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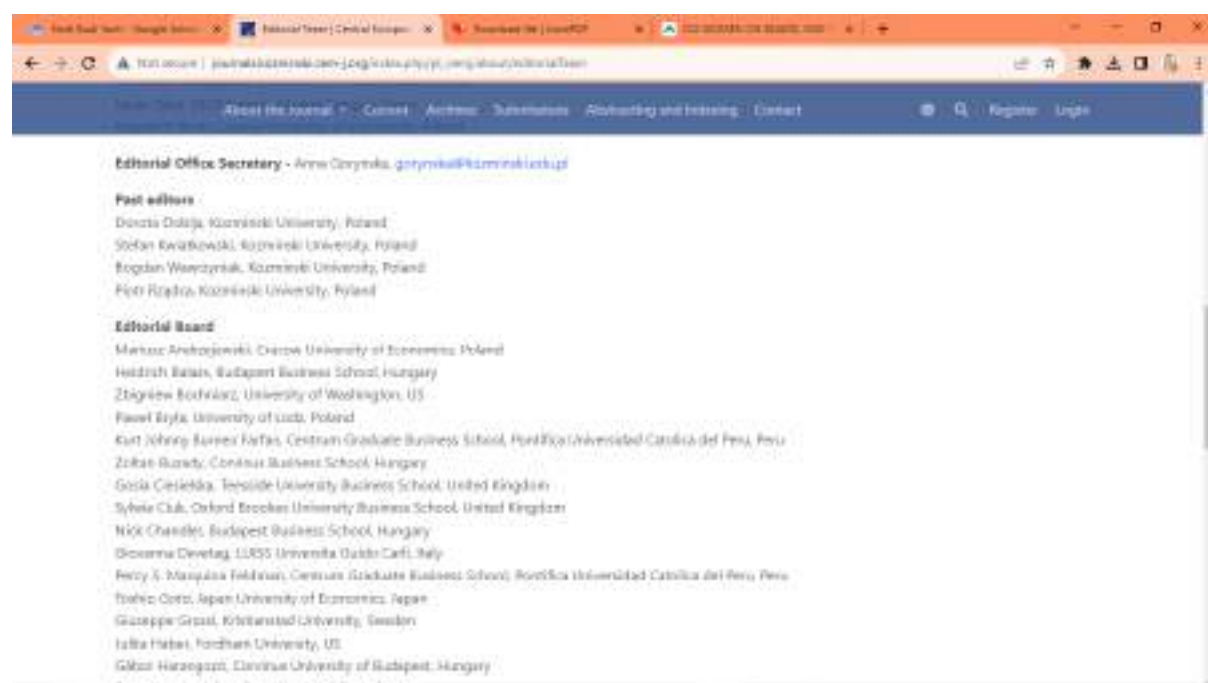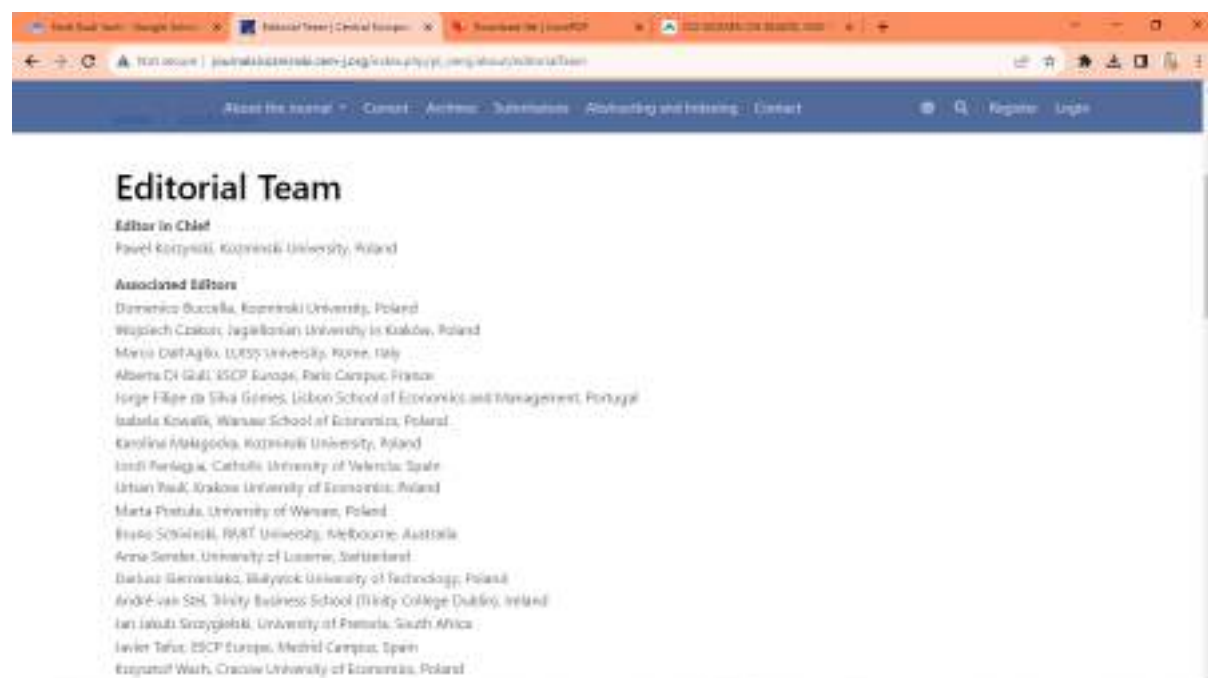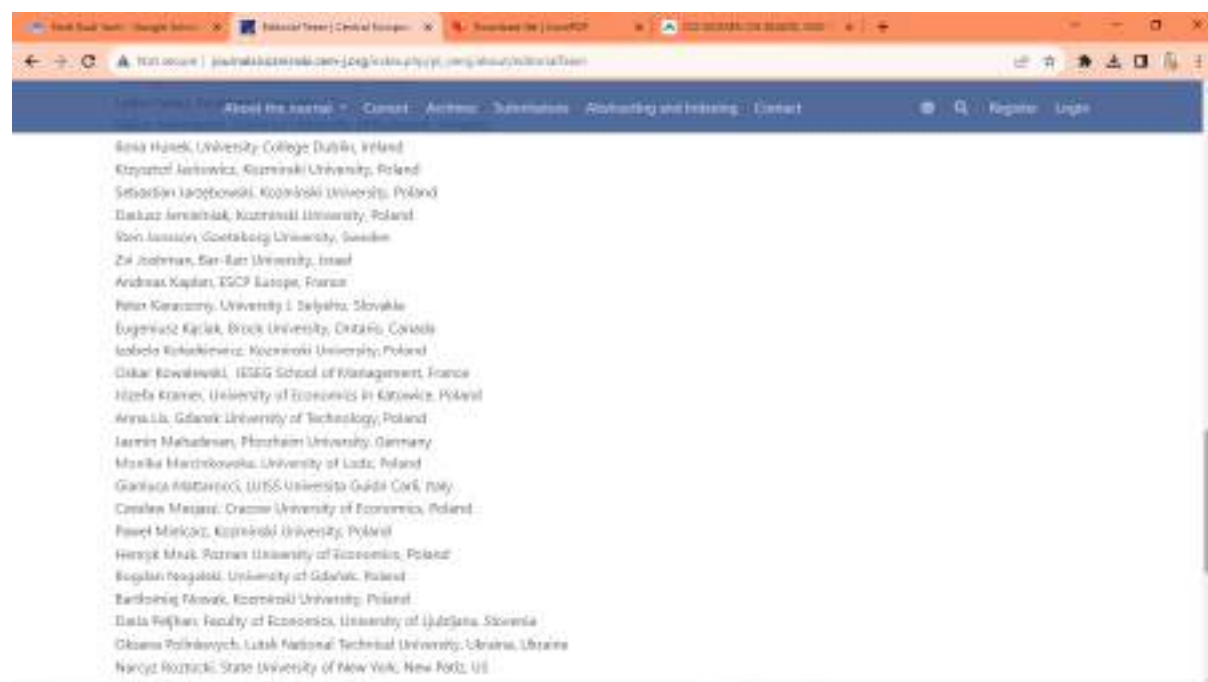
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# The Influence of Business Strategy, Management Accounting Innovation, and Enterprise Risk Management on Enterprise Performance with Information Technology Governance As Moderating Variable

Taty Sariwulan, Khomsiyah Khomsiyah, Harti Budi Yanti

## Keywords:

Business Strategy, Management Accounting Innovation, Enterprise Risk Management, Information Technology Governance, Performance.

## Abstract

This study examines and evaluates the impact of business strategy, management accounting innovation, and enterprise risk management on enterprise performance. Additionally, the study investigates whether information technology governance can moderate the influence of business strategy, management accounting innovation, and enterprise risk management on enterprise performance. The present study employed a quantitative research approach, utilizing primary data acquired through administering questionnaires for data collection. The focal point of examination in this research is a manufacturing

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# The Influence of Business Strategy, Management Accounting Innovation, and Enterprise Risk Management on Enterprise Performance with Information Technology Governance As Moderating Variable

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## ABSTRACT

This study examines and evaluates the impact of business strategy, management accounting innovation, and enterprise risk management on enterprise performance. Additionally, the study investigates whether information technology governance can moderate the influence of business strategy, management accounting innovation, and enterprise risk management on enterprise performance. The present study employed a quantitative research approach, utilizing primary data acquired through administering questionnaires for data collection. The focal point of examination in this research is a manufacturing enterprise in Indonesia. The analysis encompassed a total of 317 firms. The present work employs the smart PLS approach for data processing. The findings of this study suggest that business strategy does not yield a favorable impact on enterprise performance. However, management accounting innovation and enterprise risk management are both associated with beneficial effects on enterprise performance. The presence of information technology governance as a moderating variable does not enhance the impact of business strategy on enterprise performance. However, it enhances management accounting innovation's impact on enterprise performance. Furthermore, it does not boost the relationship between corporate risk management and enterprise performance.

**Keywords:** Business Strategy, Management Accounting Innovation, Enterprise Risk Management, Information Technology Governance, Performance.

## 1    Introduction

Something that is produced in a certain period and refers to the standards set by the enterprise is the performance of the enterprise. This can be measured and describes the empirical condition of an Enterprise (Aprizal, 2018). The performance measurement result evaluates the enterprise's work, which is expected to improve the quality of work so that Enterprise activities can continue (Hartono & Setiawardani, 2017). Companies that have high performance can continue to be *sustainable* for the sake of their survival.

The manufacturing industry sector is crucial in facilitating economic development in Indonesia. According to Winardi et al. (2017), the available data indicates a significant decline in the economic growth of the Republic of Indonesia within the manufacturing sector annually. Indeed, the manufacturing sector makes a significant contribution of 19.7% to the Gross Domestic Product (GDP), emerging as the most substantial contributor compared to other sectors. Nevertheless, the expansion rate experienced a significant fall, reaching a mere 3.8% in 2019. The subject under investigation, the manufacturing sector's performance in Indonesia, is of considerable scholarly interest (BPS, 2019).

According to Winardi et al. (2017), several factors have contributed to the deterioration in the performance of Indonesia's manufacturing industry sector, one of which is the lack of competitiveness in the national industry. Hence, the manufacturing industry must enhance its company strategy. Implementing a business strategy plays a crucial role in enhancing the overall performance of an enterprise. Implementing a dynamic business strategy incorporating agile and streamlined approaches to environmental management and supply optimization in uncertain circumstances has been found to positively influence enterprise performance (Srinivasan et al., 2020). Furthermore, it has been observed that a well-designed business strategy can serve as a protective measure against bankruptcy for enterprises (Agustia et al., 2020). Additionally, business strategies that encompass both exploratory and exploitative

technological innovations can enhance operational efficiency and promote the organization's long-term sustainability (Müller et al., 2020).

The existing body of research examining the impact of corporate strategy on performance yields varying outcomes. According to Hambrick's study conducted in 1983, the implementing approach demonstrates superior performance in terms of low profitability (Hambrick, 1983). Previous research has indicated that organizations employing prospector, defender, and analyzer techniques exhibit no statistically significant disparities (Anwar & Hasnu, 2017; Sarac et al., 2014). The findings of Haseeb (2019) and Ilmuden (2020) indicate that business strategy exerts a substantial and favorable impact on the performance of companies (Haseeb et al., 2019; Ilmudeen, 2020).

