# Risk Orientation and SME Performance: The Mediating Role of Management Accounting

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**ABSTRACT**

Limited studies have examined how risk orientation affects the adoption of management accounting (MA) and performance in small and medium-sized enterprises (SMEs). Performance in SMEs is influenced by various factors, including the ability to adapt to changes in the market and the effective use of resources. Understanding how risk orientation impacts the adoption of management accounting practices can offer helpful tips for enhancing overall business performance and sustainability in this sector. This study seeks to examine the effects of risk orientation and MA on performance using structural equation modelling. A quantitative study was established where a questionnaire survey was administered to Malaysian SMEs across different sectors. Based on 189 valid responses, the results indicate that MAs partially mediate the relationship between risk orientation and SMEs' performance. The findings provide significant information for identifying the underlying factors within the setting of small businesses in improving financial resilience of SMEs. Our findings offer practitioners valuable insight about how risk orientation and management accounting can consequently affect the positive outcomes of organisational performance.

**Keywords:** Small and Medium-Sized Enterprises, Management Accounting, Manufacturing Sector, Malaysia, Risk Management
**JEL Classification:** G32

## 1. INTRODUCTION

Small and medium-sized enterprises (SMEs) play a significant role in most economies by contributing to GDP, creating employment opportunities, and fostering entrepreneurship and innovation (Erdin and Ozkaya, 2020). Given their contribution, enhancing SMEs managerial practices is critical to reduce the risk of business failure. Studies have shown that businesses that adopt a risk-oriented approach to decision-making are better positioned to navigate future challenges. One key element of this strategy is data-driven risk assessment where it can be provided by management accounting (MA). MA serves as an essential control mechanism for effective decision-making using multiple tools such as cost-benefit analysis, variance analysis, performance measurement and budgeting. Adopting sound MA practices becomes imperative for

SMEs, especially in times of continuous economic uncertainty that may heavily impact them.

MA practices, which comprise various performance planning and monitoring analyses, are an accounting system that uses both financial and non-financial information to make informed managerial decisions (Adu-Gyamfi et al., 2021; Arseneault and Gagnon, 2024). The dynamics of the business environment that have driven the improvement and innovation of MA are also driven by the increased orientation of risk management by business owner/managers. Risk, closely intertwined with decision-making (Crovini et al., 2021), is a crucial part of the managerial process in identifying potential threats and opportunities (Vetchagool et al., 2020). To manage all significant challenges and business risks, appropriate MA practices play roles in systematically

and strategically tackling business risks (Ojra et al., 2021). The combination of effective risk management with MA gives organisations the ability to overcome challenges and achieve strategic objectives in a changing business landscape.

Extensive research has been conducted on MA and risk management, yet much of it has been explored independently. For risk to be useful in managerial decision-making, it must be translated into measurable, structured, and data-driven terms (Bhimani, 2009). Abstract or subjective risks are difficult to act upon, making them less effective in business contexts. However, when risks are analysed, and integrated into technical models such as probability assessments, or decision matrices, they become actionable and strategically manageable. In this regard, the application of MA plays a crucial role in identifying, evaluating, and controlling calculated risks, ensuring businesses can make informed and proactive decisions. The MA literature suggests that the risk orientation approach as well as MA practices in SMEs is generally limited. According to Vanauken et al. (2016), SMEs tend to prioritise control information over using MA practices to support decision-making. Consequently, SMEs often make decisions without adequate financial information, increasing their exposure to financial risks, especially in uncertain environments (Matsoso et al., 2021). Demiröz (2019) highlighted that SMEs often struggle to adopt advanced MA approaches due to resource constraints, yet integrating modern techniques can enhance financial stability and strategic decision-making. Eichholz et al. (2024) emphasised that businesses with a strong orientation toward risk are better equipped to develop adaptive capabilities in the face of significant challenges. By incorporating risk-based management decisions, particularly within financial and accounting practices, SMEs can adopt a structured and calculated approach to decision-making that mitigates future financial instability. Moreover, the unique challenges faced by SMEs such as limited access to capital or heavy reliance on a small customer base underscore the critical need for proactive risk management in their managerial practices (Glowka et al., 2024).

This study examines the effects of risk orientation and MA utilisation on SME performance. As MA practices evolve over time, identifying key elements that enhance performance enables tailored management strategies suited to SMEs' unique challenges. Addressing a significant research gap, this study focuses on essential MA practices and risk orientation to provide insights into improving SME performance. The structure of this article is as follows: The next section discusses the literature review, followed by the research methodology and discussions. The final section summarises the findings and their implications for future research.

