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The Role of Organizational Strategy and Management Accounting Innovations on Cost Performance: The Case of Higher Education Institutions

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Abstract:
Research aims: This study aims to examine the effect of organizational strategy and management accounting innovations (MAI) on cost performance of private Higher Education Institutions (HEIs). Also, this study investigates the management accounting innovations as mediating variable.
Design/Methodology/Approach: This study is quantitative research with a survey approach. This study was conducted by involving HEI located in several provinces in Sumatera Island, Indonesia, covering West Sumatra, Riau, Riau Islands, and Jambi. The research respondents were the head of the HEIs' finance department. Data analysis utilized Structural Equation Model with Partial Least Square approach (SEM-PLS).
Research findings: The results showed that HEI strategy and MAI had a positive direct effect on cost performance. However, management accounting innovations could not be mediating variable.
Theoretical contribution/Originality: This study contributes to research areas related to strategy, management accounting innovations, and cost performance in HEI sector.
Practitioner/Policy implication: Effectiveness and efficiency in managing HEIs funds requires a strategy and management accounting innovations.
Limitation/Implication: The research only included HEIs located in the areas of West Sumatra, Riau, Riau Islands, and Jambi.
Keywords: Strategy; Management Accounting Innovations; Performance; Higher Education Institution (HEI)

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Introduction

Reforms in higher education have led to an increasing number of Higher Education Institutions (HEIs), both public and private. It, of course, has both positive and negative impacts. The positive impact is that consumers have many choices in determining the best HEI, while the negative impact is the high level of competition, especially in private HEIs. This problem is based on data from the Region 10 HEI Service Institute (in Indonesian term, it is called LLDikti).

However, there was a declining number of HEIs from 250 to 239, meaning that 11 HEIs were closed during 2020 (Nugroho, 2020). In addition, the number of new student admissions tended to decrease, which certainly had a bad impact on HEIs because the largest source of funding came from the cost of student education donations (Permana, 2018; Marlina & Tjahjadi, 2019). The decrease in the amount of income earned is inversely proportional to the operational costs, which continue to increase yearly. Therefore, improvements in all fields need to be carried out both internally and externally to ensure the efficiency and effectiveness of operational activities to maintain HEI sustainability. One of these efforts is through an HEI strategy so that the cost savings made do not reduce the quality of services provided to stakeholders (Fattah & Gautama, 2017; Rustambekov & Unni, 2017).

Efficiency and effectiveness in managing HEI activity expenses can be seen from the cost performance. Cost performance is an achievement of cost reduction by the organization without ignoring HEI quality and performance (Esfahbodi, Zhang, & Watson 2016; Love et al., 2017; You & Jie, 2016; Li et al., 2019). HEI is an educational industry whose operational activities are different from other business companies. Its operational activities consist of academic and non-academic, including education, research, and community service, which must be managed in such a way as to maintain the organization's sustainability. All these activities must be appropriately managed through an HEI strategy so that operational cost savings still ensure the implementation of quality HEI activities (Ogbu & Adindu, 2019). HEI strategy is a comprehensive approach to implementing ideas, planning, and execution in achieving the vision and mission so that the operational activities of HEI institutions become effective and efficient (Lu, 2012; Wurzer & Reiner, 2018).

To improve the performance of HEI costs, every organizational activity carried out must be well planned, which refers to the HEI's strategy (Rahimnia & Kargozar, 2016). HEI strategies are tips or ways of HEI determining the best steps in achieving the vision and mission; through this HEI strategy, spending on the organization's operational activities becomes more effective and efficient (Hutaibat, 2019). The HEI's strategy will provide HEI benefits so that the organization's operational activities are directed to focus on organizational goals (Rahimnia & Kargozar, 2016). For example, giving awards to educators who receive research and service grants will motivate them to obtain these grants to reduce the allocation of costs in the field of research and community service. In addition, strict supervision of costs encourages each expenditure based on the output obtained to boost the efficiency and effectiveness of operational activities to achieve organizational goals as stated in the mission and vision (Grigoroudis, Orfanoudaki, & Zopounidis 2012; Rahimnia & Kargozar, 2016).