The enhancement of competitiveness and the improvement of enterprise performance necessitate the presence of innovation. One area of innovation that requires attention is management accounting innovation (Ax & Greve, 2017). According to Pavlatos and Kostakis (2018), implementing management accounting innovation offers enterprises in Greece a means to address the uncertainties arising from the economic crisis effectively. This innovation enables organizations to access more comprehensive and superior information for decision-making purposes. Implementing management control systems (MCS) has resulted in several advancements, such as developing novel processes, services, and goods (Chenhall & Moers, 2015; Chiwamit et al., 2017).

According to a study conducted by Azmi and Harti (2021), strategic management accounting and organizational competencies have a notable impact on the performance of enterprises. According to Azmi and Harti (2021), an increase in the prominence of management accounting is associated with improved enterprise performance. The findings presented in this study oppose the conclusions drawn by Faradiza (2018), who demonstrated that the performance of manufacturing enterprises in Indonesia is independent of the degree of complexity in their management accounting processes (Faradiza, 2018).

Risk management is identifying potential events affecting the entity and providing reasonable guarantees by managing existing risks so that the entity's objectives are achieved (COSO, 2017). Therefore, this is also important in Enterprise performance where *distributed software development* (DSD) can run well (Wan Husin et al., 2019), avoid bankruptcy (Jonek-Kowalska, 2019), reduce errors in making decisions (Golpîra et al., 2020), and avoid failure (Chernobai et al., 2020).

The same empirical study did not show a significant positive relationship between ERM and firm performance. The application of Enterprise risk management is not significantly related to Enterprise performance (Kanu, 2020). The research results of Sayilir and Farhan (2016) show that firm value has no significant relationship with risk management in the company. This is possible because the risk management applied to the company is still new, so the performance and value of the company are experiencing an impact from the implementation of risk management takes a pretty long time (Sayilir & Farhan, 2016).

The use of technology still needs to be improved, especially information technology in the manufacturing industry in Indonesia, compared to labor and capital productivity (Lestari & Isnina, 2017). Information technology can help industry players increase efficiency in the manufacturing process (Sunardi & Joy Saputra, 2016), increase productivity, and build the manufacturing industry (Sunardi & Joy Saputra, 2016). Therefore, information technology governance is also essential in improving Enterprise performance.

The use of information technology governance as a moderating variable in this study has never been done by previous researchers to measure its effect on Enterprise performance. Information technology governance is used as a moderating variable to see how much this variable supports the influence of the independent variables of business strategy, management accounting innovation, and Enterprise risk management on Enterprise performance.

## 2 Literature Reviews

**Enterprise performance**

Performance is a distinct result achieved in management, economics, and marketing, which endows an organization and its structural and procedural elements with qualities of competitiveness, effectiveness, and efficiency. Performance includes various interpretations, such as growth, profitability, efficiency, returns, productivity, and competitiveness (Taouab & Issor, 2019). Reporting on the enterprise's performance level is needed to measure the results. The enterprise performance instrument in this research was adapted from research used by Ghasemi et al. (2015) and Sariwulan (2020), namely adapting the indicators used by Govindarajan (1984), which consists of achievement of planned productivity targets, cost, quality, delivery schedule, total assets, market share, profit level, return on investment, new service programs, personnel development & holistic performance to determine the extent to which the organization has succeeded in achieving its planned goals.

### Business strategy

Business strategy pertains to how organizations compete within a specific industry or market (Cadez & Guilding, 2012). Disparities in implementing strategies arise due to variations in firm characteristics and contextual factors despite the companies operating within the same competitive environment. Strategy typology is a profile of various strategic positions that emphasize the integrative components of various strategies (Cadez & Guilding, 2012). The business strategy indicators used in this study refer to the business strategy according to Miles and Snow, which is also used in research by Cescon et al. (2013) and Ilmudeen et al. (2020), namely low-cost products, focus on product quality, ensure products are different from competitors' products, introduce new products, offer a wide range of products, improve production process efficiency, provide quality services, carry out intensive marketing, expand into new markets.

### Management Accounting Innovation

An innovation is an idea, practice, or object perceived as new by an individual or other unit of adoption. Novelty in an innovation can be expressed in terms of new knowledge and the first persuasion or the decision to adopt (Rogers, 2003). Management accounting innovations in various literatures have been observed with the emergence of contemporary management accounting techniques (Haiza et al., 2010). Management accounting resulted from a long practice of corporate managers using their corporate financial information in making decisions that give their corporations additional competitive advantages. Management accounting, as distinguished from financial accounting, generates internal reports supporting an organization's managerial functions. These reports mainly focus on identifying, gathering, quantifying, analyzing, interpreting, preparing, and disseminating information that aids managers in achieving organizational objectives (Bhimani, 2009).

Several dimensions were used by previous researchers to measure management accounting innovation variables, namely economic value added (Cescon et al., 2013; Pavlatos & Kostakis, 2018), balanced scorecard, activity based costing,target costing (Arabi & Kavianifard, 2013; Boukr et al., 2021; Cescon et al., 2013; Marlina & Tjahjadi, 2021; Nassar et al., 2011; Pavlatos & Kostakis, 2018), Budgeting for long term plan (Cescon et al., 2013), strategic costing (Cescon et al., 2013; Marlina & Tjahjadi, 2021), life cycle costing (Boukr et al., 2021; Cescon et al., 2013; Pavlatos & Kostakis, 2018), benchmarking (Arabi & Kavianifard, 2013; Boukr et al., 2021; Cescon et al., 2013; Nassar et al., 2011; Yazdifar et al., 2019), customer profitability analysis (Cescon et al., 2013), activity based management (Arabi & Kavianifard, 2013; Boukr et al., 2021; Marlina & Tjahjadi, 2021; Nassar et al., 2011; Yazdifar et al., 2019), total quality management (Arabi & Kavianifard, 2013), kaizen (Boukr et al., 2021), just in time (Arabi & Kavianifard, 2013), beyond budgeting approach (Marlina & Tjahjadi, 2021). This study's management accounting innovation variable uses measurements popularly used in previous studies, namely the dimensions of activity-based costing, activity-based management, balanced scorecard, target costing, and benchmarking. It adds three new dimensions: environmental management accounting, competitor cost assessment, and competitive position monitoring.

### Enterprise Risk Management

Risk management is a proactive process that involves the identification of probable occurrences that may impact an entity and implementing measures to effectively manage these risks to ensure the achievement of the entity's objectives (COSO, 2017). Hence, it is imperative for organizations aiming to enhance their enterprise performance to prioritize the implementation of enterprise risk management practices. According to McKay (2017), the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework can be employed to assess enterprise risk management. The present study employs indicators developed by COSO, which encompass five components of enterprise risk management as previously delineated: (1) governance and organizational culture, (2) formulation and determination of objectives and strategies, (3) performance, (4) review and revision, and (5) information, communication, and reporting (McKay, 2017).

### Information Technology Governance

Peterson et al. (2004) argue that effective information technology governance is integral to sound corporate governance. They posit that a robust information technology governance framework prompts organizations to employ distinct structures and mechanisms to align their enterprise's information technology strategy and business performance objectives. According to Bailey and Becker (2014), information technology governance can be seen as expanding corporate governance. Corporate governance refers to the actions taken by the board and executive management to establish a framework of responsibilities and practices. The push is a framework aimed at achieving

strategic direction and objectives, appropriate management of risks, and responsible utilization of corporate resources. The concept of information technology governance in this study pertains to the body of literature on information systems, which posits that its primary objective is to ensure the efficient utilization of information technology. This is achieved by emphasizing five key domains: I.T. Strategic Alignment, I.T. Value Delivery, I.T. Risk Management, I.T. Resource Management, and I.T. Performance Management.

**Conceptual framework**

This study uses information technology governance variables as a moderating variable based on this description. The conceptual framework for this research can be seen in Figure 1:



**Figure 1. Research Conceptual Framework**

**Hypothesis**

H1: Business strategy has a positive effect on Enterprise performance.

H2: Management accounting innovation has a positive effect on Enterprise performance.

H3: Enterprise risk management has a positive effect on Enterprise performance

H4: Information technology governance as a moderating variable strengthens the positive influence of business strategy on Enterprise performance

H5: Information technology governance as a moderating variable strengthens the positive effect of management accounting innovation on firm performance

H6: Information technology governance as a moderating variable strengthens the positive influence of enterprise risk management on firm performance

## 3  Methods

This study employs a quantitative data analysis approach to examine the subject (or object) under investigation. The measurement utilized in this research determines the presence or absence of a particular attribute in the subject. It quantifies the extent or level to which the subject exhibits that attribute (Jr. et al., 2018). The study focuses on a sample of prominent manufacturing enterprises operating in Indonesia. According to the August 2021 publication of the Indonesian Manufacturing Industry Statistics data by the Indonesian Statistics Center, the total count of large-scale manufacturing industry enterprises in Indonesia amounts to 10,776 entities. The study comprised a sample size of 317 individuals, all affiliated with a single enterprise. The process of data collection is conducted by employing a survey. The survey instrument comprises structured self-administered questionnaires completed by the respondents in written form or electronically (Sekaran & Bougie, 2016). The survey instrument was constructed by collecting data on an ordinal scale, employing a Likert scale for measurement. The data generated using a structural equation modeling (SEM) based on the Partial Least Square (PLS) approach is subjected to a descriptive and verification statistical analysis to assess the developed hypotheses.

## 4  Results And Discussion

**Data Quality Testing Through the PLS Structural Equation Model (SEM).**

The outcomes obtained from evaluating the comprehensive structural model using the findings derived from the PLS Algorithm and Bootstrapping are as follows.



**Figure 2 Full Structural Model (PLS Algorithm)**

Figure 2 shows the initial measurement model for 86 question items. There are five items with outer loading below 0.7, namely item 1 on the prospector business strategy dimension, item 5 on the defender strategy dimension, item 4 on the *benchmarking dimension*, item 4 on the *target costing dimension,* and item 4 on *the environmental management accounting dimension*. These items were discarded and not further analyzed. Next, a confirmatory factor analysis was repeated until no loading factor was found worth 0.7 and below 0.7.



**Figure 3 Full Structural Model (Bootstraping)**

**Structural Model Testing (Inner Model)**

A structural model is a framework that establishes links between exogenous latent variables and endogenous latent variables or elucidates the connections between endogenous variables and other endogenous variables.

**R-Square test**

R-squared values are commonly employed to elucidate the impact of specific exogenous latent variables on endogenous latent variables. The following results illustrate the R-square values obtained for each endogenous variable.

**Table 1. R-Square and Adjusted R-Square Test Results**

| Dependent Variable | R Square | Adjusted R-Square |
|---|---|---|
| Enterprise Performance (K.P.) | 0.367 | 0.353 |

Source: data processed 2023

The table indicates that the Adjusted R-square value for the Enterprise performance variable (K.P.) is 0.353. This study demonstrates that the variables of business strategy, management accounting innovation, and Enterprise risk management can account for a significant portion, precisely 35.3%, of Enterprise performance. These variables are further influenced by information technology governance as a moderating factor. However, it is essential to note that the remaining 64.7% of Enterprise performance is attributed to other variables not examined in this study.

**Prediction Relevance (Stone-Geisser's Q2)**

In conjunction with the R-Square metric, the evaluation of the inner model in structural model testing incorporates predictive relevance values, commonly referred to as Q2. The Q-square value is greater than zero, suggesting that the model possesses a significant level of predictive relevance. Table 2 displays the application of the blindfolding approach in predictive relevance testing:

**Table 2. Predictive relevance test $Q^2$**

| Endogenous Variables | $Q^2$ $(=1-(1-R^2)$ | Conclusion |
|---|---|---|
| Enterprise performance | 0.353 | Own *Predictive Relevance* |

The predictive relevance value of Q2 for enterprise performance factors is 0.353, which exceeds 0. The inference can be drawn that the model possesses predictive significance. According to Chin (1998).

**Goodness of Fit test**

In this study, the GoF Index, a measure of goodness of fit introduced by Tenenhaus et al. (2004), was employed to evaluate the overall model's overall fit index to validate the collective performance of the outer and inner models. The computation of the GoF value involves multiplying the average communalities index by the R2 value, as detailed by Ghozali and Latan (2015). The GoF value is expressed on a scale ranging from 0 to 1, with the following interpretations: 0.1 suggests a modest GoF, 0.25 signifies a moderate GoF, and 0.36 indicates a substantial GoF. The results concerning the computation of the Goodness-of-Fit (GoF) Index in this study are presented as follows:

$$Gof = \sqrt{0,785 \times 0,353} = 0.526$$

Based on the obtained calculation results, it can be observed that the Gof value of 0.526 is above the threshold of 0.36, therefore indicating its classification inside the larger category.

