



Research Article

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Organizational Performance in Environmental Uncertainty on the Indonesian Healthcare Industry: A Path Analysis

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Abstract

The COVID-19 pandemic has created turbulence in the healthcare industry, resulting in a decline in financial performance, planning, control, and systems. This has caused managers to perform specific actions related to budgeting for their benefit, resulting in budgetary slack and affecting hospital performance, which is influenced by environmental factors and organizational conditions. Therefore, this research aimed to obtain empirical evidence of the mediating role of management control systems and budgetary slack on the effect of environmental uncertainty on hospital performance. The method used was an explanatory causality approach, a primary data source, a survey data collection technique, and a research sample consisting of hospital managers. The simple random sampling technique was employed, using an individual unit of analysis, a cross-sectional time horizon, and path analysis to evaluate the data. Subsequently, the results showed that environmental uncertainty positively affects management system control and budgetary slack. The research also revealed the positive influence of management system control on budgetary slack and hospital performance and fiscal margin on hospital performance. Furthermore, the control process and budgetary slack as mediating actions indicated that budgeting is pessimistic for goal congruence, making hospital performance efficient but ineffective.

Keywords: environmental uncertainty, management control system, budgetary slack, hospital performance

1. Introduction

The Covid-19 pandemic has caused all business sectors to experience turbulence, including hospitals' performance in the health service industry. The performance of hospitals that remained private has resulted in decreased revenues from the cancellation of operations and services, as well as additional costs for purchasing personal protective equipment, workers (AHA, 2020; Aulia, 2021), and the health care system (Sulaiman, 2020; Khullar et al., 2020). In contrast, the performance of issuers that went public on the Indonesian Stock Exchange showed an increase in revenue but a fluctuation in profit and loss generation until semester 1 of 2021 (Aulia, 2021). This is due to the capital structure, control, increase in profit margins, and vital health services, and though the maintenance costs are still high, issuers have performance prospects. Generally, hospital performance depends on situational factors, precisely environmental uncertainty, which affects the organization's planning, control, performance, and decision-making. Meanwhile, several empirical studies have explored the factors that affect hospital performance in various countries, including Azar et al. [2014] in Iran, Eker and Eker (2019) in Turkey, Reis and Spencer (2019) in the UK, and Nguyen et al. (2021) in Vietnam.

Research on hospital performance has also been conducted in Indonesia, where high environmental uncertainty, resulting in the inability of managers to predict but accompanied by cost-efficient performance, was described (Julius et al., 2020). However, another investigation reported ineffective performance (Cipto et al., 2020). According to research, managers are specialists who are uninformed during decision-making as they lack participation in budget preparation and analytical knowledge and only see the current situation (Julius et al., 2020; Cipto et al., 2020). They are also unaware of essential information for scanning, monitoring, controlling changes, and making decisions (Adhikara, 2017). However, budgeting is a measure of performance and is intended as a tool for planning, implementing, coordinating, controlling, guiding employees to motivate and achieve performance (Mirza & Adi, 2020). managers tend to be pessimistic in achieving performance targets, resulting in budgetary slack (Mahmudi, 2015; Auzair, 2011). Meanwhile, various factors influence hospital performance, including market and organizational conditions.

The contingency perspective views the organization as an open system related to the environment and influences the organization's internal processes. This theory is related to environmental uncertainty that affects organizational performance and describes efforts to identify appropriate control systems under the most suitable conditions. The premise is that no control system is constantly applicable in all circumstances (Otley, 1980), causing the implementation of adjustments to maximize the benefits in every situation. This control system varies with the company based on organizational and situational factors.