## 2. MANAGEMENT ACCOUNTING PRACTICES

Management accounting is one important aspect of accounting that produces both financial and non-financial information for the management of an organisation. It comprises a set of measures for monitoring, communicating, reporting, and supporting decision-making (Pitcher, 2015) through various accounting systems that focus on planning and monitoring, such as budgeting, costing, performance measurement, strategic planning, and decision analysis (Ahmad, 2024). According to Gomez-Conde et al. (2019), MA systems involve the collection of information and systematic dissemination that strengthens organisational practices and enhances firm performance. The usefulness of MA to a business organisation that is tailored to support internal decision-making is attributed to its capacity to offer accurate and timely information regarding relevant activities, information coordination, and performance evaluation across different units (Nuhu et al., 2016). Pelz (2019) argued that MA is able to provide support SMEs by improving business planning, financial control, and reducing information asymmetry, though its effectiveness varies due to resource constraints.

Research in MA practices has been by many researchers (Grossi et al., 2020; Arseneault and Gagnon, 2024). Most small firms tend to rely on traditional or basic management accounting tools for decision-making (Tuan et al., 2022). This approach is favoured for its simplicity and ease of understanding, as they do not necessitate the use of advanced software or complex systems. Besides that, small businesses often face challenges with MA due to their limited resources and inability to adopt and understand how MA practices operate. Ylä-Kujala et al. (2023) found that small businesses often face organisational, resource, and personnel challenges, which affect the adoption of MA practices. Their research highlights that businesses with higher MA expertise tend to achieve better financial stability. Among common MA used in SMEs, regardless of the firms' size are costing systems and performance measurement systems (Ahmad, 2017). On the other hand, larger enterprises tend to use sophisticated MAs, aligning with theoretical arguments about the impact of size on MA adoption. Ahmad (2024) highlights that larger firms relatively use MA more than smaller firms, with significant differences in the use of more analytical and strategic systems such as decision support systems and strategic management accounting. Pedroso and Gomes (2020) introduced a multidimensional tool to measure the effectiveness of MA systems in SMEs, focusing on managerial information characteristics. Their findings emphasise that an effective MA system significantly enhances managerial performance and decision-making processes. A study by Armitage et al. (2020) found that SMEs prepared budgets using both structured and flexible approaches, for controlling, performance evaluation, and sometimes employee incentives, depending on their organisational needs.

### 2.1. MAs and Performance

The effect of MAs on performance have been a central focus of many researchers, especially from developing countries. This focus is an attempt to understand whether MA can significantly contribute to the overall increase in performance. Due to the roles of MA, it is perceived to have a positive impact on firm performance (Oppi et al., 2020), provide feedback on strategic plans and progress, and support effective decision-making (Alabdullah, 2019). The majority of studies examining MA have focused on specific types of MA systems, such as budgeting, costing, and performance evaluation. For example, Oladele et al. (2021) found that specific management accounting techniques such as benchmarking, value chain costing, and a balanced

scorecard have a positive association with the performance of SMEs. Almatarneh et al. (2022) concluded that pricing systems strongly correlate with supply chain performance in logistics and manufacturing organisations. Dahal et al. (2020) found that MA improves the efficiency of managerial decision-making in listed manufacturing enterprises in Nepal.

A few studies propose MA practices as a mediating variable in the effects of independent variables and business performance. For example, Ahmad and Mohamed Zabri (2024) showed that MA significantly moderates the relationship between corporate social responsibility (CSR) and performance. The study supports the idea that the adoption of proper MA can significantly improve firm performance. Ylä-Kujala et al. (2023) investigated the effect of MA on business solvency and performance and concluded that there is a lack of evidence of an indirect relationship between MA and the performance of small businesses. Their study discovered that SMEs that possessed a greater understanding of MA and invested more in implementing MAs observed a decline in their solvency. Ahmad (2017) found that SMEs employ a mix of traditional and sophisticated MAs, with larger firms more likely to adopt advanced practices. It also highlights that certain MAs, such as costing and performance measurement systems, have a significant positive impact on SME performance. Ahmad (2024) demonstrated that MA practices mediate the positive impact of financial literacy, risk orientation, and qualified accountants on the performance of Malaysian SMEs. The study highlights the lack of conclusive evidence and calls for further empirical studies to statistically and academically establish the definitive impact of MA on performance. The current literature's findings suggest the need for additional empirical evidence, especially within the SME context. We propose the following hypothesis to test the relationship between MA and performance.

- $H_1$: There is a significant relationship between MA practices and performance.