**Hypothesis testing**

Once the measurement and structural models have been tested, the last step involves hypothesis testing to address the research issues. The test results are depicted in Table 3.

**Table 3 Hypothesis Test Results**

| hypothesis | Connection | Path Coefficient | Q Statistics | P Value | Conclusion |
|---|---|---|---|---|---|
| 1 | BS -> EP | -0.092 | 1.029 | 0.152 | No supported |
| 2 | MAI -> EP | 0.543 | 5.276 | 0.000* | supported |
| 3 | ERM -> EP | 0.156 | 1.336 | 0.091*** | supported |
| 4 | BS * ITG -> EP | 0.056 | 0.914 | 0.181 | No supported |
| 5 | MAI* ITG -> EP | 0.255 | 2.483 | 0.007* | supported |
| 6 | ERP* ITG -> EP | -0.144 | 2.125 | 0.017 | No supported |

Significance *5%, **10%
adjusted R-Square: 0.353

The following is a description of the results of testing each research hypothesis presented in Table 3:

As per the hypothesis testing table, the impact of the Business Strategy (B.S.) variable on Enterprise Performance (E.P.) is characterized by a path coefficient value of -0.092. The associated statistical parameters include a t-value of 1.029 and a P-value of 0.152. The findings indicate that the H1 hypothesis lacks support, as evidenced by the t statistic of 1.029 being less than the critical t value of 1.65 (at a 5% significance level for a one-tailed test), coupled with a p-value of 0.152 exceeding the significance threshold of 0.05. Consequently, the business strategy does not exhibit a positive influence on the performance of Indonesian manufacturing enterprises.

According to the hypothesis testing results table, it is evident that the impact of the Management Accounting Innovation (MAI) variable on Enterprise Performance (E.P.) is characterized by a path coefficient of 0.543. The corresponding statistical indicators include a t-value of 5.276 and a significance level 0.000. The findings strongly support the H2 hypothesis, given that the t statistic of 5.276 surpasses the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.000 is below the threshold of 0.05. In conclusion, substantial evidence affirms that management accounting innovation positively impacts the performance of Indonesian manufacturing firms.

Based on the data presented in the hypothesis testing results table, it is apparent that the relationship between the Enterprise Risk Management (ERM) variable and Enterprise Performance (E.P.) is characterized by a path coefficient of 0.156. The associated statistical metrics consist of a t-value of 1.336 and a significance level of 0.091. These outcomes convincingly support the H2 hypothesis, as indicated by the t statistic 1.336 exceeding the critical t value of 1.28 (at a 10% significance level for a one-tailed test), and the p-value of 0.091 is lower than the predetermined threshold of 0.10. In conclusion, there is substantial and compelling evidence to confirm that enterprise risk management indeed has a favorable impact on the performance of manufacturing companies in Indonesia.

According to the results presented in the hypothesis testing table, the impact of Business Strategy (B.S.), when moderated by Information Technology Governance (BS*ITG) on Enterprise Performance (E.P.), is characterized by a path coefficient value of 0.056. The corresponding statistical indicators include a t value of 0.91 and a P value of 0.181. However, the H4 hypothesis needs to be substantiated due to the t statistic of 0.914 falling short of the critical t value of 1.65 (at a 5% significance level for a one-tailed test) and the p-value of 0.181 exceeding the threshold of 0.05. As a result, the interplay between business strategy and information technology governance, as moderated by Information Technology Governance, does not exert a discernible influence on the performance of manufacturing firms in Indonesia.

Concerning the Management Accounting Innovation (MAI) variable moderated by Information Technology Governance (ITG), it is evident that this interaction influences Enterprise Performance (E.P.) with a path coefficient of 0.255. The statistical indicators include a t-value of 2.483 and a P-value of 0.007. The H5 hypothesis gains support from the t statistic of 2.483, exceeding the critical t value of 1.65 (at a 5% significance level for a one-tailed test) and the p-value of 0.007, lower than 0.05. In conclusion, substantial evidence affirms that

management accounting innovation, when moderated by information technology governance, positively affects the performance of manufacturing firms in Indonesia.

As per the hypothesis testing results table, the impact of the Enterprise Risk Management (ERP) variable, moderated by Information Technology Governance (ITG) (ERP*ITG), on Enterprise Performance (E.P.) is denoted by a path coefficient of -0.144. The corresponding statistical values encompass a t-value of 2.125 and a P-value of 0.017. While the t statistic of 2.125 surpasses the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.017 is less than 0.05, the nature of the path coefficient value being -0.144 does not align positively. Consequently, the H6 hypothesis needs to be substantiated, leading to the conclusion that the interaction between corporate risk management, moderated by information technology governance, does not positively impact manufacturing enterprises' performance in Indonesia.

## 5  Discussion

**The Effect of Business Strategy on Enterprise Performance**

Based on the analysis of research data, the impact of the Business Strategy (B.S.) variable on Enterprise Performance (E.P.) is characterized by a path coefficient of -0.092. The associated statistical measures include a t-value of 1.029 and a P-value of 0.152. The H1 hypothesis lacks support due to the t statistic 1.029 falling below the critical t value of 1.65 (at a 5% significance level for a one-tailed test) and the p-value of 0.152 exceeding the significance threshold of 0.05. Consequently, business strategy does not exhibit a positive effect on enterprise performance.

The adoption of ineffective methods by companies might result in subpar performance. When a firm selects a strategy that aligns differently with its available resources, capabilities, or prevailing market conditions, it may encounter challenges in attaining its desired goals and objectives (Visedsun & Terdpaopong, 2021). In the contemporary corporate landscape characterized by swift transformations, organizations must exhibit adaptability and responsiveness to navigate market dynamics effectively. According to Anwar et al. (2016), a business plan that needs more flexibility and adaptability might impede the organization's capacity to effectively adjust to dynamic market conditions and capitalize on emerging possibilities, ultimately leading to subpar performance. Enterprise performance can be adversely affected by business strategies that do not align with the demands and preferences of the target market. Understanding client demands and developing successful ways to meet them are crucial for companies. Refrain from adhering to this practice to avoid a decline in market share and a reduction in overall performance. Hence, for a company to attain its objectives in an ideal manner, the organization must possess the capability to devise a sound business strategy and execute it with proficiency. Business strategy implementation pertains to the execution of defined plans and strategies. The objective is to attain the organization's long-term objectives. This process entails transforming a formulated corporate strategy into tangible and executable actions to attain predetermined objectives.

**The Effect of Management Accounting Innovation on Enterprise Performance**

The research data analysis shows that the relationship between Management Accounting Innovation (MAI) and Enterprise Performance (E.P.) is characterized by a path coefficient of 0.543. The statistical parameters include a t value 5.276 and a P value of 0.000. The H2 hypothesis finds support due to the t statistic of 5.276 surpassing the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.000 is lower than 0.05. This underscores the conclusion that management accounting innovation positively enhances enterprise performance.

The results of hypothesis testing in Table 3 show that management accounting innovation affects Enterprise performance. This aligns with the hypothesis put forward and supports the goal-setting theory that accounting innovation is carried out to create solutions from specific and challenging company goals because companies with specific and complex goals that can be achieved will lead to better Enterprise performance. This shows that with management accounting innovation, specific and high (challenging) goals can be achieved because this leads to higher levels of task performance. As long as a company commits to goals, it must have the capabilities needed to achieve them (Locke & Latham, 2006); in this study, one of them is management accounting innovation. Management accounting innovations applied to companies can provide benefits and reduce losses to companies. However, management accounting innovations can also cause losses. If this happens, the company will reject the management accounting innovations because they can interfere with the enterprise's performance (Ax & Greve, 2017).

**The Effect of Corporate Risk Management on Enterprise Performance**

The results from the hypothesis testing table indicate that the impact of Enterprise Risk Management (ERP) variables on Enterprise Performance (E.P.) is characterized by a path coefficient of 0.156. The statistical indicators include a t-value of 1.336 and a probability value of 0.091. The H3 hypothesis is upheld due to the t statistic of 1.336 exceeding the critical t value of 1.28 (at a 10% significance level for a one-tailed test) and the p-value of 0.091 less than 0.10.

The results of the hypothesis testing in Table 3 indicate that Enterprise risk management positively impacts the performance of Indonesian manufacturing companies. Integrated corporate risk management can help grow and improve Enterprise performance. In line with the goal-setting theory, corporate risk management can improve resilience and the enterprise's ability to anticipate and respond to changes by identifying risks so that formal risk management practices can improve Enterprise performance. Organizations that effectively carry out enterprise risk management and follow their industry context are likelier to improve their enterprise's performance (Liu et al., 2020). Ejrami et al. (2016) stated that risk management applied to companies can influence marketing potential to increase the enterprise's competitive advantage. By increasing its competitive advantage, the enterprise's performance will increase.

**Information Technology Governance Moderates the Effect of Business Strategy on Enterprise Performance**

As per the findings presented in the hypothesis testing table, the impact of Business Strategy (B.S.) moderated by Information Technology Governance (BS*ITG) on Enterprise Performance (E.P.) is marked by a path coefficient of 0.056. The statistical indicators include a t value of 0.91 and a P value of 0.181. However, the H4 hypothesis is not substantiated, given that the t statistic 0.914 falls short of the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.181 exceeds 0.05.

Information Technology Governance Institute (ITGI) characterizes information technology governance as the duty of executives and directors, encompassing leadership, organizational framework, and procedural measures, all aimed at ensuring that information technology serves as both a facilitator and a propeller of strategies designed to accomplish organizational goals (Bailey & Becker, 2014). This definition emphasizes the need for more control over information technology so that I.T. strategies, policies, initiatives, and projects are genuinely appropriate and can meet business needs and strategies. With this, I.T. can increase its strategic role to generate innovation, increase competitive advantage, and lift *its brand image.*

**Information Technology Governance Moderates the Effect of Management Accounting Innovation on Enterprise Performance**

The interplay between Management Accounting Innovation (MAI) moderated by Information Technology Governance (ITG) (MAI*ITG) and its effect on Enterprise Performance (E.P.) is represented by a path coefficient of 0.255. The associated statistical measures include a t-statistic value of 2.483 and a significance level of 0.007. The H5 hypothesis is substantiated by the t statistic of 2.483, surpassing the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.007 is less than 0.05.

The research data analysis presented in Table 3 demonstrates that information technology governance enhances the impact of management accounting innovation on enterprise performance. Management Accounting Innovation is implemented to enhance the performance of the enterprise. With information technology governance, the achievement of management accounting innovation, specific and high (challenging) goals can be achieved more quickly, leading to higher and faster task performance. In line with *contingency theory*, information technology governance identifies specific aspects of management accounting innovations related to certain circumstances and demonstrates an appropriate fit (Otley, 2016) to improve Enterprise performance.

**Information Technology Governance Moderates the Impact of Corporate Risk Management on Enterprise Performance**

The influence of Enterprise Risk Management (ERP) moderated by Information Technology Governance (ITG) (ERP*ITG) on Enterprise Performance (K.P.) is denoted by a path coefficient of -0.144. The corresponding statistical measures include a t-statistic of 2.125 and a significance level of 0.017. However, the H6 hypothesis does not need to be due to the t statistic of 2.125 surpassing the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.017 is less than 0.05. Despite these statistical results, the path coefficient of -0.144 does not align positively.

The findings derived from the data analysis in Table 3 reveal that the involvement of Information Technology Governance does not amplify the influence of enterprise risk management on enterprise performance. Information Technology Governance is characterized as a framework comprising relationships and procedures to guide and oversee an organization to achieve its objectives while contributing value through risk-benefit assessments of information technology (I.T.) and associated processes. According to the I.T. Governance Institute (ITGI), the accountability for information technology governance lies with organizational leaders and executive management. Effective and efficient corporate governance emphasizes the expertise and experience of individuals and groups in a particular field. It may be due to a lack of individual expertise and experience in information technology in some regions of the enterprise or a lack of attention and control from Enterprise management that should be managed. They are responsible for managing this information technology.

## 6    Conclusion

After conducting research, the results of this study obtained the following conclusions:

1) There needs to be a discernible positive impact of business strategy on enterprise performance in Indonesia. The lack of effective execution of the company's intended business strategy is likely the cause for its failure to enhance the performance of the enterprise.

