan Ampel, Surabaya	62	75.6
	UIN Maulana Malik Ibrahim, Malang	20	24.4

4.2. Instrument

The results of the confirmatory factor analysis are shown through the value of convergent validity, discriminant validity, and reliability values.

Table 2. Outer loading value

Instrument	Budget congruence	Managerial performance	Budget goal commitment	Psychological capital	Management accounting system
Agreement	0,810				
Consultation	0,879				
Cooperation	0,843				
Feedback	0,797				
Opine	0,755				
Teamworking	0,793				
Coordination		0,857			
Evaluation		0,792			
Investigation		0,809			
Planning		0,819			
Staff assessment		0,872			
Supervision		0,852			
Achievement			0,797		
Commitment			0,829		
Effort			0,786		
Contentment				0,767	
Contribution				0,843	

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Instrument	Budget congruence	Managerial performance	Budget goal commitment	Psychological capital	Management accounting system
Crative				0,848	
Enlightment				0,751	
Experience				0,732	
Optimism				0,795	
Outcome				0,831	
Positivity				0,741	
Analysis					0,845
Compatibility					0,786
Decision					0,897
External factor					0,733
Future information					0,757
Goal					0,751
Impact					0,838
Influence					0,820
Periodicity					0,742
Prediction					0,767
Relation					0,769
Relevance					0,818
Reporting					0,850
Systematic					0,798
Average variance extracted	0,622	0,695	0,646	0,624	0,639

Based on table 2, it can be seen that the loading factor value of all instruments is greater than 0.700. In addition, the average variance extracted (AVE) value of each variable has a value greater than 0.500. Therefore, it can be stated that each instrument of the variables of budget congruence, managerial performance, budget goal commitment, psychological capital, and management accounting system meets the convergent validity criteria. Meanwhile, the value of the square root of the construct AVE is greater than the correlation between latent constructs which is shown in table 3 of the Fornell-Larcker Criterion below. It can be stated that each instrument of the research variable meets the criteria of discriminant validity.

Table 3. Fornell-larcker criterion

Fornell-Larcker Criterion	Budget Congruence	Budget Goal Commitment	Management Accounting System	Managerial Performance	Psychological Capital	Cronbach's alpha	Composite reliability
Budget Congruence	0,814					0,898	0,921
Budget Goal Commitment	0,300	0,804				0,729	0,846
Management Accounting System	0,480	0,326	0,799			0,956	0,961
Managerial Performance	0,381	0,248	0,721	0,834		0,912	0,932
Psychological Capital	0,438	0,473	0,665	0,604	0,790	0,913	0,930

In addition, based on table 3, it shows that the value of Cronbach's alpha and the value of composite reliability of each variable has a value greater than 0.700, which means that each research variable meets the reliability criteria and is eligible for further analysis.

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4.3. Path Analysis

Based on the objectives and specifications of the study, testing was carried out by using smartpls to get fit test results. The following is the conceptual model of this study.