Moreover, the development of HEI cost performance through the strategic management process must be carried out systematically (Rahimnia & Kargozar, 2016). It is necessary to adjust the model to develop an HEI strategy because the HEI strategy is different from the business model. The HEI's strategic guidelines are contained in the vision and mission of long-term investment (Aprayuda & Misra, 2020; Aprayuda, Misra, & Kartika, 2021; Sofyan, Putra, & Aprayuda, 2020) to educate the community, requiring a different

strategic approach. HEI strategic planning models are prepared for five years or more (Grigoroudis et al., 2012). The stages of strategy management go through three main phases: strategy analysis, strategy formulation, and strategy implementation (Ismail & Bangun, 2017). Each phase will evaluate activities and funding to create sustainable improvements so that organizational management becomes more effective and efficient and, in the end, can improve the performance of HEI institutions (Marlina et al., 2019).

Research on the effect of strategy on cost performance in HEI has not been done much; most of the research has been conducted on business companies. Several study results, such as Prajogo and Sohal (2006), Grigoroudis et al. (2012), and Ismail and Bangun (2017), uncovered that strategy and cost performance had a positive effect on cost performance, including for research. However, Terziovski and Samson's (2000) study results indicated that the strategy did not affect cost performance. Based on the inconsistency of research results, the researchers suspect a mediating variable on the effect of strategy on cost performance. According to Otley (2016), it is not a relevant concept in an organization but depends on its situation and conditions. Ax and Greve (2017) stated that for the organization to be managed effectively and efficiently, it needs a breakthrough in the form of management accounting innovations (MAI). Based on this, there is a mediation of MAI on the effect of HEI strategy on cost performance. MAI, such as target costing, budgeting approaches, activity-based costing (ABC), balanced scorecards, and strategic management accounting, had successfully stimulated research in management accounting (Johanson & Madsen, 2019; Chiwamit et al., 2017; Ax & Greve, 2017; Maiga et al., 2015; Foster & Ward 1994). In addition, the HEI's strategy is an effort to achieve the organization's mission and vision; with an MAI approach, all activities will be more measurable. The implementation of MAI in HEI can be a medium in presenting more relevant information that leaders will use to determine organizational policies in planning, controlling, and evaluating so that the organization’s operational activities become more effective and efficient.

Further, this research has a theoretical contribution, namely using a contingency theory approach by meeting the criteria for a strategy to be effective depending on the situation and conditions in the organization. Concerning this, MAI can facilitate implementing strategies in achieving organizational funding management to be more effective and efficient, thereby increasing cost performance. Furthermore, the contribution of practitioners by applying MAI can provide more measurable and accurate information so that they can overcome the problems faced by the company by providing relevant information in organizational decision-making. Thus, the organization's strategy to reduce the organization's operational costs without reducing the quality of HEI can be achieved to maintain the sustainability of HEI.

Literature Review and Hypotheses Development

Theoretical Framework

This section is a theoretical foundation that relates the variables of management accounting innovations, HEI strategy, and cost performance. Based on Carter and Rogers (2008), a conceptual framework is not only a concept but also the moral values that underlie the theoretical foundation. According to this mind, the researchers developed cost performance through HEI strategy and MAI. This research used contingency theory as a theoretical foundation to build a research model. Based on Hutaibat et al. (2011), the organization is more focused on achieving the vision and mission contained in the short-term and long-term goals so that the management of organizational resources is more optimal in dealing with existing obstacles and challenges. Thus, organizational management becomes more effective and efficient, and continuous improvement can be realized (Rathee & Rajain, 2013).

According to Otley (2016), the contingency theory is that no concept or design of an organization can be applied universally anywhere or under any circumstances. An organization is only suitable for specific contexts or conditions. The contingency theory is considered by researchers to identify conditions suitable for the design of a particular entity. In addition, contingency theory identifies the optimal form of organization or entity control under different operating conditions and explains how the entity's control activity procedures are (Hariyati & Tjahjadi, 2018). The contingency theory allows for variables that can be moderating and mediating variables. Hence, the relationship between contingency theory in this study is to evaluate MAI as a mediating variable between the influence of HEI strategies on cost performance (Chan et al., 2016). It aligns with the new public management (NPM) era, where the business management approach is superior in carrying out the organization's operational activities. Therefore, MAI will support the organization's strategy in controlling HEI costs to be more efficient (Ax & Greve, 2017).