2) The use of innovative management accounting practices has been found to impact the overall performance of enterprises positively. This finding demonstrates a positive correlation between the effective adoption of management accounting innovations and the subsequent enhancement of an enterprise's performance.

3) Enterprise risk management (ERM) has been found to impact enterprises' performance favorably. This finding demonstrates that a more effective implementation of risk management is positively correlated with an improvement in the performance of the enterprise.

4) Information technology governance does not strengthen the influence of business strategy on Enterprise performance. This is likely because the company needs more control over the information technology that is executed so that the strategy policy information technology procurement initiatives cannot meet the needs according to the business strategy that has been designed.

5) Information technology governance strengthens the effect of management accounting innovation on Enterprise performance. This proves that in order to implement sound management accounting innovations to achieve high corporate performance, adequate information governance is required.

6) Information technology governance does not strengthen the influence of enterprise risk management on corporate performance. This may be due to a lack of expertise and experience of resources in the field of information technology in specific fields within the enterprise, or it may also be due to a lack of attention and control from the management of the company, which should be the responsibility of managing information technology.

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# The Influence of Business Strategy, Management Accounting Innovation, and Enterprise Risk Management on Enterprise Performance with Information Technology Governance As Moderating Variable

by Taty Sariwulan

# The Influence of Business Strategy, Management Accounting Innovation, and Enterprise Risk Management on Enterprise Performance with Information Technology Governance As Moderating Variable

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## ABSTRACT

This study examines and evaluates the impact of business strategy, management accounting innovation, and enterprise risk management on enterprise performance. Additionally, the study investigates whether information technology governance can moderate the influence of business strategy, management accounting innovation, and enterprise risk management on enterprise performance. The present study employed a quantitative research approach, utilizing primary data acquired through administering questionnaires for data collection. The focal point of examination in this research is a manufacturing enterprise in Indonesia. The analysis encompassed a total of 317 firms. The present work employs the smart PLS approach for data processing. The findings of this study suggest that business strategy does not yield a favorable impact on enterprise performance. However, management accounting innovation and enterprise risk management are both associated with beneficial effects on enterprise performance. The presence of information technology governance as a moderating variable does not enhance the impact of business strategy on enterprise performance. However, it enhances management accounting innovation's impact on enterprise performance. Furthermore, it does not boost the relationship between corporate risk management and enterprise performance.

**Keywords:** Business Strategy, Management Accounting Innovation, Enterprise Risk Management, Information Technology Governance, Performance.

## 1 Introduction

Something that is produced in a certain period and refers to the standards set by the enterprise is the performance of the enterprise. This can be measured and describes the empirical condition of an Enterprise (Aprizal, 2018). The performance measurement result evaluates the enterprise's work, which is expected to improve the quality of work so that Enterprise activities can continue (Hartono & Setiawardani, 2017). Companies that have high performance can continue to be *sustainable* for the sake of their survival.

The manufacturing industry sector is crucial in facilitating economic development in Indonesia. According to Winardi et al. (2017), the available data indicates a significant decline in the economic growth of the Republic of Indonesia within the manufacturing sector annually. Indeed, the manufacturing sector makes a significant contribution of 19.7% to the Gross Domestic Product (GDP), emerging as the most substantial contributor compared to other sectors. Nevertheless, the expansion rate experienced a significant fall, reaching a mere 3.8% in 2019. The subject under investigation, the manufacturing sector's performance in Indonesia, is of considerable scholarly interest (BPS, 2019).

According to Winardi et al. (2017), several factors have contributed to the deterioration in the performance of Indonesia's manufacturing industry sector, one of which is the lack of competitiveness in the national industry. Hence, the manufacturing industry must enhance its company strategy. Implementing a business strategy plays a crucial role in enhancing the overall performance of an enterprise. Implementing a dynamic business strategy incorporating agile and streamlined approaches to environmental management and supply optimization in uncertain circumstances has been found to positively influence enterprise performance (Srinivasan et al., 2020). Furthermore, it has been observed that a well-designed business strategy can serve as a protective measure against bankruptcy for enterprises (Agustia et al., 2020). Additionally, business strategies that encompass both exploratory and exploitative

technological innovations can enhance operational efficiency and promote the organization's long-term sustainability (Müller et al., 2020).

The existing body of research examining the impact of corporate strategy on performance yields varying outcomes. According to Hambrick's study conducted in 1983, the implementing approach demonstrates superior performance in terms of low profitability (Hambrick, 1983). Previous research has indicated that organizations employing prospector, defender, and analyzer techniques exhibit no statistically significant disparities (Anwar & Hasnu, 2017; Sanac et al., 2014). The findings of Haseeb (2019) and Ilmuden (2020) indicate that business strategy exerts a substantial and favorable impact on the performance of companies (Haseeb et al., 2019; Ilmudeen, 2020).

The enhancement of competitiveness and the improvement of enterprise performance necessitate the presence of innovation. One area of innovation that requires attention is management accounting innovation (Ax & Greve, 2017). According to Pavlatos and Kostakis (2018), implementing management accounting innovation offers enterprises in Greece a means to address the uncertainties arising from the economic crisis effectively. This innovation enables organizations to access more comprehensive and superior information for decision-making purposes. Implementing management control systems (MCS) has resulted in several advancements, such as developing novel processes, services, and goods (Chenhall & Moers, 2015; Chiwamit et al., 2017).

According to a study conducted by Azmi and Harti (2021), strategic management accounting and organizational competencies have a notable impact on the performance of enterprises. According to Azmi and Harti (2021), an increase in the prominence of management accounting is associated with improved enterprise performance. The findings presented in this study oppose the conclusions drawn by Faradiza (2018), who demonstrated that the performance of manufacturing enterprises in Indonesia is independent of the degree of complexity in their management accounting processes (Faradiza, 2018).

Risk management is identifying potential events affecting the entity and providing reasonable guarantees by managing existing risks so that the entity's objectives are achieved (COSO, 2017). Therefore, this is also important in Enterprise performance where *distributed software development* (DSD) can run well (Wan Husin et al., 2019), avoid bankruptcy (Jonek-Kowalska, 2019), reduce errors in making decisions (Golpira et al., 2020), and avoid failure (Chernobai et al., 2020).

The same empirical study did not show a significant positive relationship between ERM and firm performance. The application of Enterprise risk management is not significantly related to Enterprise performance (Kanu, 2020). The research results of Sayilir and Farhan (2016) show that firm value has no significant relationship with risk management in the company. This is possible because the risk management applied to the company is still new, so the performance and value of the company are experiencing an impact from the implementation of risk management takes a pretty long time (Sayilir & Farhan, 2016).

The use of technology still needs to be improved, especially information technology in the manufacturing industry in Indonesia, compared to labor and capital productivity (Lestari & Isnira, 2017). Information technology can help industry players increase efficiency in the manufacturing process (Sunardi & Joy Saputra, 2016), increase productivity, and build the manufacturing industry (Sunardi & Joy Saputra, 2016). Therefore, information technology governance is also essential in improving Enterprise performance.

The use of information technology governance as a moderating variable in this study has never been done by previous researchers to measure its effect on Enterprise performance. Information technology governance is used as a moderating variable to see how much this variable supports the influence of the independent variables of business strategy, management accounting innovation, and Enterprise risk management on Enterprise performance.

## 2  Literature Reviews

### Enterprise performance

Performance is a distinct result achieved in management, economics, and marketing, which endows an organization and its structural and procedural elements with qualities of competitiveness, effectiveness, and efficiency. Performance includes various interpretations, such as growth, profitability, efficiency, returns, productivity, and competitiveness (Taouab & Issor, 2019). Reporting on the enterprise's performance level is needed to measure the results. The enterprise performance instrument in this research was adapted from research used by Ghasemi et al. (2015) and Sariwulan (2020), namely adapting the indicators used by Govindarajan (1984), which consists of achievement of planned productivity targets, cost, quality, delivery schedule, total assets, market share, profit level, return on investment, new service programs, personnel development & holistic performance to determine the extent to which the organization has succeeded in achieving its planned goals.

## Business strategy

Business strategy pertains to how organizations compete within a specific industry or market (Cadez & Guilding, 2012). Disparities in implementing strategies arise due to variations in firm characteristics and contextual factors despite the companies operating within the same competitive environment. Strategy typology is a profile of various strategic positions that emphasize the integrative components of various strategies (Cadez & Guilding, 2012). The business strategy indicators used in this study refer to the business strategy according to Miles and Snow, which is also used in research by Cescon et al. (2013) and Ilmudeen et al. (2020), namely low-cost products, focus on product quality, ensure products are different from competitors' products, introduce new products, offer a wide range of products, improve production process efficiency, provide quality services, carry out intensive marketing, expand into new markets.

## Management Accounting Innovation

An innovation is an idea, practice, or object perceived as new by an individual or other unit of adoption. Novelty in an innovation can be expressed in terms of new knowledge and the first persuasion or the decision to adopt (Rogers, 2003). Management accounting innovations in various literatures have been observed with the emergence of contemporary management accounting techniques (Haiza et al., 2010). Management accounting resulted from a long practice of corporate managers using their corporate financial information in making decisions that give their corporations additional competitive advantages. Management accounting, as distinguished from financial accounting, generates internal reports supporting an organization's managerial functions. These reports mainly focus on identifying, gathering, quantifying, analyzing, interpreting, preparing, and disseminating information that aids managers in achieving organizational objectives (Bhimani, 2009).

Several dimensions were used by previous researchers to measure management accounting innovation variables, namely economic value added (Cescon et al., 2013; Pavlatos & Kostakis, 2018), balanced scorecard, activity based costing, target costing (Arabi & Kavianifard, 2013; Boukr et al., 2021; Cescon et al., 2013; Marlina & Tjahjadi, 2021; Nassar et al., 2011; Pavlatos & Kostakis, 2018), Budgeting for long term plan (Cescon et al., 2013), strategic costing (Cescon et al., 2013; Marlina & Tjahjadi, 2021), life cycle costing (Boukr et al., 2021; Cescon et al., 2013; Pavlatos & Kostakis, 2018), benchmarking (Arabi & Kavianifard, 2013; Boukr et al., 2021; Cescon et al., 2013; Nassar et al., 2011; Yazdifar et al., 2019), customer profitability analysis (Cescon et al., 2013), activity based management (Arabi & Kavianifard, 2013; Boukr et al., 2021; Marlina & Tjahjadi, 2021; Nassar et al., 2011; Yazdifar et al., 2019), total quality management (Arabi & Kavianifard, 2013), kaizen (Boukr et al., 2021), just in time (Arabi & Kavianifard, 2013), beyond budgeting approach (Marlina & Tjahjadi, 2021). This study's management accounting innovation variable uses measurements popularly used in previous studies, namely the dimensions of activity-based costing, activity-based management, balanced scorecard, target costing, and benchmarking. It adds three new dimensions: environmental management accounting, competitor cost assessment, and competitive position monitoring.

## Enterprise Risk Management

Risk management is a proactive process that involves the identification of probable occurrences that may impact an entity and implementing measures to effectively manage these risks to ensure the achievement of the entity's objectives (COSO, 2017). Hence, it is imperative for organizations aiming to enhance their enterprise performance to prioritize the implementation of enterprise risk management practices. According to McKay (2017), the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework can be employed to assess enterprise risk management. The present study employs indicators developed by COSO, which encompass five components of enterprise risk management as previously defined: (1) governance and organizational culture, (2) formulation and determination of objectives and strategies, (3) performance, (4) review and revision, and (5) information, communication, and reporting (McKay, 2017).

## Information Technology Governance

Peterson et al. (2004) argue that effective information technology governance is integral to sound corporate governance. They posit that a robust information technology governance framework prompts organizations to employ distinct structures and mechanisms to align their enterprise's information technology strategy and business performance objectives. According to Bailey and Becker (2014), information technology governance can be seen as expanding corporate governance. Corporate governance refers to the actions taken by the board and executive management to establish a framework of responsibilities and practices. The push is a framework aimed at achieving

strategic direction and objectives, appropriate management of risks, and responsible utilization of corporate resources. The concept of information technology governance in this study pertains to the body of literature on information systems, which posits that its primary objective is to ensure the efficient utilization of information technology. This is achieved by emphasizing five key domains: I.T. Strategic Alignment, I.T. Value Delivery, I.T. Risk Management, I.T. Resource Management, and I.T. Performance Management.