Several research show variations in hospital performance, possibly due to situational uncertainty in the environment due to rapidly changing needs, which require organizations to make adjustments (Lee et al., 2011; Wang and Fang, 2012). However, alongside the lack of important information, these situations make managers unable to predict environmental uncertainty and effectively perform (Lee et al., 2011; Lonial and Raju, 2001; Cipto et al., 2020). This results in reduced suitability of the control system and performance discrepancies (Miliken, 1987; Zainuddin, 2003). The implication is that employees strive to achieve performance by overestimating costs and reducing income excessively through budgetary slack (Walther and Skousen, 2009; Horngren et al., 2015; Goebel and WeiBenberger, 2016; Langevin and Mendoza, 2012; Drury, 2018; Kren and Maiga, 2015; Hansen and Mowen, 2019; Merchant and Van der Stede, 2012). Meanwhile, Azar et al. (2016) showed that budgetary slack is not always damaging because it distorts the results of the contribution of activities, accelerates the achievement of goals, increases the organization's utility function, and optimizes the most strategic allocation of resources, and avoids inappropriateness.

Therefore, the urgency of the research includes, firstly, uncertain environments pose risks to hospitals' performance and cause managers to accept situational risks and predict signals as news or bad news. This highlights the importance of the management control system as a mediating factor to synergize the goals and objectives of the organization. Secondly, the complexity of the contingency

design in four analytical categories based on contingency, control, and outcome variables was examined. The contingency factors determine the adequate functioning of the control system and its association with performance.

This research identifies critical organizational performance factors, namely environmental uncertainty, management control system, and budgetary slack, from contingent situations that determine the effectiveness of control designs. The results of this research are expected to contribute to behavioral accounting, especially the behavior of managers in planning, controlling, measuring performance, and making decisions in the Indonesian health service industry.

2. Literature Review and Hypotheses Development

2.1 Contingency Theory

The contingency theory states that an organization is an open system and has a relationship with the environment that affects its internal processes. This theory is related to environmental uncertainty that affects organizational performance through planning, controlling, and decision-making (Lueg and Borisov, 2014). Environmental uncertainty estimates the current risks that affect the viability of an organization and help address future threats. Hence, this theory can determine whether financial and non-financial factors play an essential role in the relationship between strategy and organizational behavior towards environmental uncertainty and organizational performance.

Contingency theory describes efforts to identify appropriate control systems under the most suitable conditions. The premise is that no constantly right control system can be applied in all circumstances (Otley, 1980), resulting in adjustments to ensure continued usefulness. Consequently, each company's control system will be different based on organizational and situational factors, showing that no single system can be helpful in all situations. Numerous organizations must change their internal settings in response to various environments, emphasizing the adage that there is no best way to manage.

2.2 Environmental Uncertainty with Hospital Performance

Environmental uncertainty is the manager's perception of the professional environment that will affect organizational performance (Gordon and Narayanan, 1984) and accurately understand external and non-financial conditions (Dwyer and Welsh, 1985; Hoque, 2004; Eker and Eker, 2019). It challenges organizations to make the right decisions, as the environment may accept required information while still incomplete, inadequate, and unable to distinguish between relevant and unrelated data (Miliken, 1987). This is due to the difficulty of anticipating rapidly changing conditions, especially in the relationship between organizational and environmental strategy and organizational performance. Therefore, the management's role is to estimate the risk of current problems that will be useful in addressing future risks that affect an organization's survival. The administration also requires information and increasingly sophisticated reports generated from systems to help improve the quality of decision-making (Gul and Chia, 1994; Nguyen et al., 2021). Jumono (2021) indicates that economic growth positively correlates with financial development.

H1: Environmental Uncertainty affects Hospital Performance.

2.3 Environmental Uncertainty with Management Control System

High environmental uncertainty makes planning, supervision, and organizational decision-making difficult for managers (Adhikara, 2010; Adhikara, 2017; Lueg and Borisov, 2014) because future events cannot be accurately predicted. Generally, decision-making in the health care environment is a complex and inhibiting procedure, which can be simplified through communication and consideration of the responsibilities and central roles of medico-scientific (Reis and Spencer, 2019).