## 2.2. Risk Orientation, and Performance

Risk is typically described as uncertainty or the likelihood of the occurrence of danger or unfavourable outcomes. Risk management is an important aspect of the managerial system that helps address risks in organisations (Anton and Nucu, 2020). In accounting or finance areas, risk analysis involves various component of integrated decision analysis, including the budgeting, cost-volume profit, decision trees, probability distributions, forecasted cash flow, and pricing models (Walker and Shenkir, 2018; Collier et al., 2007). In the context of small business, risk orientation refers to an individual's or organisation's approach to uncertainty and threats. It reflects whether risks are considered opportunities or challenges to mitigate. A strong risk orientation involves proactive strategies like risk assessment, contingency planning, and adaptive decision-making. Risk orientation is often more relevant in the SME context because it captures how small businesses perceive and approach uncertainty (Mohd Tan and Jo Ann Ho, 2023).

SMEs typically operate with limited resources and must balance risk-taking with caution, making their strategic decisions highly dependent on their risk orientation. Levels of risk tolerance among small enterprises reflect the approach to risky ventures

with expected higher-than-average returns. Dvorsky et al. (2021) asserted that the effects of risk management are evident in the gradual increase in SME financial performance, including improvements in the business segment, services/products, and employee productivity. Gošnik and Stubelj (2022) study revealed a potential negative correlation between risk-adjusted performance measures and business process management (BPM), leading to the conclusion that further research is warranted due to the mixed results. Mohd Tan and Jo Ann Ho (2023), in their study of risk orientation among Malaysian SME managers, concluded that risk orientation and participative leadership style had a significant influence on the managers' attitudes. Similarly, Crovini et al. (2021) highlighted that entrepreneurial SMEs inherently integrate risk management into their decision-making processes. The risk-oriented approach helps to enhance organisational performance. Given the findings from current literature, we propose the following hypothesis to test the relationship between risk orientation and performance.

- $H_2$: There is a significant relationship between risk orientation and performance.

## 2.3. Management Accounting, Risk Orientation, and Performance

Businesses that proactively manage risks and can identify potential risks, assess the impact, and mitigate the impact are more likely to adopt MA for control tools. Eichholz et al. (2024) in their study revealed that risk orientation and the importance of the planning function are positively associated with both the adaptive capability factor and the planning factor of organisational resilience. Enterprises seek to evaluate risks and adopt risk controls, including the deployment of transparent managerial controls, which in turn strengthen organisational credibility. The intertwining of certain risk management processes and MA is increasingly apparent as businesses integrate financial controls with strategic risk mitigation. This integration enhances efficiency, resilience, and long-term sustainability in economic uncertainties (Acciarini et al., 2021). A study by Van der Poll and Mthiyane (2018) examined the interdependence of risk management, corporate governance, and MA in top-performing Johannesburg Stock Exchange-listed companies confirmed that there is a strong side-to-side interdependence of these elements. We propose that a more pronounced risk orientation will contribute to increased use of proper managerial practices, thereby improving performance. In this case, MA plays a key role in mediating the influence of risk on performance. Drawing from the arguments presented, we propose the following hypothesis:

- $H_3$: MA practices significantly mediate the relationships between risk orientation and performance.

## 3. RESEARCH METHOD

### 3.1. The Survey

This study sets micro, small, and medium-sized enterprises (SMEs) from the southern region of Malaysia as the population of study to fully understand the application of MAPs across sectors. SMEs Corp Malaysia (2024) defined SMEs as enterprises that have a minimum of 200 employees in the manufacturing sector and 75 employees in the service sector. By integrating businesses of

varying sizes and resource capacities, a more comprehensive understanding of the implementation of advanced management systems in SMEs can be gained. We focused on our target respondents, whose number of employees ranges from 3 to 75 in the city of Batu Pahat, Malaysia. Johor is a Malaysian state located in the southern region of Malaysia that consists of major industrial areas in Malaysia, with a high density of SME populations.

A total of 500 questionnaires were randomly distributed through email and face-to-face to SMEs. The survey questionnaires, accompanied by a cover letter, were distributed to the accounting staff or owner/managers of the business. The distributed questionnaire requested details relating to size, business sector, frequency of the use of MAs, financial literacy, risk orientation, qualification of the accounting staff, and the level of financial and non-financial performance of the enterprise. After several follow-ups, the total number of replies gathered increased to 189 usable questionnaires. The unusable responses were received for a few reasons, including those who declined to take part and incomplete questionnaires.

## 3.2. Measurement of Variables
Three main variables involved in this study consists of MA practices (MA), risk orientation (RO) and performance. Qualified accounting staff is added as a controlling variable.