Hypotheses Development

According to Love (2017), strategies are tips or steps to achieve organizational competitive advantage. Strategic management is the art and knowledge of formulating, implementing, and evaluating decisions to achieve organizational goals. The strategic management process includes analyzing organizational conditions, strategy formulation, and strategy implementation (Ismail & Bangun, 2017). The primary process encompasses strategic development through analysis of the internal and external environment, then formulating strategies relevant to the conditions and situations of HEI, and finally implementing strategies to achieve organizational goals as stated in the organization's vision and mission. Strategic planning is the foremost step that can be taken to overcome obstacles by optimizing HEI's opportunities (Love et al., 2017). Therefore, through an HEI strategy, it will be easier and more focused in carrying out effective and efficient operational activities to increase the cost performance of HEI (Auzair, 2011).

HEI has strategic plans in the short term and long term so that in carrying out operational activities, the HEI becomes more focused and directed to run more effectively and efficiently. Thus, activities that do not add value to the organization can be eliminated to be more effective, and the operational costs become more efficient. Thus, the cost performance of HEI will increase, namely a decrease in operational costs. It aligns with Auzair's (2011) and Ismail & Bangun's (2017) research, showing that organizational strategy positively affected organizational performance. Thus, the hypothesis was proposed as follows:

***H_1**: The strategy of HEI has a positive effect on cost performance.*

The HEI's strategy is the art of achieving organizational goals as stated in the strategic plan to achieve the HEI's vision and mission by considering the weaknesses and obstacles and optimizing the strengths and opportunities (Marlina et al., 2019). Meanwhile, MAI is an innovation from accounting information presented to internal parties involved in the organization's operational activities, including determining costs, performance evaluation, and company control so that the implementation of operational activities becomes more effective and efficient. The HEI strategy with its short-term and long-term organizational goals will encourage the implementation of MAI. In line with the research results of Chiwamit et al. (2017) and Alsharari et al. (2015), organizational strategy positively affected MAI. Thus, the hypothesis was put forward as follows:

***H_2**: The strategy of HEI has a positive effect on management accounting innovations.*

Management accounting innovations are a contemporary management accounting system relevant to the changing business environment with a high level of competition (Wong, Li, & Choi, 2018). With MAI, the development of the traditional management accounting system includes calculating the cost of products using activity-based costing, evaluating performance with a balanced scorecard, and planning beyond budgeting (Maiga et al., 2015). With the management accounting innovations approach, the information presented is more accurate and balanced so that the data used by management in decision making will be better, leading organizational management to be more effective and efficient, which can encourage the cost performance of HEIs. It is in line with the research results by Ax and Greve (2017) that MAI had a positive effect on performance. Thus, the hypothesis was arranged as follows:

***H_3**: Management accounting innovations have effects on cost performance.*

Considering the arguments, it is expected that HEI strategies will positively influence management accounting innovations and cost performance. Therefore, the researchers placed management accounting innovations as mediating variables for the effect of HEI strategy on cost performance. The mediating variable will affect the results of the

relationship between the strategy variable (X) and the cost performance variable (Y) (Baron & Kenny, 1986; Hayes & Preacher, 2013). Edelman, Brush, and Manolova (2005) explained that the mediation test determines the existence of a significant intervention mechanism (MAI) between the relationship between HEI strategy and cost performance. Thus, the mediating variable (MAI) accounts for a significant proportion of the relationship between the predictors of HEI strategy and cost performance (outcome). MAI also provides a theoretical explanation for the mediating effect of the relationship between HEI strategy and cost performance. In addition, the HEI's strategy offers opportunities for organizations to carry out activities in accordance with the established vision and mission so that organizations are more focused on running their organizations following the short-term and long-term goals to be achieved to encourage the MAI implementation. Thus, organizational management becomes more effective and efficient and ultimately boosts cost performance because it benefits the company in saving operational costs.