Information is also an essential commodity in an organization's planning, controlling, and decision-making processes. It is used by the control system, which signifies a formal procedure, to maintain or change the pattern of activity in the organization (Simon, 1987), thereby maintaining and revising the crucial aspects in management. The management control system represents the organization's desire to achieve its goals by providing helpful information for decision-making, planning, and performance evaluation (Merchant and Stede, 2011; Anthony and Govindarajan, 2015; Outley et al., 2014). Meanwhile, business strategy refers to the chosen pattern of handling environmental uncertainty and depends on implementing a management control system that corresponds to the structure and decisions of managers to eliminate emerging threats or convert them into opportunities (Gschwantner and Hiebl, 2016).

H2: Environmental Uncertainty affects the Management Control System.

2.4 Environmental Uncertainty with Budgetary Slack

Environmental uncertainty is the inability of individuals to accurately judge that the implemented decisions made will fail or succeed because of the difficulty of predicting the possibilities that may occur (Duncan, 1973). As a dynamic, uncontrollable, fast-growing, complex, and global condition that is difficult to interpret (Hitt et al., 2016), the environment poses a challenge for managers during planning, control, and organizational decision-making (Adhikara, 2010; Adhikara, 2017). Unpredictable future events cause problems during the planning and management in uncertain situations. Hence, managers behave negatively by using profit as a safe space in meeting budget planning goals that will facilitate the achievement of targets (Walther and Skousen, 2009; Anthony and Govindarajan, 2015). Budgetary slack occurs due to low estimated total revenue and high-cost budgets (Ngo et al., 2017; Weygandt et al., 2015; Faria and Silva, 2013). Since the goal is to reduce the pressure and anxiety caused by a tight budget, managers create budgetary gaps by considering a combination of organizational and personal goals to achieve goal congruence and ensure closeness to a predetermined amount (Siegel, 1989).

H3: Environmental Uncertainty affects Budgetary Slack

2.5 Management Control System with Budgetary Slack

A management control system is a tool used to ensure the control process functions appropriately, and the organization operates based on the performance objectives. It encompasses strategic planning, budgeting, performance evaluation, and implementation. It can be an internal and external process that occurs quantitatively and qualitatively. This also makes it helpful in managing organizations (Bouwens and Abernethy, 2000; Abernethy and Guthrie, 1994; Chenhall and Morris, 1986). Control is the essential part of the budget system and is implemented by comparing actual results with periodic budgets to prevent budgetary slack between organizational and personal goals (Anthony and Govindarajan, 2015; Merchant and Van Der Stede, 2007). This is because the planned amount differs from the realization, and uncertain environmental conditions will require the manager to revise the budget, supposing a slack occurs. The budgetary slack phenomenon occurs partly because the budget is prepared using certain assumptions. According to Anthony (2015), managerial control is an explicit and formal mechanism that contributes to achieving a company's maximum efficiency and effectiveness, providing the purpose of this system is to promote alignment and coincidence between personal and business goals.

H4: Management Control System affects Budgetary Slack

2.6 Management Control System with Hospital Performance.

The management control system is a tool to ensure that all individuals supervised will implement the intended strategy. It is an essential process due to its close relationship with a company's

performance, which refers to achieving results related to the organization's goals (Lönnqvist, 2004). The system's goal is to ensure the organization is working according to the goals, thereby enabling managers to understand better the problems (Bouwens and Abernethy, 2000; Abernethy and Guthrie, 1994; Chenhall and Morris, 1986; Arsono and Muslichah 2000). Management information is a broad internal and external process that occurs quantitatively and qualitatively and is helpful in planning and controlling the company to facilitate performance. Meanwhile, performance is a measure of organizational results and is influenced by market and organizational conditions, making its compilation complex. Performance can be measured in two ways, namely directly related to outcomes (financial, performance) and focusing on the determinants (quality, flexibility, performance, resource utilization, and innovation) (Neely et al., 2000). Hence, the management control structure positively affects financial performance through the control process (Animah, 2002).