## Conceptual framework

This study uses information technology governance variables as a moderating variable based on this description. The conceptual framework for this research can be seen in Figure 1:



Figure 1. Research Conceptual Framework

## Hypothesis

H1: Business strategy has a positive effect on Enterprise performance.

H2: Management accounting innovation has a positive effect on Enterprise performance.

H3: Enterprise risk management has a positive effect on Enterprise performance

H4: Information technology governance as a moderating variable strengthens the positive influence of business strategy on Enterprise performance

H5: Information technology governance as a moderating variable strengthens the positive effect of management accounting innovations on firm performance

H6: Information technology governance as a moderating variable strengthens the positive influence of enterprise risk management on firm performance

## 3  Methods

This study employs a quantitative data analysis approach to examine the subject (or object) under investigation. The measurement utilized in this research determines the presence or absence of a particular attribute in the subject. It quantifies the extent or level to which the subject exhibits that attribute (Jr. et al., 2018). The study focuses on a sample of prominent manufacturing enterprises operating in Indonesia. According to the August 2021 publication of the Indonesian Manufacturing Industry Statistics data by the Indonesian Statistics Center, the total count of large-scale manufacturing industry enterprises in Indonesia amounts to 10,776 entities. The study comprised a sample size of 317 individuals, all affiliated with a single enterprise. The process of data collection is conducted by employing a survey. The survey instrument comprises structured self-administered questionnaires completed by the respondents in written form or electronically (Sekaran & Bougie, 2016). The survey instrument was constructed for collecting data on an ordinal scale, employing a Likert scale for measurement. The data generated using a structural equation modeling (SEM) based on the Partial Least Square (PLS) approach is subjected to a descriptive and verification statistical analysis to assess the developed hypotheses.

## 4 Results And Discussion

**Data Quality Testing Through the PLS Structural Equation Model (SEM).**

The outcomes obtained from evaluating the comprehensive structural model using the findings derived from the PLS Algorithm and Bootstrapping are as follows.



**Figure 2 Full Structural Model (PLS Algorithm)**

Figure 2 shows the initial measurement model for 86 question items. There are five items with outer loading below 0.7, namely item 1 on the prospector business strategy dimension, item 5 on the defender strategy dimension, item 4 on the *benchmarking dimension*, item 4 on the *target costing dimension*, and item 4 on *the environmental management accounting dimension*. These items were discarded and not further analyzed. Next, a confirmatory factor analysis was repeated until no loading factor was found worth 0.7 and below 0.7.



**Figure 3 Full Structural Model (Bootstraping)**

## Structural Model Testing (Inner Model)

A structural model is a framework that establishes links between exogenous latent variables and endogenous latent variables or elucidates the connections between endogenous variables and other endogenous variables.

## R-Square test

R-squared values are commonly employed to elucidate the impact of specific exogenous latent variables on endogenous latent variables. The following results illustrate the R-square values obtained for each endogenous variable.

Table 1. R-Square and Adjusted R-Square Test Results

| Dependent Variable | R Square | Adjusted R-Square |
|---|---|---|
| Enterprise Performance (K.P.) | 0.367 | 0.353 |

Source: data processed 2023

The table indicates that the Adjusted R-square value for the Enterprise performance variable (K.P.) is 0.353. This study demonstrates that the variables of business strategy, management accounting innovation, and Enterprise risk management can account for a significant portion, precisely 35.3%, of Enterprise performance. These variables are further influenced by information technology governance as a moderating factor. However, it is essential to note that the remaining 64.7% of Enterprise performance is attributed to other variables not examined in this study.

## Prediction Relevance (Stone-Geisser's Q2)

In conjunction with the R-square metric, the evaluation of the inner model in structural model testing incorporates predictive relevance values, commonly referred to as Q2. The Q-square value is greater than zero, suggesting that the model possesses a significant level of predictive relevance. Table 2 displays the application of the blindfolding approaches in predictive relevance testing.

Table 2. Predictive relevance test $Q^2$

| Endogenous Variables | $Q^2$ $(=1-(1-R^2)$ | Conclusion |
|---|---|---|
| Enterprise performance | 0.353 | Own Predictive Relevance |

The predictive relevance value of Q2 for enterprise performance factors is 0.353, which exceeds 0. The inference can be drawn that the model possesses predictive significance. According to Chin (1998).

## Goodness of Fit test

In this study, the GoF Index, a measure of goodness of fit introduced by Tenenhaus et al. (2004), was employed to evaluate the overall model's overall fit index to validate the collective performance of the outer and inner models. The computation of the GoF value involves multiplying the average communalities index by the R2 value, as detailed by Ghozali and Latan (2015). The GoF value is expressed on a scale ranging from 0 to 1, with the following interpretations: 0.1 suggests a modest GoF, 0.25 signifies a moderate GoF, and 0.36 indicates a substantial GoF. The results concerning the computation of the Goodness-of-Fit (GoF) Index in this study are presented as follows:

$$Gof = \sqrt{0,785 \times 0,353} = 0,526$$

Based on the obtained calculation results, it can be observed that the Gof value of 0.526 is above the threshold of 0.36, therefore indicating its classification inside the larger category.

## Hypothesis testing

Once the measurement and structural models have been tested, the last step involves hypothesis testing to address the research issues. The test results are depicted in Table 3.

**Table 3 Hypothesis Test Results**

| hypothesis | Connection | Path Coefficient | Q Statistics | P Value | Conclusion |
|---|---|---|---|---|---|
| 1 | BS -> EP | -0.092 | 1.029 | 0.152 | No supported |
| 2 | MAI -> EP | 0.543 | 5.276 | 0.000* | supported |
| 3 | ERM -> EP | 0.156 | 1.336 | 0.091 *** | supported |
| 4 | BS * ITG -> EP | 0.056 | 0.914 | 0.181 | No supported |
| 5 | MAI* ITG -> EP | 0.255 | 2.483 | 0.007* | supported |
| 6 | ERP* ITG -> EP | -0.144 | 2.125 | 0.017 | No supported |

Significance *5%, **10%
adjusted R-Square: 0.353

The following is a description of the results of testing each research hypothesis presented in Table 3:

As per the hypothesis testing table, the impact of the Business Strategy (B.S.) variable on Enterprise Performance (E.P.) is characterized by a path coefficient value of -0.092. The associated statistical parameters include a t-value of 1.029 and a P-value of 0.152. The findings indicate that the H1 hypothesis lacks support, as evidenced by the t statistic of 1.029 being less than the critical t value of 1.65 (at a 5% significance level for a one-tailed test), coupled with a p-value of 0.152 exceeding the significance threshold of 0.05. Consequently, the business strategy does not exhibit a positive influence on the performance of Indonesian manufacturing enterprises.

According to the hypothesis testing results table, it is evident that the impact of the Management Accounting Innovation (MAI) variable on Enterprise Performance (E.P.) is characterized by a path coefficient of 0.543. The corresponding statistical indicators include a t-value of 5.276 and a significance level 0.000. The findings strongly support the H2 hypothesis, given that the t statistic of 5.276 surpasses the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.000 is below the threshold of 0.05. In conclusion, substantial evidence affirms that management accounting innovation positively impacts the performance of Indonesian manufacturing firms.

Based on the data presented in the hypothesis testing results table, it is apparent that the relationship between the Enterprise Risk Management (ERM) variable and Enterprise Performance (E.P.) is characterized by a path coefficient of 0.156. The associated statistical metrics consist of a t-value of 1.336 and a significance level of 0.091. These outcomes convincingly support the H2 hypothesis, as indicated by the t statistic 1.336 exceeding the critical t value of 1.28 (at a 10% significance level for a one-tailed test), and the p-value of 0.091 is lower than the predetermined threshold of 0.10. In conclusion, there is substantial and compelling evidence to confirm that enterprise risk management indeed has a favorable impact on the performance of manufacturing companies in Indonesia.

According to the results presented in the hypothesis testing table, the impact of Business Strategy (B.S.), when moderated by Information Technology Governance (BS*ITG) on Enterprise Performance (E.P.), is characterized by a path coefficient value of 0.056. The corresponding statistical indicators include a t value of 0.91 and a P value of 0.181. However, the H4 hypothesis needs to be substantiated due to the t statistic of 0.914 falling short of the critical t value of 1.65 (at a 5% significance level for a one-tailed test) and the p-value of 0.181 exceeding the threshold of 0.05. As a result, the interplay between business strategy and information technology governance, as moderated by Information Technology Governance, does not exert a discernible influence on the performance of manufacturing firms in Indonesia.

Concerning the Management Accounting Innovation (MAI) variable moderated by Information Technology Governance (ITG), it is evident that this interaction influences Enterprise Performance (E.P.) with a path coefficient of 0.255. The statistical indicators include a t-value of 2.483 and a P-value of 0.007. The H5 hypothesis gains support from the t statistic of 2.483, exceeding the critical t value of 1.65 (at a 5% significance level for a one-tailed test) and the p-value of 0.007, lower than 0.05. In conclusion, substantial evidence affirms that

management accounting innovation, when moderated by information technology governance, positively affects the performance of manufacturing firms in Indonesia.

As per the hypothesis testing results table, the impact of the Enterprise Risk Management (ERP) variable, moderated by Information Technology Governance (ITG) (ERP*ITG), on Enterprise Performance (E.P.) is denoted by a path coefficient of -0.144. The corresponding statistical values encompass a t-value of 2.125 and a P-value of 0.017. While the t statistic of 2.125 surpasses the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.017 is less than 0.05, the nature of the path coefficient value being -0.144 does not align positively. Consequently, the H6 hypothesis needs to be substantiated, leading to the conclusion that the interaction between corporate risk management, moderated by information technology governance, does not positively impact manufacturing enterprises' performance in Indonesia.

## 5  Discussion

### The Effect of Business Strategy on Enterprise Performance

Based on the analysis of research data, the impact of the Business Strategy (B.S.) variable on Enterprise Performance (E.P.) is characterized by a path coefficient of -0.092. The associated statistical measures include a t-value of 1.029 and a P-value of 0.152. The H1 hypothesis lacks support due to the t statistic 1.029 falling below the critical t value of 1.65 (at a 5% significance level for a one-tailed test) and the p-value of 0.152 exceeding the significance threshold of 0.05. Consequently, business strategy does not exhibit a positive effect on enterprise performance.

The adoption of ineffective methods by companies might result in subpar performance. When a firm selects a strategy that aligns differently with its available resources, capabilities, or prevailing market conditions, it may encounter challenges in attaining its desired goals and objectives (Visedsun & Terdpaopong, 2021). In the contemporary corporate landscape characterized by swift transformations, organizations must exhibit adaptability and responsiveness to navigate market dynamics effectively. According to Anwar et al. (2016), a business plan that needs more flexibility and adaptability might impede the organization's capacity to effectively adjust to dynamic market conditions and capitalize on emerging possibilities, ultimately leading to subpar performance. Enterprise performance can be adversely affected by business strategies that do not align with the demands and preferences of the target market. Understanding client demands and developing successful ways to meet them are crucial for companies. Refrain from adhering to this practice to avoid a decline in market share and a reduction in overall performance. Hence, for a company to attain its objectives in an ideal manner, the organization must possess the capability to devise a sound business strategy and execute it with proficiency. Business strategy implementation pertains to the execution of defined plans and strategies. The objective is to attain the organization's long-term objectives. This process entails transforming a formulated corporate strategy into tangible and executable actions to attain predetermined objectives.

### The Effect of Management Accounting Innovation on Enterprise Performance

The research data analysis shows that the relationship between Management Accounting Innovation (MAI) and Enterprise Performance (E.P.) is characterized by a path coefficient of 0.543. The statistical parameters include a t value 5.276 and a P value of 0.000. The H2 hypothesis finds support due to the t statistic of 5.276 surpassing the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.000 is lower than 0.05. This underscores the conclusion that management accounting innovation positively enhances enterprise performance.

The results of hypothesis testing in Table 3 show that management accounting innovation affects Enterprise performance. This aligns with the hypothesis put forward and supports the goal-setting theory that accounting innovation is carried out to create solutions from specific and challenging company goals because companies with specific and complex goals that can be achieved will lead to better Enterprise performance. This shows that with management accounting innovation, specific and high (challenging) goals can be achieved because this leads to higher levels of task performance. As long as a company commits to goals, it must have the capabilities needed to achieve them (Locke & Latham, 2006); in this study, one of them is management accounting innovation. Management accounting innovations applied to companies can provide benefits and reduce losses to companies. However, management accounting innovations can also cause losses. If this happens, the company will reject the management accounting innovations because they can interfere with the enterprise's performance (Ax & Greve, 2017).