### 3.2.1. MA practices
MA practices were assessed through ten basic tools commonly used by small businesses. This study focuses on basic financial reporting: budgeting, costing, performance evaluation, short and strategic planning, and additional support analysis. Specifically, the degree of MA was examined using 10 items (profit and loss -PNL; Balance sheet – BS; cash flow- CF; ratio analysis - Ratio; costing- Cost; budgeting- Budget, strategic planning – Plan; financial-based performance measure-PMSF; non-financial-based performance measure- PMNonF; and decision support analysis– DS. All items were measured using a seven-point scale, ranging from 1 (very rarely) to 7 (very frequently).

### 3.2.2. Risk orientation
This study identifies SMEs' risk orientation, which is still uncommon among smaller businesses. Hence, a single question about whether any risk assessments are performed for the respondent's business was included. The goal is to capture the overall application of SMEs' risk focus while also assisting SMEs in understanding the context. We required respondents to rate their risk orientation on a scale of 1 (very low) to 7 (very high).

### 3.2.3. Business performance
The degree of performance as a dependent variable was measured using four items (profit margin, sales growth, productivity, and customer satisfaction) on a seven-point scale ranging from 1: significantly decreased to 7: significantly increased. We captured subjective measures of performance from financial and non-financial angles. We designed simple and clear questionnaire items for the study to enable the participants to easily comprehend the questions and give precise feedback that accurately mirrors their business and their actual practices. The selection of items also

reflects a desire not to overwhelm targeted respondents with details in order to increase the number of replies. The simple instruments aid the study in acquiring data on the overall overview of how risk orientation affects the usage of MA and overall business success. The following section discusses the findings of this study.

## 4. RESULTS

This section presents the descriptive results of MA adoption, risk orientation, and performance.

### 4.1. Frequency Analysis of Demographic Profile
Table 1 shows the distribution of business age, types, sectors, and the presence of qualified accountants within a sample of 189 businesses. The results reveal that 37% of respondents have been in business for 3–5 years, followed by 20.6% operating for 6–10 years. Meanwhile, 19.9% have been in business for over 16 years. In terms of ownership structure, proprietors account for 74.6% of the total sample, while companies register for 22.8%. Sector-wise, retail businesses account for the largest portion (37%), closely followed by food and beverage enterprises at 36.5%. Regarding the owners' education levels, 38.1% have completed secondary education, while 27.5% hold a bachelor's degree and 23.3% possess a diploma. Additionally, the findings indicate that 61.9% of the surveyed businesses have not

**Table 1: Demographic background of the respondents**

| Item | Frequency | Percent |
|---|---|---|
| Age of business | | |
| Below 2 years | 17 | 9.0 |
| 3–5 years | 70 | 37.0 |
| 6–10 years | 39 | 20.6 |
| 11–15 years | 24 | 12.7 |
| 16–20 years | 16 | 8.5 |
| More than 20 years | 23 | 12.2 |
| Total | 189 | 100.0 |
| Type of business | | |
| Proprietorship | 141 | 74.6 |
| Partnership | 5 | 2.6 |
| Company | 43 | 22.8 |
| Total | 189 | 100.0 |
| Sector | | |
| Retail | 70 | 37.0 |
| Food and beverages | 69 | 36.5 |
| Service | 31 | 16.4 |
| Manufacturing | 12 | 6.3 |
| Construction | 4 | 2.1 |
| Total | 186 | 98.4 |
| Missing | 3 | 1.6 |
| Total | 189 | 100.0 |
| Owner's education level | | |
| Primary | 3 | 1.6 |
| Secondary | 72 | 38.1 |
| STPM | 4 | 2.1 |
| Diploma | 44 | 23.3 |
| Bachelor | 52 | 27.5 |
| Master | 12 | 6.3 |
| PhD | 2 | 1.1 |
| Total | 189 | 100.0 |
| Qualified accountant | | |
| No | 117 | 61.9 |
| Yes | 72 | 38.1 |
| Total | 189 | 100.0 |

employed qualified accountants, suggesting a lower prevalence of professional accounting staff in smaller enterprises, which may have implications for financial management and reporting.

## 4.2. Descriptive Analysis of Key Variables

Table 2 provides the descriptive results of independent and dependent variables: RO, MA, and performance. The analysis shows that risk orientation receives moderate emphasis by the SMEs with average mean score of 4.402. MA and the performance level is regarded as quite high, with a mean score of 4.957 and 4.966 respectively.