H5: Management Control System Affects Hospital Performance.

2.7 Budgetary Slack with Hospital Performance

Budgetary slack is a deliberate attempt by budgeting managers, where estimates that do not match the original potential are presented, thereby lowering the revenue generated and increasing the required costs (Dunk, 1993). This is executed as a manager's effort to approach the safe limit in achieving the organization's target budget through participatory budgeting with individuals who have positive and negative attitudes. This behavior motivates overall performance appraisal strategies and long-term goal design (Hansen and Mowen, 2019). It will affect the successful implementation of future programs and activities due to the arrangement between organizational and employee goals. As a goal congruence, structuring company targets with employee points will be ideal and sought in the readiness of financial plans (Azar et al. 2016; Kahar et al. 2016). Therefore, managers are pessimistic during budgeting and create slack, which tends to be easily achieved during hospital performance and allows personal goals and targets. Therefore, budgetary slack has a positive effect on financial performance.

H6: Budgetary Slack affects Hospital Performance

3. Research Model

A conceptual model to explain the relationship resulting from the influence of environmental uncertainty on hospital performance with management control systems and budgetary slack as mediating aspects in the health service industry in Indonesia is explained below:

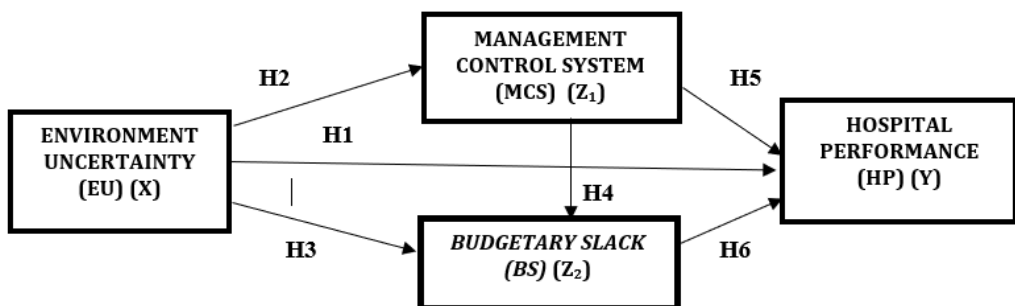


Figure 1: Research Model

4. Method

4.1 Research Design

The research used the explanatory causality design, the data were collected through surveys, and the research population comprised 130 hospital managers from class B and C in DKI Jakarta Province. Meanwhile, the purposive sampling technique was employed using the criteria of a manager that formulated the hospital budget. The final sample consisted of 118 hospital managers, using the individual unit of analysis, the cross-sectional time horizon, and the path data analysis.

4.2 Definition of the Operational Variables

Environmental uncertainty is the manager's perception of the inability to handle external conditions that affect an organization. The instrument employed in this research comprised seven items developed from Gordon and Narayanan (1984), namely competition in the inputs used, the output produced, the economy, technology, law, environment, and interest rates. Subsequently, the variables were measured using a Likert scale ranging from 1 (very unpredictable) to 5 (very predictable) to describe the level of predictive ability.

A management control system is the attitude of managers in conducting effective and efficient supervision to achieve organizational goals. The instrument consisted of 10 indicators developed from Anthony (1997), namely the preparation of patient care programs, implementation of strategies, patient care programs supporting the achievement of goals and objectives, reviewing programs according to demands, patient service activities using the principles of efficiency and effectiveness, resource considerations, supervisory advice, program communication, monitoring of patient care, and timely reporting systems. The measurement of the variables employed a Likert scale ranging from 1 (very uncontrollable) to 5 (very controllable) to express the level of control.

Budgetary slack is the difference between the resources needed to complete a task efficiently and the enormous amount allocated. This instrument was developed from Dunk (1993) with 6 indicators, namely budget standards, success, tightness, pressure, efficiency, and targets. The variables were measured using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) to state the level of inequality.