## The Effect of Corporate Risk Management on Enterprise Performance

The results from the hypothesis testing table indicate that the impact of Enterprise Risk Management (ERP) variables on Enterprise Performance (E.P.) is characterized by a path coefficient of 0.156. The statistical indicators include a t-value of 1.336 and a probability value of 0.091. The H3 hypothesis is upheld due to the t statistic of 1.336 exceeding the critical t value of 1.28 (at a 10% significance level for a one-tailed test) and the p-value of 0.091 less than 0.10.

The results of the hypothesis testing in Table 3 indicate that Enterprise risk management positively impacts the performance of Indonesian manufacturing companies. Integrated corporate risk management can help grow and improve Enterprise performance. In line with the goal-setting theory, corporate risk management can improve resilience and the enterprise's ability to anticipate and respond to changes by identifying risks so that formal risk management practices can improve Enterprise performance. Organizations that effectively carry out enterprise risk management and follow their industry context are likelier to improve their enterprise's performance (Liu et al., 2020). Ejrami et al. (2016) stated that risk management applied to companies can influence marketing potential to increase the enterprise's competitive advantage. By increasing its competitive advantage, the enterprise's performance will increase.

## Information Technology Governance Moderates the Effect of Business Strategy on Enterprise Performance

As per the findings presented in the hypothesis testing table, the impact of Business Strategy (B.S.) moderated by Information Technology Governance (BS*ITG) on Enterprise Performance (E.P.) is marked by a path coefficient of 0.056. The statistical indicators include a t value of 0.91 and a P value of 0.181. However, the H4 hypothesis is not substantiated, given that the t statistic 0.914 falls short of the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.181 exceeds 0.05.

Information Technology Governance Institute (ITGI) characterizes information technology governance as the duty of executives and directors, encompassing leadership, organizational framework, and procedural measures, all aimed at ensuring that information technology serves as both a facilitator and a propeller of strategies designed to accomplish organizational goals (Bailey & Becker, 2014). This definition emphasizes the need for more control over information technology so that I.T. strategies, policies, initiatives, and projects are genuinely appropriate and can meet business needs and strategies. With this, I.T. can increase its strategic role to generate innovation, increase competitive advantage, and lift *its brand image*.

## Information Technology Governance Moderates the Effect of Management Accounting Innovation on Enterprise Performance

The interplay between Management Accounting Innovation (MAI) moderated by Information Technology Governance (ITG) (MAI*ITG) and its effect on Enterprise Performance (E.P.) is represented by a path coefficient of 0.255. The associated statistical measures include a t-statistic value of 2.483 and a significance level of 0.007. The H5 hypothesis is substantiated by the t statistic of 2.483, surpassing the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.007 is less than 0.05.

The research data analysis presented in Table 3 demonstrates that information technology governance enhances the impact of management accounting innovation on enterprise performance. Management Accounting Innovation is implemented to enhance the performance of the enterprise. With information technology governance, the achievement of management accounting innovation, specific and high (challenging) goals can be achieved more quickly, leading to higher and faster task performance. In line with *contingency theory*, information technology governance identifies specific aspects of management accounting innovations related to certain circumstances and demonstrates an appropriate fit (Otley, 2016) to improve Enterprise performance.

## Information Technology Governance Moderates the Impact of Corporate Risk Management on Enterprise Performance

The influence of Enterprise Risk Management (ERP) moderated by Information Technology Governance (ITG) (ERP*ITG) on Enterprise Performance (K.P.) is denoted by a path coefficient of -0.144. The corresponding statistical measures include a t statistic of 2.125 and a significance level of 0.017. However, the H6 hypothesis does not need to be due to the t statistic of 2.125 surpassing the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.017 is less than 0.05. Despite these statistical results, the path coefficient of -0.144 does not align positively.

The findings derived from the data analysis in Table 3 reveal that the involvement of Information Technology Governance does not amplify the influence of enterprise risk management on enterprise performance. Information Technology Governance is characterized as a framework comprising relationships and procedures to guide and oversee an organization to achieve its objectives while contributing value through risk-benefit assessments of information technology (I.T.) and associated processes. According to the I.T. Governance Institute (ITGI), the accountability for information technology governance lies with organizational leaders and executive management. Effective and efficient corporate governance emphasizes the expertise and experience of individuals and groups in a particular field. It may be due to a lack of individual expertise and experience in information technology in some regions of the enterprise or a lack of attention and control from Enterprise management that should be managed. They are responsible for managing this information technology.

## 6 Conclusion

After conducting research, the results of this study obtained the following conclusions:

1) There needs to be a discernible positive impact of business strategy on enterprise performance in Indonesia. The lack of effective execution of the company's intended business strategy is likely the cause for its failure to enhance the performance of the enterprise.

2) The use of innovative management accounting practices has been found to impact the overall performance of enterprises positively. This finding demonstrates a positive correlation between the effective adoption of management accounting innovations and the subsequent enhancement of an enterprise's performance.

3) Enterprise risk management (ERM) has been found to impact enterprises' performance favorably. This finding demonstrates that a more effective implementation of risk management is positively correlated with an improvement in the performance of the enterprise.

4) Information technology governance does not strengthen the influence of business strategy on Enterprise performance. This is likely because the company needs more control over the information technology that is executed so that the strategy policy information technology procurement initiatives cannot meet the needs according to the business strategy that has been designed.

5) Information technology governance strengthens the effect of management accounting innovation on Enterprise performance. This proves that in order to implement sound management accounting innovations to achieve high corporate performance, adequate information governance is required.

6) Information technology governance does not strengthen the influence of enterprise risk management on corporate performance. This may be due to a lack of expertise and experience of resources in the field of information technology in specific fields within the enterprise, or it may also be due to a lack of attention and control from the management of the company, which should be the responsibility of managing information technology.

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# The Influence of Business Strategy, Management Accounting Innovation, and Enterprise Risk Management on Enterprise Performance with Information Technology Governance As Moderating Variable

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# The Influence of Business Strategy, Management Accounting Innovation, and Enterprise Risk Management on Enterprise Performance with Information Technology Governance As Moderating Variable

by Taty Sariwulan

# The Influence of Business Strategy, Management Accounting Innovation, and Enterprise Risk Management on Enterprise Performance with Information Technology Governance As Moderating Variable

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## ABSTRACT

This study examines and evaluates the impact of business strategy, management accounting innovation, and enterprise risk management on enterprise performance. Additionally, the study investigates whether information technology governance can moderate the influence of business strategy, management accounting innovation, and enterprise risk management on enterprise performance. The present study employed a quantitative research approach, utilizing primary data acquired through administering questionnaires for data collection. The focal point of examination in this research is a manufacturing enterprise in Indonesia. The analysis encompassed a total of 317 firms. The present work employs the smart PLS approach for data processing. The findings of this study suggest that business strategy does not yield a favorable impact on enterprise performance. However, management accounting innovation and enterprise risk management are both associated with beneficial effects on enterprise performance. The presence of information technology governance as a moderating variable does not enhance the impact of business strategy on enterprise performance. However, it enhances management accounting innovation's impact on enterprise performance. Furthermore, it does not boost the relationship between corporate risk management and enterprise performance.

**Keywords:** Business Strategy, Management Accounting Innovation, Enterprise Risk Management, Information Technology Governance, Performance.

## 1 Introduction

Something that is produced in a certain period and refers to the standards set by the enterprise is the performance of the enterprise. This can be measured and describes the empirical condition of an Enterprise (Aprizal, 2018). The performance measurement result evaluates the enterprise's work, which is expected to improve the quality of work so that Enterprise activities can continue (Hartono & Setiawardani, 2017). Companies that have high performance can continue to be *sustainable* for the sake of their survival.

The manufacturing industry sector is crucial in facilitating economic development in Indonesia. According to Winardi et al. (2017), the available data indicates a significant decline in the economic growth of the Republic of Indonesia within the manufacturing sector annually. Indeed, the manufacturing sector makes a significant contribution of 19.7% to the Gross Domestic Product (GDP), emerging as the most substantial contributor compared to other sectors. Nevertheless, the expansion rate experienced a significant fall, reaching a mere 3.8% in 2019. The subject under investigation, the manufacturing sector's performance in Indonesia, is of considerable scholarly interest (BPS, 2019).

According to Winardi et al. (2017), several factors have contributed to the deterioration in the performance of Indonesia's manufacturing industry sector, one of which is the lack of competitiveness in the national industry. Hence, the manufacturing industry must enhance its company strategy. Implementing a business strategy plays a crucial role in enhancing the overall performance of an enterprise. Implementing a dynamic business strategy incorporating agile and streamlined approaches to environmental management and supply optimization in uncertain circumstances has been found to positively influence enterprise performance (Srinivasan et al., 2020). Furthermore, it has been observed that a well-designed business strategy can serve as a protective measure against bankruptcy for enterprises (Agustia et al., 2020). Additionally, business strategies that encompass both exploratory and exploitative

technological innovations can enhance operational efficiency and promote the organization's long-term sustainability (Müller et al., 2020).

The existing body of research examining the impact of corporate strategy on performance yields varying outcomes. According to Hambrick's study conducted in 1983, the implementing approach demonstrates superior performance in terms of low profitability (Hambrick, 1983). Previous research has indicated that organizations employing prospector, defender, and analyzer techniques exhibit no statistically significant disparities (Anwar & Hasnu, 2017; Sarac et al., 2014). The findings of Haseeb (2019) and Ilmudeen (2020) indicate that business strategy exerts a substantial and favorable impact on the performance of companies (Haseeb et al., 2019; Ilmudeen, 2020).

The enhancement of competitiveness and the improvement of enterprise performance necessitate the presence of innovation. One area of innovation that requires attention is management accounting innovation (Ax & Greve, 2017). According to Pavlatos and Kostakis (2018), implementing management accounting innovation offers enterprises in Greece a means to address the uncertainties arising from the economic crisis effectively. This innovation enables organizations to access more comprehensive and superior information for decision-making purposes. Implementing management control systems (MCS) has resulted in several advancements, such as developing novel processes, services, and goods (Chenhall & Moers, 2015; Chiucuri et al., 2017).

According to a study conducted by Azmi and Harti (2021), strategic management accounting and organizational competencies have a notable impact on the performance of enterprises. According to Azmi and Harti (2021), an increase in the prominence of management accounting is associated with improved enterprise performance. The findings presented in this study oppose the conclusions drawn by Faradiza (2018), who demonstrated that the performance of manufacturing enterprises in Indonesia is independent of the degree of complexity in their management accounting processes (Faradiza, 2018).

Risk management is identifying potential events affecting the entity and providing reasonable guarantees by managing existing risks so that the entity's objectives are achieved (COSO, 2017). Therefore, this is also important in Enterprise performance where *distributed software development* (DSD) can run well (Wan Husin et al., 2019), avoid bankruptcy (Jonek-Kowalska, 2019), reduce errors in making decisions (Golpira et al., 2020), and avoid failure (Chernobai et al., 2020).

The same empirical study did not show a significant positive relationship between ERM and firm performance. The application of Enterprise risk management is not significantly related to Enterprise performance (Kami, 2020). The research results of Sayilir and Farhan (2016) show that firm value has no significant relationship with risk management in the company. This is possible because the risk management applied to the company is still new, so the performance and value of the company are experiencing an impact from the implementation of risk management takes a pretty long time (Sayilir & Farhan, 2016).

The use of technology still needs to be improved, especially information technology in the manufacturing industry in Indonesia, compared to labor and capital productivity (Lestari & Ismina, 2017). Information technology can help industry players increase efficiency in the manufacturing process (Sunardi & Joy Saputra, 2016), increase productivity, and build the manufacturing industry (Sunardi & Joy Saputra, 2016). Therefore, information technology governance is also essential in improving Enterprise performance.

The use of information technology governance as a moderating variable in this study has never been done by previous researchers to measure its effect on Enterprise performance. Information technology governance is used as a moderating variable to see how much this variable supports the influence of the independent variables of business strategy, management accounting innovation, and Enterprise risk management on Enterprise performance.