## 4.3. Structural Equation Modelling Model Assessment

To test the hypotheses, we use a structural equation model (SEM) with AMOS to examine whether risk orientation (RO) significantly affects performance, with MA acting as a mediating variable. In general, SEM consists of two stages: the measurement model, which reduces observed variables to a smaller number of latent factors, and the SEM, which identifies causal relationships among the latent factors. For the measurement model, the validation process is confirmed by checking individual item reliability, internal consistency, convergent validity and discriminant validity. Measurement validity is conducted to ensure the accuracy of a measure or concept. Confirmatory factor analysis (CFA) was first performed to assess the validity and reliability of all latent constructs.

The model's goodness of fit was examined by checking absolute, incremental, and parsimonious goodness of fit measures. The model was evaluated using few indices, including the root mean square error approximation index (RMSEA), the goodness-of-fit index (GFI), the comparative fit index (CFI), the Tucker-Lewis index (TLI) and the normed fit index (NFI). Zainudin (2015)

recommended the minimum standards for evaluating the model's fit based on its absolute fit (RMSEA should be <0.08 and GFI should be greater than 0.90), incremental fit (CFI, TLI, and NFI should all be greater than 0.9), and parsimonious fit (the ratio of $\chi^2$ to df should be <3.0). Figure 1 presents an initial measurement of the CFA model in the AMOS graphic that includes RO, MA, one control variable (qualified accountant) and business performance. The output of the CFA reveals the factor loading for every item and component and the correlation between the constructs. The initial measurement of the CFA model indicates 10 items under MA and four items under performance. All items have factor loadings greater than 0.5 except for non-financial performance measures (PMNonF), which have a factor loading of 0.06; hence, it is removed from the model.

The model's goodness of fit is further examined by ensuring that all of the measures—RMSEA (<0.08), GFI, CFI, TLI, and NFI (greater than 0.90)—meet the required level. This is achieved by removing items with low modification indices, as it contributes to poor model fit. Figure 2 shows the results of the CFA after refining the model where the absolute measures of fit, RMSEA and GFI, achieved the acceptable thresholds, which are 0.070 and 0.917, respectively. With regard to the incremental measures of fit, the results produce CFI, TLI and NFI values that are all above 0.90, thus indicating adequate fit. Lastly, the parsimonious measure of fit, $\chi^2$/df, value is <3.0, which is deemed sufficient.

### 4.3.1. Convergent validity

Convergent validity is to confirm that a measurement effectively represents the intended concept. It should demonstrate consistency with other established measures of the same construct (Cheung et al., 2024). Convergent validity is evaluated using the average variance extracted (AVE) and composite reliability (CR). The AVE indicates the amount of variance in the indicators that is accounted for by the latent construct and is adequate when the AVE value exceeds 0.50. CR measures the degree to which the construct indicators represent the latent construct and is acceptable if its value exceeds 0.70. Table 3 presents CR and AVE coefficients for

**Table 2: Descriptive analysis of key variables (N=189)**

| Variables | Min | Max | Mean | Standard deviation |
|---|---|---|---|---|
| Risk orientation | 1 | 7 | 4.402 | 1.570 |
| MA | 2 | 7 | 4.957 | 1.010 |
| Performance | 3 | 7 | 4.966 | 1.003 |

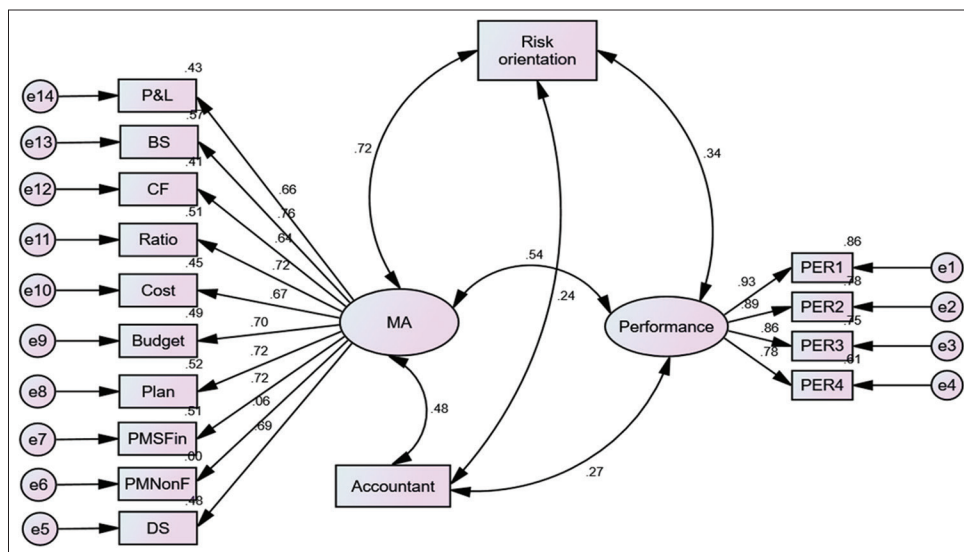**Figure 1:** Initial measurement of CFA model