Hospital performance results from the hospital's financial performance for one period. The variables were developed from Fisher (1998) and consisted of 7 indicators: rate of return (ROI), profit, cash flow, cost control, sales volume, human resource development, and community affairs. The measurement of variables was performed using a Likert scale ranging from 1 (very unperforming) to 5 (very performing) to depict performance.

5. Results and Discussion

5.1 Research Result

5.1.1 Descriptive Statistics

Table 1 shows the descriptive statistical results of the behavioral tendencies of managers in hospitals.

Table 1: Descriptive Statistics Test Results

Variable	N	Minimum	Maximum	Mean	Std Deviation
Environment Uncertainty [EU] (X)	118	1.00	5.00	3.2528	.71744
Management Control System [MCS] (Z)	118	3.00	5.00	3.8707	.65529

Variable	N	Minimum	Maximum	Mean	Std Deviation
Budgetary Slack [BS] (Z)	118	3.00	5.00	3.6898	.44722
Hospital Performance [HP] (Y)	118	2.00	5.00	2.9562	.59726

Source: Processed Data, 2021

Table 1 above shows that the respondents who have been unable to predict environmental uncertainty are less controlled in management supervision, create a pessimistic budget gap, and are efficient but ineffective in achieving hospital performance.

5.1.2 Normality test

Normality test is used to test the normal distribution of relevant data, determined by a significant critical ratio (cr) value less than 2.58 for each multivariate value. The results of the test can be seen in Table 2 below:

Table 2: Normality Test

Variable	Min	Max	Skew	c.r.	Kurtosis	c.r.
Environment Uncertainty [EU]	.500	1.386	.000	.000	-.795	-1.725
Management Control System [MCS]	.000	1.435	.210	.912	-1.477	-3.204
Budgetary Slack [BS]	.693	1.447	-.070	-.304	-.949	-2.059
Hospital Performance [HP]	.410	1.130	.905	3.926	.315	.683
Multivariate					1.743	1.337

Source: Processed Data, 2021

As shown in Table 2 above, the critical ratio value is $1.337 < 1.96$, or the skewness value is below 1.96, meaning the resulting data pattern is normal.

5.1.3 Data Quality Test

The validity test was used to measure the concept by executing the Kaiser-Meyer-Olkin (KMO) assessment, where the lowest and highest values were 0.718 and 0.792, respectively. Meanwhile, the reliability test measures the consistency of a variable, which is accepted when the Cronbach's Alpha value obtained is above 0.60. The lowest reliability test value was 0.884, while the highest was 0.960.

Table 3: Data Quality Test

No	Variable	Validity (KMO)	Reliability (Cronbach's Alpha)
1	Environment Uncertainty [EU] (X)	0.792	0.953
2	Management Control System [MCS] (Z)	0.780	0.960
3	Budgetary Slack [BS] (Z)	0.749	0.917
4	Hospital Performance [HP] (Y)	0.718	0.884

Source: Processed Data, 2021

5.1.4 Hypothesis test

The hypothesis testing was done simultaneously or partially, as shown by the calculation results in Table 4 below.

Table 4: Path Analysis Test Results

Influencing Variable			Estimate	S.E.	C.R.	P	Information
EU	→	HP	.181	.083	2.196	.028	H1 Accepted
EU	→	MCS	.166	.058	2.890	.004	H2 Accepted
EU	→	BS	.288	.063	4.562	.000	H3 Accepted
MCS	→	BS	.409	.126	3.249	.001	H4 Accepted
MCS	→	HP	.181	.083	2.196	.028	H5 Accepted
BS	→	HP	.470	.071	6.623	.000	H6 Accepted
Squared Multiple Correlations Budgetary Slack = 0.608 Hospital Performance = 0.764					Minimum was achieved Chi-square = .063 Covariance determinan matrix = . 0162		