## 2 Literature Reviews

### Enterprise performance

Performance is a distinct result achieved in management, economics, and marketing, which endows an organization and its structural and procedural elements with qualities of competitiveness, effectiveness, and efficiency. Performance includes various interpretations, such as growth, profitability, efficiency, returns, productivity, and competitiveness (Taouab & Issor, 2019). Reporting on the enterprise's performance level is needed to measure the results. The enterprise performance instrument in this research was adapted from research used by Ghasemi et al. (2015) and Sariwulan (2020), namely adapting the indicators used by Govindarajan (1984), which consists of achievement of planned productivity targets, cost, quality, delivery schedule, total assets, market share, profit level, return on investment, new service programs, personnel development & holistic performance to determine the extent to which the organization has succeeded in achieving its planned goals.

## Business strategy

Business strategy pertains to how organizations compete within a specific industry or market (Cadez & Guilding, 2012). Disparities in implementing strategies arise due to variations in firm characteristics and contextual factors despite the companies operating within the same competitive environment. Strategy typology is a profile of various strategic positions that emphasize the integrative components of various strategies (Cadez & Guilding, 2012). The business strategy indicators used in this study refer to the business strategy according to Miles and Snow, which is also used in research by Cescon et al. (2013) and Ilmudeen et al. (2020), namely low-cost products, focus on product quality, ensure products are different from competitors' products, introduce new products, offer a wide range of products, improve production process efficiency, provide quality services, carry out intensive marketing, expand into new markets.

## Management Accounting Innovation

An innovation is an idea, practice, or object perceived as new by an individual or other unit of adoption. Novelty in an innovation can be expressed in terms of new knowledge and the first persuasion or the decision to adopt (Rogers, 2003). Management accounting innovations in various literatures have been observed with the emergence of contemporary management accounting techniques (Haiza et al., 2010). Management accounting resulted from a long practice of corporate managers using their corporate financial information in making decisions that give their corporations additional competitive advantages. Management accounting, as distinguished from financial accounting, generates internal reports supporting an organization's managerial functions. These reports mainly focus on identifying, gathering, quantifying, analyzing, interpreting, preparing, and disseminating information that aids managers in achieving organizational objectives (Bhimani, 2009).

Several dimensions were used by previous researchers to measure management accounting innovation variables, namely economic value added (Cescon et al., 2013; Pavlatos & Kostakis, 2018), balanced scorecard, activity based costing, target costing (Arabi & Kavianifard, 2013; Boukr et al., 2021; Cescon et al., 2013; Marlina & Tjahjadi, 2021; Nassar et al., 2011; Pavlatos & Kostakis, 2018), Budgeting for long term plan (Cescon et al., 2013), strategic costing (Cescon et al., 2013; Marlina & Tjahjadi, 2021), life cycle costing (Boukr et al., 2021; Cescon et al., 2013; Pavlatos & Kostakis, 2018), benchmarking (Arabi & Kavianifard, 2013; Boukr et al., 2021; Cescon et al., 2013; Nassar et al., 2011; Yazdifar et al., 2019), customer profitability analysis (Cescon et al., 2013), activity based management (Arabi & Kavianifard, 2013; Boukr et al., 2021; Marlina & Tjahjadi, 2021; Nassar et al., 2011; Yazdifar et al., 2019), total quality management (Arabi & Kavianifard, 2013), kaizen (Boukr et al., 2021), just in time (Arabi & Kavianifard, 2013), beyond budgeting approach (Marlina & Tjahjadi, 2021). This study's management accounting innovation variable uses measurements popularly used in previous studies, namely the dimensions of activity-based costing, activity-based management, balanced scorecard, target costing, and benchmarking. It adds three new dimensions: environmental management accounting, competitor cost assessment, and competitive position monitoring.

## Enterprise Risk Management

Risk management is a proactive process that involves the identification of probable occurrences that may impact an entity and implementing measures to effectively manage these risks to ensure the achievement of the entity's objectives (COSO, 2017). Hence, it is imperative for organizations aiming to enhance their enterprise performance to prioritize the implementation of enterprise risk management practices. According to McKay (2017), the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework can be employed to assess enterprise risk management. The present study employs indicators developed by COSO, which encompass five components of enterprise risk management as previously defined: (1) governance and organizational culture, (2) formulation and determination of objectives and strategies, (3) performance, (4) review and revision, and (5) information, communication, and reporting (McKay, 2017).

## Information Technology Governance

Peterson et al. (2004) argue that effective information technology governance is integral to sound corporate governance. They posit that a robust information technology governance framework prompts organizations to employ distinct structures and mechanisms to align their enterprise's information technology strategy and business performance objectives. According to Bailey and Becker (2014), information technology governance can be seen as expanding corporate governance. Corporate governance refers to the actions taken by the board and executive management to establish a framework of responsibilities and practices. The push is a framework aimed at achieving

strategic direction and objectives, appropriate management of risks, and responsible utilization of corporate resources. The concept of information technology governance in this study pertains to the body of literature on information systems, which posits that its primary objective is to ensure the efficient utilization of information technology. This is achieved by emphasizing five key domains: I.T. Strategic Alignment, I.T. Value Delivery, I.T. Risk Management, I.T. Resource Management, and I.T. Performance Management.

## Conceptual framework

This study uses information technology governance variables as a moderating variable based on this description. The conceptual framework for this research can be seen in Figure 1:



Figure 1. Research Conceptual Framework

## Hypothesis

H1: Business strategy has a positive effect on Enterprise performance.

H2: Management accounting innovation has a positive effect on Enterprise performance.

H3: Enterprise risk management has a positive effect on Enterprise performance

H4: Information technology governance as a moderating variable strengthens the positive influence of business strategy on Enterprise performance

H5: Information technology governance as a moderating variable strengthens the positive effect of management accounting innovations on firm performance

H6: Information technology governance as a moderating variable strengthens the positive influence of enterprise risk management on firm performance

## 3  Methods

This study employs a quantitative data analysis approach to examine the subject (or object) under investigation. The measurement utilized in this research determines the presence or absence of a particular attribute in the subject. It quantifies the extent or level to which the subject exhibits that attribute (Jr. et al., 2018). The study focuses on a sample of prominent manufacturing enterprises operating in Indonesia. According to the August 2021 publication of the Indonesian Manufacturing Industry Statistics data by the Indonesian Statistics Center, the total count of large-scale manufacturing industry enterprises in Indonesia amounts to 10,776 entities. The study comprised a sample size of 317 individuals, all affiliated with a single enterprise. The process of data collection is conducted by employing a survey. The survey instrument comprises structured self-administered questionnaires completed by the respondents in written form or electronically (Sekaran & Bougie, 2016). The survey instrument was constructed collecting data on an ordinal scale, employing a Likert scale for measurement. The data generated using a structural equation modeling (SEM) based on the Partial Least Square (PLS) approach is subjected to a descriptive and verification statistical analysis to assess the developed hypotheses.

## 4    Results And Discussion

**Data Quality Testing Through the PLS Structural Equation Model (SEM).**

The outcomes obtained from evaluating the comprehensive structural model using the findings derived from the PLS Algorithm and Bootstrapping are as follows.
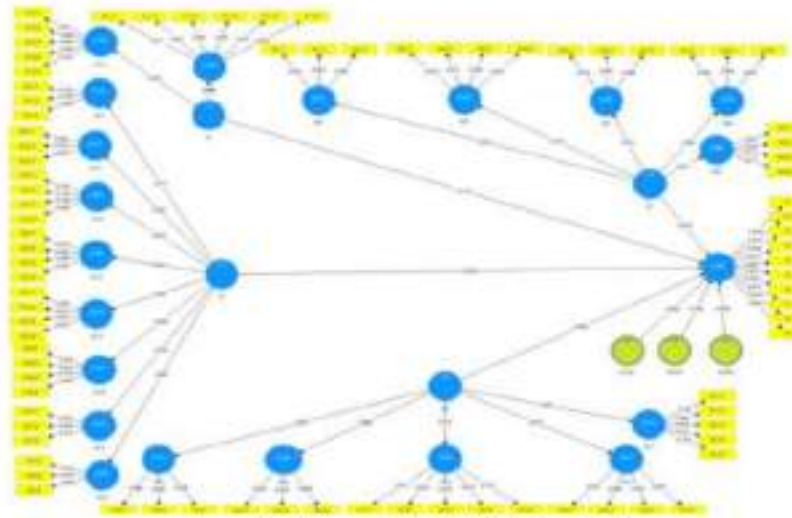


**Figure 2 Full Structural Model (PLS Algorithm)**

Figure 2 shows the initial measurement model for 86 question items. There are five items with outer loading below 0.7, namely item 1 on the prospector business strategy dimension, item 5 on the defender strategy dimension, item 4 on the *benchmarking dimension*, item 4 on the *target costing dimension*, and item 4 on *the environmental management accounting dimension*. These items were discarded and not further analyzed. Next, a confirmatory factor analysis was repeated until no loading factor was found worth 0.7 and below 0.7.



**Figure 3 Full Structural Model (Bootstraping)**

## Structural Model Testing (Inner Model)

A structural model is a framework that establishes links between exogenous latent variables and endogenous latent variables or elucidates the connections between endogenous variables and other endogenous variables.

## R-Square test

R-squared values are commonly employed to elucidate the impact of specific exogenous latent variables on endogenous latent variables. The following results illustrate the R-square values obtained for each endogenous variable.

Table 1. R-Square and Adjusted R-Square Test Results

| Dependent Variable | R Square | Adjusted R-Square |
|---|---|---|
| Enterprise Performance (K.P.) | 0.367 | 0.353 |

Source: data processed 2023

The table indicates that the Adjusted R-square value for the Enterprise performance variable (K.P.) is 0.353. This study demonstrates that the variables of business strategy, management accounting innovation, and Enterprise risk management can account for a significant portion, precisely 35.3%, of Enterprise performance. These variables are further influenced by information technology governance as a moderating factor. However, it is essential to note that the remaining 64.7% of Enterprise performance is attributed to other variables not examined in this study.

## Prediction Relevance (Stone-Geisser's Q2)

In conjunction with the R-square metric, the evaluation of the inner model in structural model testing incorporates predictive relevance values, commonly referred to as Q2. The Q-square value is greater than zero, suggesting that the model possesses a significant level of predictive relevance. Table 2 displays the application of the blindfolding approaches in predictive relevance testing.

Table 2. Predictive relevance test $Q^2$

| Endogenous Variables | $Q^2$ $(=1-(1-R^2)$ | Conclusion |
|---|---|---|
| Enterprise performance | 0.353 | Own Predictive Relevance |

The predictive relevance value of Q2 for enterprise performance factors is 0.353, which exceeds 0. The inference can be drawn that the model possesses predictive significance. According to Chin (1998).

## Goodness of Fit test

In this study, the GoF Index, a measure of goodness of fit introduced by Tenenhaus et al. (2004), was employed to evaluate the overall model's overall fit index to validate the collective performance of the outer and inner models. The computation of the GoF value involves multiplying the average communalities index by the R2 value, as detailed by Ghozali and Latan (2015). The GoF value is expressed on a scale ranging from 0 to 1, with the following interpretations: 0.1 suggests a modest GoF, 0.25 signifies a moderate GoF, and 0.36 indicates a substantial GoF. The results concerning the computation of the Goodness-of-Fit (GoF) Index in this study are presented as follows:

$$Gof = \sqrt{0,785 \times 0,353} = 0.526$$

Based on the obtained calculation results, it can be observed that the Gof value of 0.526 is above the threshold of 0.36, therefore indicating its classification inside the larger category.

## Hypothesis testing

Once the measurement and structural models have been tested, the last step involves hypothesis testing to address the research issues. The test results are depicted in Table 3.

**Table 3 Hypothesis Test Results**

| hypothesis | Connection | Path Coefficient | Q Statistics | P Value | Conclusion |
|---|---|---|---|---|---|
| 1 | BS -> EP | -0.092 | 1.029 | 0.152 | No supported |
| 2 | MAI -> EP | 0.543 | 5.276 | 0.000* | supported |
| 3 | ERM -> EP | 0.156 | 1.336 | 0.091 *** | supported |
| 4 | BS * ITG -> EP | 0.056 | 0.914 | 0.181 | No supported |
| 5 | MAI* ITG -> EP | 0.255 | 2.483 | 0.007* | supported |
| 6 | ERP* ITG -> EP | -0.144 | 2.125 | 0.017 | No supported |

Significance *5%, **10%
adjusted R-Square: 0.353

The following is a description of the results of testing each research hypothesis presented in Table 3:

As per the hypothesis testing table, the impact of the Business Strategy (B.S.) variable on Enterprise Performance (E.P.) is characterized by a path coefficient value of -0.092. The associated statistical parameters include a t-value of 1.029 and a P-value of 0.152. The findings indicate that the H1 hypothesis lacks support, as evidenced by the t statistic of 1.029 being less than the critical t value of 1.65 (at a 5% significance level for a one-tailed test), coupled with a p-value of 0.152 exceeding the significance threshold of 0.05. Consequently, the business strategy does not exhibit a positive influence on the performance of Indonesian manufacturing enterprises.