According to the results of several studies, strategy affected management accounting innovations (Alsharari et al., 2015; Chiwamit et al., 2017). Besides, research by Ax and Greve (2017) found that the MAI affected performance. Therefore, it is concluded that the application of MAI can lead organizational management to translate the strategic effects of HEI on cost performance. Then, the hypothesis that the researchers proposed is as follows:

***H_4**: Management accounting innovations mediate the relationship between HEI strategy and cost performance.*

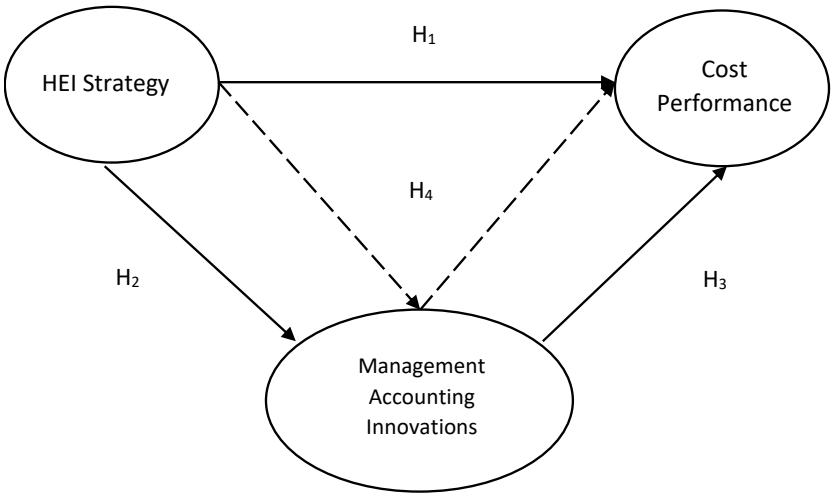

Figure 1 The conceptual framework

Based on the theoretical framework and existing literature, the conceptual framework of this research was formulated as shown in Figure 1.

Research Method

This study used a quantitative approach. This study involved the heads of the finance department in private HEIs in LLDikti region 10, covering the provinces of Jambi, West Sumatra, Riau, and Riau Islands, totaling 239 HEIs. The sample of this research was the entire research population of 239 HEIs, and the research respondents were the heads of the finance department. The head of the financial department was in charge of preparing the finance division's work program and implementing a financial receipts and expenditures system. Then, data collection was done by distributing online questionnaires via a google form.

In the HEI strategy, HEI tries to become institutions that provide the best educational services by setting affordable costs for all people (Ismail & Bangun, 2017; Porter, 1980; 1985). The measurement of HEI strategy in this study referred to an instrument from Sands (2006) and Ismail and Bangun (2017), consisting of the lowest educational costs from competitors, very tight cost control, producing standard services, outsourced functions to control costs, technology to lower costs, analysis of costs related to activities, and rewards for employees for cost reduction suggestions.

Cost performance is the ability of an organization to reduce costs in operational activities (Esfahbodi et al., 2016). The measurement of cost performance was modified from Esfahbodi et al.'s (2016) research instrument: reducing education costs, research costs, service costs, maintenance costs, and purchase costs. Meanwhile, management accounting innovations are the invention and implementation of new management practice, process, structure, or technique to state of the art and intended to further organizational goals (Johanson & Madsen, 2019). In this study, MAI measurement referred to Johanson and Madsen's (2019) research, including the balanced scorecard, activity-based costing, strategic management accounting, beyond budgeting, and target costing for matters relating to activities to be carried out in HEI.

The data analysis technique in this study used SEM-PLS with the following justification: (1) this research instrument measurement employed the Linkert scale. According to some experts, this Linkert scale includes ordinal data because it cannot describe the same characteristics or distances between objects. Based on this, this study utilized non-parametric assumptions (predictor specifications). (2) This research aimed to confirm the existing theories and concepts using the data and explain the relationship between latent variables. SEM-PLS was more appropriate for this study because it can perform confirmatory multivariate analysis (Hair et al., 2014) and avoid serious problems of inadmissible solutions and factory indetermination (Fornell & Bookstains, 1982). (3) This research model was relatively complex since the MAI proxy acted as a dependent variable and an indirect variable or a mediating variable, so the use of SEM-PLS was considered more appropriate (Sholihin & Ratmono, 2013).