**Figure 2:** CFA model after modification



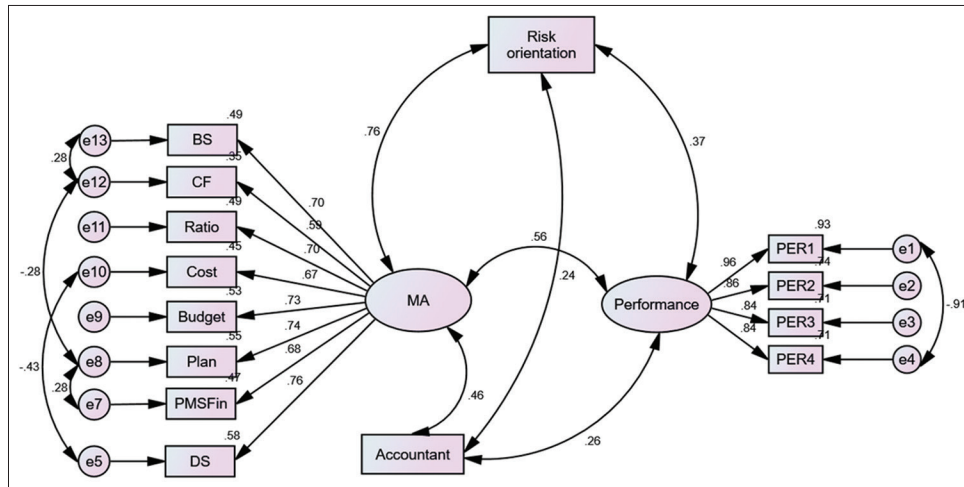**Table 3: Loadings, composite reliability coefficients and average variance**

| Latent constructs | Items | Standardized factor loading | AVE | CR |
|---|---|---|---|---|
| Performance | PER1 | 0.963 | | |
| | PER2 | 0.859 | | |
| | PER3 | 0.843 | | |
| | PER4 | 0.842 | 0.770 | 0.930 |
| MA | PMSFin | 0.683 | | |
| | Plan | 0.745 | | |
| | Budget | 0.728 | | |
| | Cost | 0.672 | | |
| | Ratio | 0.701 | | |
| | CF | 0.591 | | |
| | BS | 0.697 | | |
| | DS | 0.76 | 0.50 | 0.88 |

each of the latent variables. The results indicate that all constructs have AVE values of 0.50 to 0.77, achieving the minimum of 0.50. The CR values range from 0.88 to 0.93, hence, they are considered acceptable. The validity of the constructs and the individual variables used in this study can explain the variance in the main constructs.

### 4.3.2. Discriminant validity analysis
Discriminant validity examines the distinctiveness of a construct, whether the phenomenon captured by a construct is unique and not represented by other constructs in the model (Hair et al., 2015). It is assessed by evaluating the cross-loadings among constructs based on the Fornell-Larcker criterion. To obtain satisfactory discriminant validity, the square root of the AVE should be higher than the correlations among the latent variables. Table 4 presents a discriminant validity index for MA and performance constructs. Discriminant validity is verified by comparing the value of the square root of the AVE with the corresponding correlation values to other variables. The results indicate the values of the square roots of the constructs' AVEs are greater than inter-factor correlation values (>0.70), which indicates excellent discriminant validity.

## 4.4. Structural Equation Modelling Analysis
This section presents the results of the SEM on the effect of risk orientation on MA practices and performance. SEM is a convenient

**Table 4: Latent variable correlations and square roots of AVE**

| Construct | MA | Performance |
|---|---|---|
| MA | 0.700 | |
| Performance | 0.517 | 0.878 |

analysis that aids in describing the causal relationships among a set of variables. At the same time, SEM examines variables while accounting for measurement errors. SEM establishes the standardised path coefficients and the regression path coefficient between constructs of the model. An important criterion for SEM assessment is the R-squared value assessment, which is also called the coefficient of determination. It represents the proportion of variation in the dependent variable(s) that could be explained by one or more predictor variables and is subject to the context where a particular study is conducted. An R-squared value <0.7 generally indicates a strong effect size. Figure 3 demonstrates the standardised path coefficients of the model. The R-squared value obtained for the present study was 0.31, which is considered decent, particularly for social science research. The results suggest that risk orientation, MA, and qualified accountants explain 31% of the variance in SMEs' performance.