According to the hypothesis testing results table, it is evident that the impact of the Management Accounting Innovation (MAI) variable on Enterprise Performance (E.P.) is characterized by a path coefficient of 0.543. The corresponding statistical indicators include a t-value of 5.276 and a significance level 0.000. The findings strongly support the H2 hypothesis, given that the t statistic of 5.276 surpasses the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.000 is below the threshold of 0.05. In conclusion, substantial evidence affirms that management accounting innovation positively impacts the performance of Indonesian manufacturing firms.

Based on the data presented in the hypothesis testing results table, it is apparent that the relationship between the Enterprise Risk Management (ERM) variable and Enterprise Performance (E.P.) is characterized by a path coefficient of 0.156. The associated statistical metrics consist of a t-value of 1.336 and a significance level of 0.091. These outcomes convincingly support the H2 hypothesis, as indicated by the t statistic 1.336 exceeding the critical t value of 1.28 (at a 10% significance level for a one-tailed test), and the p-value of 0.091 is lower than the predetermined threshold of 0.10. In conclusion, there is substantial and compelling evidence to confirm that enterprise risk management indeed has a favorable impact on the performance of manufacturing companies in Indonesia.

According to the results presented in the hypothesis testing table, the impact of Business Strategy (B.S.), when moderated by Information Technology Governance (BS*ITG) on Enterprise Performance (E.P.), is characterized by a path coefficient value of 0.056. The corresponding statistical indicators include a t value of 0.91 and a P value of 0.181. However, the H4 hypothesis needs to be substantiated due to the t statistic of 0.914 falling short of the critical t value of 1.65 (at a 5% significance level for a one-tailed test) and the p-value of 0.181 exceeding the threshold of 0.05. As a result, the interplay between business strategy and information technology governance, as moderated by Information Technology Governance, does not exert a discernible influence on the performance of manufacturing firms in Indonesia.

Concerning the Management Accounting Innovation (MAI) variable moderated by Information Technology Governance (ITG), it is evident that this interaction influences Enterprise Performance (E.P.) with a path coefficient of 0.255. The statistical indicators include a t-value of 2.483 and a P-value of 0.007. The H5 hypothesis gains support from the t statistic of 2.483, exceeding the critical t value of 1.65 (at a 5% significance level for a one-tailed test) and the p-value of 0.007, lower than 0.05. In conclusion, substantial evidence affirms that

management accounting innovation, when moderated by information technology governance, positively affects the performance of manufacturing firms in Indonesia.

As per the hypothesis testing results table, the impact of the Enterprise Risk Management (ERP) variable, moderated by Information Technology Governance (ITG) (ERP*ITG), on Enterprise Performance (E.P.) is denoted by a path coefficient of -0.144. The corresponding statistical values encompass a t-value of 2.125 and a P-value of 0.017. While the t statistic of 2.125 surpasses the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.017 is less than 0.05, the nature of the path coefficient value being -0.144 does not align positively. Consequently, the H6 hypothesis needs to be substantiated, leading to the conclusion that the interaction between corporate risk management, moderated by information technology governance, does not positively impact manufacturing enterprises' performance in Indonesia.

## 5  Discussion

### The Effect of Business Strategy on Enterprise Performance

Based on the analysis of research data, the impact of the Business Strategy (B.S.) variable on Enterprise Performance (E.P.) is characterized by a path coefficient of -0.092. The associated statistical measures include a t-value of 1.029 and a P-value of 0.152. The H1 hypothesis lacks support due to the t statistic 1.029 falling below the critical t value of 1.65 (at a 5% significance level for a one-tailed test) and the p-value of 0.152 exceeding the significance threshold of 0.05. Consequently, business strategy does not exhibit a positive effect on enterprise performance.

The adoption of ineffective methods by companies might result in subpar performance. When a firm selects a strategy that aligns differently with its available resources, capabilities, or prevailing market conditions, it may encounter challenges in attaining its desired goals and objectives (Visedsun & Terdpaopong, 2021). In the contemporary corporate landscape characterized by swift transformations, organizations must exhibit adaptability and responsiveness to navigate market dynamics effectively. According to Anwar et al. (2016), a business plan that needs more flexibility and adaptability might impede the organization's capacity to effectively adjust to dynamic market conditions and capitalize on emerging possibilities, ultimately leading to subpar performance. Enterprise performance can be adversely affected by business strategies that do not align with the demands and preferences of the target market. Understanding client demands and developing successful ways to meet them are crucial for companies. Refrain from adhering to this practice to avoid a decline in market share and a reduction in overall performance. Hence, for a company to attain its objectives in an ideal manner, the organization must possess the capability to devise a sound business strategy and execute it with proficiency. Business strategy implementation pertains to the execution of defined plans and strategies. The objective is to attain the organization's long-term objectives. This process entails transforming a formulated corporate strategy into tangible and executable actions to attain predetermined objectives.

### The Effect of Management Accounting Innovation on Enterprise Performance

The research data analysis shows that the relationship between Management Accounting Innovation (MAI) and Enterprise Performance (E.P.) is characterized by a path coefficient of 0.543. The statistical parameters include a t value 5.276 and a P value of 0.000. The H2 hypothesis finds support due to the t statistic of 5.276 surpassing the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.000 is lower than 0.05. This underscores the conclusion that management accounting innovation positively enhances enterprise performance.

The results of hypothesis testing in Table 3 show that management accounting innovation affects Enterprise performance. This aligns with the hypothesis put forward and supports the goal-setting theory that accounting innovation is carried out to create solutions from specific and challenging company goals because companies with specific and complex goals that can be achieved will lead to better Enterprise performance. This shows that with management accounting innovation, specific and high (challenging) goals can be achieved because this leads to higher levels of task performance. As long as a company commits to goals, it must have the capabilities needed to achieve them (Locke & Latham, 2006); in this study, one of them is management accounting innovation. Management accounting innovations applied to companies can provide benefits and reduce losses to companies. However, management accounting innovations can also cause losses. If this happens, the company will reject the management accounting innovations because they can interfere with the enterprise's performance (Ax & Greve, 2017).

## The Effect of Corporate Risk Management on Enterprise Performance

The results from the hypothesis testing table indicate that the impact of Enterprise Risk Management (ERP) variables on enterprise Performance (E.P.) is characterized by a path coefficient of 0.156. The statistical indicators include a t-value of 1.336 and a probability value of 0.091. The H3 hypothesis is upheld due to the t statistic of 1.336 exceeding the critical t value of 1.28 (at a 10% significance level for a one-tailed test) and the p-value of 0.091 less than 0.10.

The results of the hypothesis testing in Table 3 indicate that Enterprise risk management positively impacts the performance of Indonesian manufacturing companies. Integrated corporate risk management can help grow and improve Enterprise perfomance. In line with the goal-setting theory, corporate risk management can improve resilience and the enterprise's ability to anticipate and respond to changes by identifying risks so that formal risk management practices can improve Enterprise performance. Organizations that effectively carry out enterprise risk management and follow their industry context are likelier to improve their enterprise's performance (Liu et al., 2020). Ejrami et al. (2016) stated that risk management applied to companies can influence marketing potential to increase the enterprise's competitive advantage. By increasing its competitive advantage, the enterprise's performance will increase.

## Information Technology Governance Moderates the Effect of Business Strategy on Enterprise Performance

As per the findings presented in the hypothesis testing table, the impact of Business Strategy (B.S.) moderated by Information Technology Governance (BS*ITG) on Enterprise Performance (E.P.) is marked by a path coefficient of 0.056. The statistical indicators include a t value of 0.91 and a P value of 0.181. However, the H4 hypothesis is not substantiated, given that the t statistic 0.914 falls short of the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.181 exceeds 0.05.

Information Technology Governance Institute (ITGI) characterizes information technology governance as the duty of executives and directors, encompassing leadership, organizational framework, and procedural measures, all aimed at ensuring that information technology serves as both a facilitator and a propeller of strategies designed to accomplish organizational goals (Bailey & Becker, 2014). This definition emphasizes the need for more control over information technology so that I.T. strategies, policies, initiatives, and projects are genuinely appropriate and can meet business needs and strategies. With this, I.T. can increase its strategic role to generate innovation, increase competitive advantage, and lift *its brand image*.

## Information Technology Governance Moderates the Effect of Management Accounting Innovation on Enterprise Performance

The interplay between Management Accounting Innovation (MAI) moderated by Information Technology Governance (ITG) (MAI*ITG) and its effect on Enterprise Performance (E.P.) is represented by a path coefficient of 0.255. The associated statistical measures include a t-statistic value of 2.483 and a significance level of 0.007. The H5 hypothesis is substantiated by the t statistic of 2.483, surpassing the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.007 is less than 0.05.

The research data analysis presented in Table 3 demonstrates that information technology governance enhances the impact of management accounting innovation on enterprise performance. Management Accounting Innovation is implemented to enhance the performance of the enterprise. With information technology governance, the achievement of management accounting innovation, specific and high (challenging) goals can be achieved more quickly, leading to higher and faster task performance. In line with *contingency theory*, information technology governance identifies specific aspects of management accounting innovations related to certain circumstances and demonstrates an appropriate fit (Otley, 2016) to improve Enterprise performance.

## Information Technology Governance Moderates the Impact of Corporate Risk Management on Enterprise Performance

The influence of Enterprise Risk Management (ERP) moderated by Information Technology Governance (ITG) (ERP*ITG) on Enterprise Performance (K.P.) is denoted by a path coefficient of -0.144. The corresponding statistical measures include a t statistic of 2.125 and a significance level of 0.017. However, the H6 hypothesis does not need to be due to the t statistic of 2.125 surpassing the critical t value of 1.65 (at a 5% significance level for a one-tailed test), and the p-value of 0.017 is less than 0.05. Despite these statistical results, the path coefficient of -0.144 does not align positively.

The findings derived from the data analysis in Table 3 reveal that the involvement of Information Technology Governance does not amplify the influence of enterprise risk management on enterprise performance. Information Technology Governance is characterized as a framework comprising relationships and procedures to guide and oversee an organization to achieve its objectives while contributing value through risk-benefit assessments of information technology (I.T.) and associated processes. According to the I.T. Governance Institute (ITGI), the accountability for information technology governance lies with organizational leaders and executive management. Effective and efficient corporate governance emphasizes the expertise and experience of individuals and groups in a particular field. It may be due to a lack of individual expertise and experience in information technology in some regions of the enterprise or a lack of attention and control from Enterprise management that should be managed. They are responsible for managing this information technology.

## 6    Conclusion

After conducting research, the results of this study obtained the following conclusions:

1)   There needs to be a discernible positive impact of business strategy on enterprise performance in Indonesia. The lack of effective execution of the company's intended business strategy is likely the cause for its failure to enhance the performance of the enterprise.

2)   The use of innovative management accounting practices has been found to impact the overall performance of enterprises positively. This finding demonstrates a positive correlation between the effective adoption of management accounting innovations and the subsequent enhancement of an enterprise's performance.

3)   Enterprise risk management (ERM) has been found to impact enterprises' performance favorably. This finding demonstrates that a more effective implementation of risk management is positively correlated with an improvement in the performance of the enterprise.

4)   Information technology governance does not strengthen the influence of business strategy on Enterprise performance. This is likely because the company needs more control over the information technology that is executed so that the strategy policy information technology procurement initiatives cannot meet the needs according to the business strategy that has been designed.

5)   Information technology governance strengthens the effect of management accounting innovation on Enterprise performance. This proves that in order to implement sound management accounting innovations to achieve high corporate performance, adequate information governance is required.

6)   Information technology governance does not strengthen the influence of enterprise risk management on corporate performance. This may be due to a lack of expertise and experience of resources in the field of information technology in specific fields within the enterprise, or it may also be due to a lack of attention and control from the management of the company, which should be the responsibility of managing information technology.

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