Moreover, the data analysis of this study included direct and indirect effects for each of the proposed hypotheses: the effect of HEI strategy on cost performance and management accounting innovations, the effect of management accounting innovations

on cost performance, and the mediating role of management accounting innovations on the influence of HEI strategy on cost performance.

Results and Discussion

The questionnaires were distributed to 239 HEIs in Sumatera barat, Riau, Riau Islands, dan Jambi. The rate of return of the questionnaires was relatively high, namely 73.22% or as many as 175 questionnaires, but only 167 or 69.87% met the qualifications. Furthermore, the data processed in the study were 167 questionnaires. The demographic data of respondents can be seen in Table 1.

Table 1 Demographic of respondents

Characters	Frequency (People/HEI)	Percentage (%)
Gender		
Man	94	56.28
Woman	73	43.71
Education level		
Bachelor	8	4.79
Master	120	71.85
Doctoral	39	23.36
Age		
20-30 years old	41	24.55
31-40 years old	71	42.51
41-50 years old	37	22.15
>50 years old	18	10.77
Tenure		
< 2 years	52	31.13
2-4 years	100	59.89
>4 years	15	8.98
HEI Type		
University	86	51.49
Higher school	57	34.13
Polytechnic	24	14.38

Descriptive Statistics

Table 2 shows the results of descriptive statistical analysis for all variables of this study. The total mean of respondent's answers to the HEI strategy variable was 3.95. Furthermore, the MAI variable obtained a total mean value of 4.21. Finally, the cost performance attained a total mean value of 3.93. From these data, the variable with the highest mean value was HEI strategy, whereas cost performance had the lowest mean value. Besides, all variable indicators had a mean higher than the standard deviation, meaning that the data variation was low, below the mean value.

Table 2 Descriptive statistics of research variables

Indicator	Minimum	Maximum	Mean	SD
HEI Strategy				
Low educational costs	1	5	4.32	0.829
Very tight cost control	2	5	4.59	0.670
Producing standard services	1	5	3.44	0.662
Outsourced functions to control costs	1	5	4.33	0.725
Technology to lower costs	1	5	4,12	0.915
Analysis of costs related to activities	1	5	3.08	0.980
Rewards for employees			3.74	1.183
Total Mean			*3.95*	
Management Accounting Innovations				
Activity-based costing	1	5	4.55	0.723
Balanced scorecard	1	5	4.28	0.828
Strategic management accounting	2	5	3.95	0.853
Target costing	1	5	4.15	0.797
Beyond budgeting approach	1	5	4.11	0.733
Total Mean			*4.21*	
Cost Performance				
Reducing education costs	1	5	4.39	0.668
Reducing research costs	1	5	4.24	0.664
Reducing service costs	1	5	4.43	0.635
Reducing maintenance costs	1	5	3.55	1.056
Low educational costs	1	5	3.06	1.138
Total Mean			*3.93*	

Table 3 Value of outer loading

Indicator	Outer loading	Reliability	AVE
HEI Strategy		0.845	0.524
Low educational costs (HS1)	0.767		
Very tight cost control (HS2)	0.574		
Producing standard services (HS3)	0.737		
Outsourced functions to control costs (HS4)	0.232		
Technology to lower costs (HS5)	0.755		
Analysis of costs related to activities (HS6)	0.088		
Rewards for employees (HS7)	0.754		
Management Accounting Innovations		0.775	0.462
Activity-based costing (MAI1)	0.801		
The balanced scorecard (MAI2)	0.597		
Strategic management accounting (MAI3)	0.662		
Target costing (MAI4)	0.639		
Beyond budgeting approach (MAI5)	0.090		
Cost Performance		0.770	0.460
Reducing education costs (CP1)	0.801		
Reducing research costs (CP2)	0.597		
Reducing service costs (CP3)	0.662		
Reducing maintenance costs (CP4)	0.639		
Reducing purchasing costs (CP5)	0.090		

To assess the Outer Model, Composite Reliability and Average Variance Extracted (AVE) were evaluated. In Table 3, the values of convergent validity, reliability, and AVE can be seen. According to Ghozali (2018), it is an indicator of convergent validity if a loading value is above 0.5. The reliability criteria is evaluated using the AVE value of each construct. The construct is said to have high reliability if the value is more than 0.50 and the AVE is above 0.40 (Hair et al., 2014).