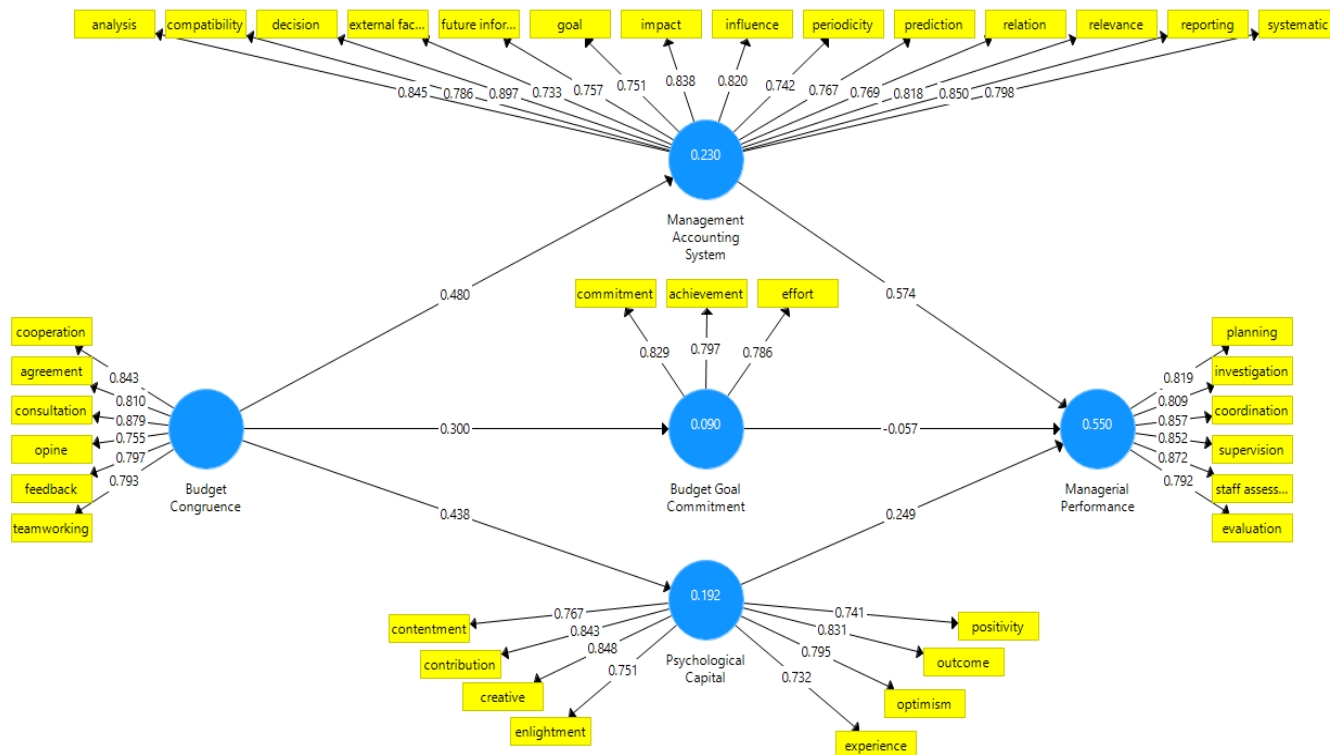


Figure 1. Results from partial least square

Based on figure 1 above, it can be seen that the R-square value of managerial performance is 0.550, which means that the influence of management accounting system, budget goal commitment, and psychological capital is 55% and the remaining 45% is influenced by other variables outside the model. Meanwhile, the magnitude of the influence of budget congruence on the management accounting system, budget goal commitment, and psychological capital are 23%, 9%, and 19.2%, respectively.

4.4. Findings

As shown in figure 1, path analysis was used to test the research hypothesis. The t-statistics criteria and probability values were used to analyze the effect of exogenous variables on endogenous variables as well as the effect of research mediation.

Table 4. Path Analysis Result

Construct		Coef.	T-Statistics	Prob.	Result
Budget Congruence -> Budget Goal Commitment (H1a)		0,300	3,218	0,001	Supported
Budget Goal Commitment -> Managerial Performance (H1b)		-0,057	0,602	0,547	Not Supported
Budget Congruence -> Psychological Capital (H2a)		0,438	4,968	0,000	Supported
Psychological Capital -> Managerial Performance (H2b)		0,249	2,318	0,021	Supported
Budget Congruence -> Management Accounting System (H3a)		0,480	6,082	0,000	Supported
Management Accounting System -> Managerial Performance (H3b)		0,574	6,199	0,000	Supported
Intervening variable	Budget Congruence -> Budget Goal Commitment -> Managerial Performance (H1c)	-0,017	0,536	0,592	Not Supported
	Budget Congruence -> Psychological Capital -> Managerial Performance (H2c)	0,109	2,118	0,035	Supported
	Budget Congruence -> Management Accounting System -> Managerial Performance (H3c)	0,275	3,997	0,000	Supported