Source: Processed Data, 2021

5.1.5 Intervening Test

Table 5 shows the path analysis test results of the intervening variables:

Table 5: Intervening Test

Variable	Environment Uncertainty		Management Control System	
	Direct Effects	Indirect Effects	Direct Effects	Indirect Effects
Management Control System	0.267	0.000	-	-
Budgetary Slack	0.364	0.682	0.422	0.000
Hospital Performance	0.415	0.838	0.229	0.592

Source: Processed Data, 2021

The results in Table 5 indicate that the indirect effect on the management control system is higher (0.682) than the direct effect (0.267). In comparison, the budgetary slack has a higher direct effect (0.838) than the direct effect (0.415) on the relationship between environmental uncertainty and hospital performance. These findings show that the management control system and budgetary slack function as intervening variables.

5.2 Discussion

5.2.1 The effect of environmental uncertainty on hospital performance.

This research showed that environmental uncertainty has a significant positive effect on hospital performance. The results indicated that managers have been unable to predict this variable, resulting in low operational effectiveness due to their poor understanding of external non-financial information. Predictability occurs in the inputs and outputs of organizations, the environment, economy, and technology, which enhances the efficiency of the hospital's performance, reduces operational expense control and investment costs, and develops human resources. As Covid-19 referrals in the National Health Service Guarantee (BPJS), Class B and C hospitals must provide bailout funds, though there are high dispute claims against this environment. The results of load efficiency did not reach the effectiveness objective, which prevented the financial performance from reaching the budgeted target. This result could reduce profit due to a decrease in sales volume, alongside a fall in Return on Assets and Return on Investment. Consequently, these results are consistent with the studies by Cadeaux and Ng (2012) and Bendickson et al. (2018) that high

environmental uncertainty will increase operating expenses and reduce sales volume to cause decreased performance. During the COVID-19 pandemic, there was also a 78% decline in financial and service performance in health agencies (Putra, 2020).

5.2.2 The effect of environmental uncertainty on the management control system.

Environmental uncertainty has a significant positive effect on the management control system, meaning managers have been unable to predict the inputs used, the output produced, the economy, technology, and the environment. Hence, they have failed to control, monitor, and evaluate the implementation of strategies and review programs according to hospital developments, principles of efficiency and effectiveness, and timely reporting systems. The weak control shows that program targets are not effectively achieved due to a lack of information (Wirawan, 2015), and bailout funds are required, though dispute claims against BPJS are high. This research supports Gordon and Narayanan (1983), who stated that the environment influences information systems and corporate organizational structures. Management control directs the organization through the environment towards achieving short- and long-term goals (Outley and Soin 2014); Hence, an uncertain climate causes the application of a stricter control system (Auzair, 2011).

5.2.3 The effect of environmental uncertainty on budgetary slack.

Environmental uncertainty has a significant positive effect on budgetary slack. This research showed that managers have been unable to predict the inputs used, the output produced, the economy, technology, and the environment. This gives rise to a pessimistic behavior, which creates a budgetary slack on budget standards, tightness, pressure, efficiency, and targets. Hospital managers create suspicious opportunities through the planning budget slack to achieve individual and organizational goals. The results of this research support Yilmas and Ozer (2011), alongside Sanjiwani and Suryanawa (2020), who stated that environmental uncertainty has a positive impact on the tendency to create budgetary slack. Therefore, ecological uncertainty strengthens the slack fiscal relationship.

5.2.4 effect of management control system on budgetary slack.