In Table 3, it can be seen that for the strategy variable, only five of the seven indicators met the convergent validity test, while for the management accounting innovations variable, only five indicators met the convergent validity test. Furthermore, of the five indicators for the cost performance variable, only four indicators met the convergent validity test. Based on Table 3, it can be concluded that all constructs met the reliable criteria, indicated by the composite reliability value of 0.70 and AVE of 0.40 as recommended criteria.

Discriminant Validity

Discriminant validity of a model is considered good if the loading value of each indicator of a latent variable has the largest loading value compared with other loading values on other latent variables. The discriminant validity test results are displayed in Table 4.

Table 4 Cross loading values

Indicator	HS	MAI	CP
HS1	0.759	0.171	0.182
HS2	0.569	0.298	0.298
HS3	0.754	0.367	0.361
HS4	0.748	0.150	0.161
HS5	0.769	0.369	0.360
HS6	0.232	0.799	0.781
HS7	0.170	0.595	0.568
MAI1	0.319	0.675	0.658
MAI2	0.292	0.635	0.622
MAI3	0.241	0.793	0.816
MAI4	0.172	0.558	0.579
MAI5	0.304	0.657	0.677
CP1	0.619	0.616	0.298
CP2	0.182	0.171	0.759
CP3	0.298	0.298	0.569
CP4	0.361	0.367	0.754
CP5	0.161	0.150	0.748

Based on Table 4, it is known that the loading factor value for the latent variable indicator was higher than the loading factor value of other latent variables. It signifies that the latent variable had good discriminant validity.

Hypothesis Testing Using Structural Model Analysis

The structural or inner model was evaluated by looking at the percentage of variance explained, namely by looking at R2 for the dependent latent construct using the Stone-Geisser Q Square test measures and looking at the structural path coefficients. Hypotheses testing results and R-Square of this study is shown in Table 5.

Table 5 Hypothesis Testing Results and R-Square

Hypothesis	Symbol	Coefficient	T Statistic	P-Value	Decision
HS → CP	H_1	0.413	6.473	0.001*	Supported
HS → MAI	H_2	0.416	5.985	0.001*	Supported
MAI → CP	H_3	0.982	24.576	0.001*	Supported
HS → MAI → CP	H_4	0.024	1.146	0.171	Not Supported

* Significant at alpha 0.01; Adjusted R-Squared = 0.167

Discussion

The results testing hypothesis disclosed that the HEI strategy had a positive and significant effect on cost performance. It confirms Rahimnia and Kargozar (2016) that HEI strategies could improve cost performance and create efficiency and effectiveness in HEI management, including education, research, service, and other supporting activities related to the implementation of HEI strategies. These findings then verify the contingency theory that an organization's cost performance is determined by the organization's strategy.

Ismail and Bangun (2017) explained that the lowest educational costs from competitors, very tight cost control, producing standard services, outsourced functions to control costs, technology to lower costs, analysis of costs related to activities, and rewards for employees for cost reduction suggestions, which have or be built in the same way, could reduce the cost of the activity. Besides, strategic planning contains short-term and long-term organizational goals. As the activities at HEI will be more focused, organizational management becomes more effective and efficient. It is because output-based organizational funding is obtained, thereby lowering operating costs, encouraging cost performance.

The findings in this study support the study's findings by Auzair (2011), which revealed that HEI strategy had a positive and significant influence on cost performance. Similar results were also obtained by Ismail and Bangun (2015) that strategy affected the increase in Indonesian's company performance. In line with Grigoroudis et al. (2012), the results uncovered that the HEI strategy could help manage company resources to reduce cost activities. Thus, strategy is vital for improving organization performance, especially in higher institutions, where cost-saving activities lead to the sustainability of HEI (Hutaibat et al., 2011)