There are six direct and three indirect effects in this study. Based on table 4, the path analysis results show that psychological capital and management accounting system variables are proven to be able to function as mediating variables; (H2c) and (H3c) were supported. Meanwhile, budget goal commitment failed to show its role in mediating the relation between budget

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congruence and managerial performance; (H1c) was not supported. This is because there is no direct influence of budget goal commitment on managerial performance; (H1b) was not supported. Other results of this study support several hypotheses of direct influence, such as budget congruence to budget goal commitment (H1a), budget congruence to psychological capital (H2a), psychological capital to managerial performance (H2b), budget congruence to management accounting system (H3a), and management accounting system on managerial performance (H3b). The research hypothesis is supported because the probability value is less than 5% ($p < 0.050$) and has a t-statistics value greater than 1.96 (Baron & Kenny, 1986; Fanshel, 1983).

4.5 Discussions

Budget congruence and managerial performance in contingency theory states that the better the budget congruence in an organization, the better its management performance is by considering several organizational and situational factors such as budget target commitment and individual psychological mentality which are represented by the positive behaviour of a person in the organization and the applied management accounting system. The results of the research on the first hypothesis reveal that the relation between budget congruence and budget goal commitment is in line with Maiga & Jacobs (2007), but the relation between budget goal congruence and managerial performance is not in line with Wentzel (2002) due to different patterns in participatory budgeting in the public sector. Thus, the results of the study do not support Breaux, et al. (2011) and Melek (2009) on the role of mediation. Budget congruence can increase budget goal commitment, while budget goal commitment cannot affect managerial performance, and finally, budget goal commitment cannot mediate the relation between budget congruence and managerial performance.

On the other hand, the second hypothesis in the context of behaviour show that the relation between budget congruence, psychological capital, and managerial performance is in line with the Venkatesh & Blaskovich (2012), Rego, et al. (2012) and Sweetman, et al. (2011) at several levels of higher education management. Budget congruence can increase individual psychological capital, and ultimately also improve managerial performance. These results prove the theory of individual behaviour when faced with the budgeting process; a person will use their motivation to achieve these goals (Woodman et al., 1993).

The relation between budget congruence and management accounting system is in line with Linn, et al. (2001). In addition, research findings on the relation between management accounting system and managerial performance are in line with Agbejule (2005) and Hoque (2011). Differences in information received by leaders and members cause obstacles to the achievement of goals (Bontis, 1999), this causes the necessity of the system applied to the budgeting process to be quite effective and efficient. Thus, the third hypothesis proposed in this study is in line with Chia (1995), Gul & Chia (1994) and Tsui (2001) which prove that there is a mediating role of the management accounting system in the relation between budget congruence and managerial performance.

5. CONCLUSIONS

This study proves that there is a relation between budget congruence and managerial performance at the leadership level in State Islamic Universities that apply the financial pattern of public service agencies in Indonesia. In addition, there is a mediating role of psychological capital, and management accounting system on the relation between budget congruence and managerial performance. Meanwhile, in the context of public sector organizations, budget goal commitment failed to prove its mediating role. In general, the relation between budget congruence and managerial performance is in line with the findings of Melek (2009) and Venkatesh & Blaskovich (2012), which state that participatory budgeting is an important factor for improving managerial performance.

This study has several limitations. First, this research is only applied to State Islamic Universities with a financial pattern of public service agencies, with a number of respondents who are not large enough. Second, this study cannot be generalized because it only focuses on Islamic colleges based in the Ministry of Religious Affairs of the Republic of Indonesia. In addition, this study has an R-square of 55%, which means there are other factors that can affect managerial performance.

This study has several suggestions for further research. The first suggestion is that further research can expand the scope of state universities that have a similar financial system both public and private universities. This study provides insight into the pattern of the relation between participatory budgeting and managerial performance. In addition, based on the last limitations of this study, there is an opportunity for further research to develop research variables namely the form of individual creativity in organizations.

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