Table 5 presents a regression path coefficient with a significant P-value, along with the standardised and unstandardised coefficient estimates for all independent variables, control variables, and dependent variables. The results demonstrate that both risk orientation and qualified accountant have significant and positive effects on MA with coefficient values of 0.726 and 0.312, respectively, and P-values lower than 0.05. The results imply that the greater level of risk orientation leads to the increased use of MA tools, particularly with the presence of qualified accounting staff. The finding suggests that accountant expertise may reinforce the adoption of these practices within the SMEs. The results indicate that risk orientation has no significant effect on performance when the MA is added in the model, with coefficient values of -0.145 and a P > 0.05. On the other hand, MA practices exhibit a strong positive and significant effect on performance ($\beta = 0.654$, P < 0.05). The findings support the first hypothesis, $H_1$, which asserts that there is a significant relationship between MA practices and performance.

To test the second hypothesis, we run the second regression model, which includes risk orientation, control variables, and performance. This is to determine the direct effect of risk orientation on performance, as shown in Model 2 in Table 5. With an R-squared value of 0.15, the results suggest that risk orientation has limited explanatory power, accounting for only 15% of the variance in SMEs' performance. The results suggest that risk orientation has a significant effect on performance with a beta coefficient value of 0.332 and a P-value of 0.000. Hence, the result supports the second hypothesis, which states that there is a significant relationship between risk orientation and performance. This finding supports the importance of risk orientation in enhancing the performance of SMEs.

To test the third hypothesis, we first conducted a bootstrap analysis to examine how risk orientation indirectly affects performance through MA practices. The following subsection explains further.

### 4.4.1. Bookstrap analysis
A bootstrap analysis is employed to determine significance of indirect effects between risk orientation and performance. The bootstrap resampling procedure is conducted with 5,000 iterations

using AMOS, applying bias-corrected confidence intervals to assess statistical significance. The indirect effect is determined by calculating the influence of the relationship between RO and MA (path a), as well as the relationship between MA and performance (path b). This is accomplished by multiplying the corresponding regression coefficients for each relationship, resulting in the indirect effect (a * b). This approach quantifies the extent to which the independent variable affects the dependent variable through the mediator.

The results indicate that the direct path from RO to business performance was found to be statistically significant ($\beta = 0.332$, $P < 0.05$) indicating a moderate effect of RO on performance. Next, the RO significantly affect the use of MA practices ($\beta = .726$, $P = 0.00$), suggesting a strong association between the two. In turn, the MA practices had a statistically significant effect on business performance ($\beta = .654$, $P = 0.000$), supporting its role in the relationship. The indirect effects is 0.475 ($0.726 \times 0.654$), with a 95% confidence interval ranging from .215 to .481. Since this confidence interval does not include zero, the results indicate a statistically significant indirect effect, supporting the role of MA as a mediator. Mediation analysis summary is presented in Table 6.
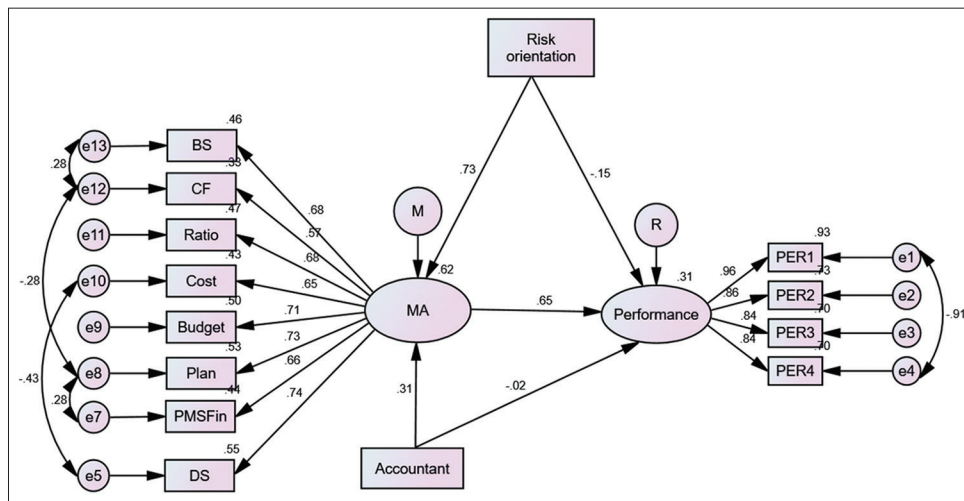