The management control system has a positive effect on budgetary slack. This research indicated that managers could not control strategy implementation, program reviews, efficiency, effectiveness principles, and timely reporting systems. This leads to a pessimistic behavior to create budgetary slack on budget standards, tightness, pressure, efficiency, and targets. The COVID-19 pandemic and the high claims of the National Health Insurance (BPJS) have challenged the control management and targets outlined in the budget. According to Yilmas and Ozer (2011), environmental uncertainty positively impacts the tendency to create budgetary slack. Hence, control partially mediates the relationship between environmental uncertainty and the propensity to create budgetary slack. Deore et al. (2019) also stated that budget control is more effective in achieving organizational goals to lessen reporting errors and decrease managers' dysfunctional behavior in budget participation to reduce slack (Sangkala, 2015).

5.2.5 effect of hospital management control system on hospital performance.

The management control system has a significant positive effect on hospital performance. According to this research, the inability to control, monitor, and evaluate management will result in efficient but ineffective performance. Subsequently, the cost efficiency was unable to achieve the financial performance target due to decreased profit and sales volume, alongside ROI and ROA. During the COVID-19 pandemic, there was a 78% decline in health care agencies' economic and service performance (Putra, 2020). Meanwhile, the factors that control organizational performance are

budget and control (Schiff and Lewin, 1970), and in system design, several variables of the management control system and performance correlate (Davis, 2000; Marginson 2002; Grabner and Moers (2013); Hogan and Coote, 2014; Salmon and Joiner, 2005; Coenders et al., 2003; Liao, 2005; Eker and Eker, 2019).

5.2.6 *The effect of budgetary slack on hospital performance*

Budgetary slack positively affects hospital performance, and the research showed that this suspicious behavior would result in efficient but ineffective performance. The suspicious behavior is evident in budget standards, tightness, pressure, efficiency, and targets, causing hospital cost-efficiency in operating expenses, investment costs, and human resource development costs. However, there is no budget target effectiveness, as seen in the decline in profit and sales volume, alongside the decrease in ROI and ROA. The COVID-19 pandemic conditions and high BPJS claim disputes have made budget realizations difficult, resulting in efficient but ineffective performance. These results support Putra (2020), who reported a decline in financial and service performance by 78% in health service agencies during the pandemic. Hence, budgetary slack has been confirmed to improve short-term performance (Simon, 1987; Karsam, 2015; Stede, 2000; Siallagan, 2018). Low budgetary slack is then determined by unbiased information, causing the budgeted amount to match and improve performance (Hansen and Mowen, 2015).

6. Research Findings

The results of this research support the management control system and budgetary slack as mediating variables in the relationship between environmental uncertainty and hospital performance. Management control partially mediates the relationship between ecological tension and the tendency to create budgetary slack. The inability to predict the environment results in weak management control, which has created suspicious behavior in budget participation to facilitate the alignment between individual and organizational goals to ensure congruence. Although this causes low performance and revenue ineffectiveness, managers can reduce operational costs and achieve efficient investments. Hence, hospitals can provide sustainable operational activities by creating low budgetary slack due to pessimistic budgeting.

7. Conclusion

The results of this research support the contingency theory, which aims to identify the control systems in the most appropriate conditions and make adjustments to ensure usefulness in every situation based on organizational and situational factors. This research concluded that environmental uncertainty, budgetary slack, and management control system have simultaneous and partial effects on hospital performance. Furthermore, management control systems and budgetary slack mediate the influence of environmental uncertainty on organizational performance. In this research, implementing management control in budgeting facilitated cost efficiency, resulting in the suboptimal achievement of Return on Investment and Return on Assets targets.

8. Recommendation

This research recommended participation in the preparation and revision of management budget to reduce the behavior of budgetary slack, alongside training on market strategy, business research. It also suggested enhanced consumer behavior to improve the ability to predict markets, competitors, the health services industry for long-term goals and capture regulatory changes made by the monetary board to determine the level of investment to be implemented in the organization. Other recommendations were increasing the role of budget guidelines as a monitoring and evaluation tool

and developing the contingency theory by expanding independent and moderating variables by adding new variables, such as organizational commitment, mental budgeting, benefits of financial information, budget participation, and opportunistic behavior in budgeting.

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