In addition, the results of the testing hypothesis disclosed that the HEI strategy had a positive and significant effect on MAI. It confirms that HEI strategies can improve MAI and is strategically prepared. The efficiency of activities carried out, starting with low

educational costs and strict cost control, will encourage MAI because traditional management accounting is deemed irrelevant. In other words, the HEI's strategy can improve MAI. These findings then verify the contingency theory that an organization's MAI is determined by the organization's strategy

On the other hand, Marlina et al. (2019) described that HEIs in the LLDikti 10 area generally experienced a decrease in the number of students; therefore, a cost management strategy is needed to make funding more efficient. Thus, the need for more efficient fund management will encourage the implementation of MAI. The findings in this study also reinforce the study's findings by Chiwamit et al. (2017), which showed HEI strategy had a positive and significant influence on MAI. Similar results were attained by Ax and Greve (2017) that strategy affected the effective increase of MAI implementation. In line with Johanson and Madsen (2019), the results exposed that the HEI strategy could help manage company resources to implement MAI. Thus, the HEI's strategy to encourage the MAI implementation supports the achievement of the organization's vision and mission (Hutaibat et al., 2011)

The results testing hypothesis also showed that the MAI had a positive and significant effect on cost performance. It confirms that MAI can improve cost performance and prepared information to achieve the goals. In this case, the MAI is designed to present information planning, controlling, and evaluating organizations to be more effective and efficient. These findings then correspond to the contingency theory that an organization's MAI is determined by the organization's cost performance.

MAI is a contemporary management accounting information system relevant to today's industrial developments (Wong et al., 2018). In the MAI, there are innovations in presenting accounting information for security, such as calculating the cost of goods based on activities and evaluating performance using a balanced scorecard to be more balanced; various management information needs to support effective and efficient decision making (Maiga et al., 2015).

This study also corroborates the study's findings by Ax and Greve (2017), which uncovered that MAI had a positive and significant influence on cost performance. Chiwamit et al. (2017) obtained similar results that MAI could help to encourage the management of organizational resources to be more efficient and ultimately increase cost performance (Johanson & Madsen, 2019).

However, the researchers also found that MAI could not translate HEI strategy, so it did not mediate the effect of strategy on HEI cost performance. These results indicate that HEI strategy and MAI directly had a positive effect on cost performance, but indirectly, HEI strategy with MAI mediation had no effect on cost performance. It was because the simpler HEI strategy mediated by MAI became more complex or complicated, resulting in the HEI management being ineffective and inefficient. Therefore, it did not have an impact on cost performance.

These results do not support hypothesis H4, where MAI could not mediate the effect of HEI strategies on cost performance. In accordance with the research results by Auzair (2011), it was shown that HEI strategy directly had a positive effect on MAI. Ax and Greve (2017) and Maiga et al. (2015) also exposed a direct positive effect on cost performance. Therefore, this study supports the contingency theory, in which the strategy of HEI and MAI directly results in more effective and efficient organizational management to improve cost performance.

Conclusion

This study aimed to examine MAI mediation on the effect of HEI strategy on cost performance. According to the findings, the view that strategy HEI and MAI could improve cost performance was supported. However, the HEI's strategy with MAI mediation became ineffective and inefficient so that it did not affect cost performance. In this regard, maintaining the organization's continuity is currently an essential issue in the context of high competition in the world of HEI. In the HEI's strategy, the organization is expected to operate more on target so that funding becomes more efficient. Furthermore, efforts to achieve effective and efficient organizational management must be supported by MAI. These research findings emphasize the vital role of HEI strategy and MAI so that the management of HEI funding becomes more effective and efficient in supporting the achievement of the organization's vision and mission.

Moreover, this study results revealed that HEI strategy and MAI had a positive effect on cost performance. It implies that in managing organizations to be more effective and efficient, private HEIs need to consider management accounting strategies and innovations to maintain their existence in global competition. The research implication is the contingency theory development in HEI and organizational management to produce better cost performance, especially private HEIs in West Sumatra, Riau, Riau Islands, and Jambi.

Nevertheless, this study had limitations related to the respondents involved only in the LLDikti 10 area. In addition, the MAI mediation variable has indicators from several different dimensions. For future research, it is recommended to extend the population by involving all HEIs in Indonesia. Future research can also make the MAI instrument a research variable because each has different dimensions.

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