**Figure 3:** Standardised path coefficients

**Table 5: The regression weights and path coefficients**

| Regression path | | | Unstandardised estimate | Standardised estimate | S.E. | C.R. | P |
|---|---|---|---|---|---|---|---|
| Model 1 | | | | | | | |
| MA | <-- | Risk | 0.4 | 0.726 | 0.044 | 9.165 | *** |
| MA | <-- | Accountant | 0.555 | 0.312 | 0.102 | 5.428 | *** |
| Performance | <-- | Risk | −0.099 | −0.145 | 0.074 | −1.341 | 0.18 |
| Performance | <-- | Accountant | −0.034 | −0.015 | 0.163 | −0.207 | 0.836 |
| Performance | <-- | MA | 0.812 | 0.654 | 0.165 | 4.92 | *** |
| Model 2 | | | | | | | |
| Performance | <-- | Risk | 0.228 | 0.332 | 0.047 | 4.890 | *** |
| Performance | <-- | Accountant | 0.415 | 0.188 | 0.149 | 2.780 | 0.005 |

**Table 6: Mediation analysis summary**

| Regression path | Direct effect | Indirect effect | Lower bound | Lower bound | P-value | Conclusion |
|---|---|---|---|---|---|---|
| Ris orientation➔MA practices➔ Performance | 0.332 (0.000) | 0.475 | 0.215 | 0.481 | 0.000 | Partial mediation |

In conclusion, the indirect effect of RO on business performance through MA practices is 0.475, and the total effect of RO on business performance is 0.807 (0.332 + 0.475). This suggests that MA practices play a significant role in enhancing the effect of RO on business performance. The findings indicate that risk orientation has both a direct and indirect effect on business performance. The direct effect of RO on performance is statistically significant, suggesting that organisations with a strong risk-orientated approach tend to experience moderate improvements in business outcomes. Additionally, RO has a strong positive effect on the adoption of MA practices, implying that risk-orientated SMEs are more likely to integrate structured financial decision-making techniques. The findings validate that MA practices have a partial mediation effect in the link between RO and business performance. It supports the third hypothesis, which states MA practices significantly mediate the relationships between risk orientation and performance.

This study supports previous research, such as Matsoso et al. (2021) which highlighted that a strong risk orientation led to a greater adoption of management control mechanisms. Specifically, the effectiveness of MA practices is crucial in translating risk-orientated strategies into tangible business success. While qualified accountants significantly influence the adoption of MA practices, their presence alone does not directly enhance business performance. This suggests that their expertise must be leveraged strategically within the organisation to achieve meaningful outcomes.

## 5. SUMMARY AND CONCLUSION

This study aims to examine the influence of risk orientation on performance and the roles of MA among SMEs in Malaysia. The study indicates that MA partially mediates the relationship between SMEs' risk orientation and performance. This indicates that businesses with greater emphasis on risk orientation led to higher usage of management accounting, thereby improving performance. This finding emphasises the importance of management accounting in supporting other organisational strategies that enhance business performance. SMEs that invest in and prioritise robust MA practices may experience improved outcomes and competitive advantages.

As today's market has become more competitive and uncertain, small businesses should be more aware of the business risks and make decisions by taking potential risks into account. Such actions can be facilitated using management accounting tools that provide various crucial information relevant for understanding risks. The findings reveal new insights into the importance of risk management and the adoption of management accounting in enhancing the performance of SMEs. The input will further help relevant policymakers in enhancing SMEs' competitiveness in the long run. Understanding key variables, managerial capabilities and strong professionals helps prevent business failures among SMEs. By fostering a culture of continuous improvement and strategic planning, SMEs can better navigate uncertainties and seize opportunities for growth. Ultimately, this proactive approach enhances their resilience and contributes to the overall stability of the economy.

This study has some limitations. First, this research used a small sample focused on SMEs in the southern region of Malaysia. Careful consideration is required when extrapolating these findings to the broader SME sector. As the present investigation is only an exploratory study, future studies may extend the risk orientation variable to a more comprehensive risk management approach. Such an extension would allow for a deeper examination of how risk management influences the use of management accounting, decision-making processes, and performance within SMEs. Additionally, researchers could consider incorporating more variables as well as control variables to gain insights into the influences of multiple factors on SMEs' performance, thereby enriching the overall understanding of this critical area.

## 6. ACKNOWLEDGEMENTS

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