UNVEILING THE INTERPLAY OF COMPETITIVE ADVANTAGE, MANAGEMENT ACCOUNTING INFORMATION SYSTEMS AND SME PERFORMANCE

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ABSTRACT

This research uses the resource-based view theory to examine the influence of competitive advantage on SME performance. Furthermore, this research also examines the effect of management accounting information systems (MAIS) on SME performance. This study used a survey method with 129 SMEs in Malang City, Indonesia. Warp PLS 8.0 was used to analyze the research data. The research results show a significant effect between competitive advantage and MAIS on the performance of SMEs. In addition, MAIS can moderate the relationship between competitive advantage and SME performance. These results imply that SMEs must create a competitive advantage over competitors, which will positively affect profits. In addition, implementing a management accounting information system will further strengthen the role of competitive advantage in improving performance for SMEs.

Keywords: Competitive Advantage; Management Accounting Information Systems; SME Performance; Resources-Based View Theory

ABSTRAK

Penelitian ini menggunakan teori resources-based view untuk menguji pengaruh keunggulan kompetitif terhadap kinerja UMKM menggunakan. Selain itu juga, penelitian ini juga menguji pengaruh sistem informasi akuntansi terhadap kinerja UMKM. Studi ini menggunakan metode survei kepada 129 UMKM di Kota Malang Indonesia. Data penelitian dianalisis menggunakan Warp PLS 8.0. Hasil penelitian menunjukkan bahwa terdapat pengaruh yang signifikan antara keunggulan kompetitif dan sistem informasi akuntansi manajemen terhadap kinerja UMKM. Selain itu, sistem informasi akuntansi manajemen juga terbukti mampu memoderasi hubungan antara keunggulan kompetitif dan kinerja UMKM. Hasil tersebut mengindikasikan bahwa pentingnya bagi UMKM untuk dapat menciptakan keunggulan kompetitif dari pesaing, sehingga hal tersebut akan berimplikasi positif terhadap keuntungan. Selain itu, penerapan sistem informasi akuntansi manajemen akan semakin memperkuat peran keungulan kompetitif dalam peningkatan kinerja bagi UMKM.

Kata kunci : Keunggulan Bersaing; Sistem Informasi Akuntansi Manajemen; Kinerja UMKM; Teori Resources-Based View

INTRODUCTION

Small and Medium Enterprises (SMEs) have received special attention from the Indonesian government in recent years. The government's seriousness towards SMEs is manifested by regulating PP No. 7 in 2021 about the Facilitation, Protection, and Empowerment of Cooperatives and Micro, Small, and Medium Enterprises. The

Indonesian economy depends heavily on the presence of SMEs. SMEs can take on a workforce prepared to work but unemployed, lowering the unemployment rate and raising people's incomes as this industry grows. The existence of SMEs is vital to the Indonesian economy (Kadeni & Srijani, 2022). In a press release on October 1, 2022, by the Coordinating Ministry for Economic Affairs of the Republic of Indonesia, SMEs play an essential role in Indonesia's economic growth, namely reaching 99% of all business units, contributing 60.5% to GDP, and contributing 96.9% of energy absorption. National work as a whole. The data above shows that increasing efforts to empower SMEs to develop and be sustainable is necessary.

The existence and sustainability of SMEs can be seen from their performance from time to time. SME performance refers to the results obtained by the company from its business activities (Kotane & Kuzmina-Merlino, 2017). The measure of success of an SME includes not only financial aspects but also non-financial aspects. Comprehensive performance measurement should include broad measurements of both financial and non-financial performance (Hariyati et al., 2022). Several studies state that the implementation of business strategies chosen by SME owners or managers has an essential role in the sustainability of their business. Porter's competitive advantage is a strategic framework that is considered the easiest to adapt to the type of management control; business units can choose to run their business with differentiation or cost leadership (Anthony et al., 2014, p. 296). Cost leadership can be achieved by relying on economies of scale in production, strict cost control, and minimizing several costs. Meanwhile, the differentiation strategy focuses on innovation and the products' uniqueness.

Competitive advantage is the value business actors want to offer to the market that differentiates them from competitors. According to Porter's argument, business units have two primary approaches to reacting in the marketplace and creating sustainable competitive advantages: by adopting low costs or differentiation (Anthony et al., 2014). Several previous studies show that competitive advantage influences the performance of SMEs. (Daengs et al., 2019; Ferreira & Coelho, 2020; Khattak et al., 2021; Kiyabo & Isaga, 2020; and Puspaningrum, 2020). This research shows that SMEs' competitive advantages significantly contribute to improving performance. SME owners can use advantages in the form of low prices or unique products to attract customers,

which will ultimately impact improving performance, which can be in the form of increasing profits and market share. On the other hand, several studies show that competitive advantage does not affect SME performance (Razali et al., 2018; and Qamariah and Muchtar, 2019). Some of the research results above show a need for retesting to confirm again, opening up opportunities to explore other variables that might strengthen the relationship between these two variables.

Resources-based view theory (RBV) explains that each company has a different position in the market, so companies will also acquire and build their resources in line with their respective positions (Wernerfelt, 1984). The resources consist of every resource, including capabilities, organizational procedures, company traits, knowledge and information, etc (Miller, 2013). In this regard, to maintain the sustainability of their business, SME owners will strive to create product value for customers. Various efforts will be made. According to Wernerfelt, (1984) the resource perspective provides an essential basis for determining strategy; referring to the RBV theory, this research examines the effect of competitive advantage on SME performance, which several previous studies have studied. However, the results of several previous studies showed inconsistent results. To fill this gap, by using the RBV theory, the MAIS is thought to be able to help SME owners maintain a competitive advantage so that it will support SMEs in improving performance.

Several studies suggest that MAIS has an essential role in the sustainability of SMEs. Management accounting information systems can assist in planning, budgeting, break-even analysis, and using budgets to determine performance targets (Garrison et al., 2018). Chenhall & Morris (1986) explain MAIS consisting of scope, timeliness, aggregation, and integration. Information produced from management accounting is essential for workers, managers, and executives to make better decisions to improve company performance (Hariyati et al., 2022). Management accounting information systems can provide information in various forms of aggregation, ranging from raw, unprocessed data to aggregations around periods such as centers of responsibility or functional areas (Chenhall & Morris, 1986). The role of MAIS for SMEs is to facilitate decision-making at the planning and control stages. SME owners use elements of management accounting information systems to calculate profits from goods or services, calculate profits from customers, and also assess the contribution of customer

acquisition costs, such as advertising costs, to ROI (Shields & Shelleman, 2016). Several studies suggest that MAIS affects on the performance of SMEs (Hariyati et al., 2022; Alliyah & Dewi, 2023; and Maharani & Wuryaningsih, 2024).

This research can contribute by providing evidence that managing internal resources is necessary for SMEs, which can become a long-term competitive advantage. MAIS is considered one of the resources by SMEs, which is related to how companies collect, store, analyze, and manage financial and non-financial information effectively. SMEs with an efficient and adaptive management accounting information system can better manage their resources, respond faster to market changes, and increase their operational efficiency compared to competitors.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Resources-Based View Theory

Corporate resources include every asset, capability, procedure for organization, corporate traits, information, knowledge, and so on that the company oversees, enabling it to create and execute strategies to improve its effectiveness and efficiency (Barney, 1991). RBV theory emphasizes the importance of managing the company's resources compared to products. Furthermore, the RBV theory also views the importance of resources in obtaining high profits over time and examines the relationship between resources and profitability (Wernerfelt, 1984). Performance differences between firms over time stem from structural differences in industries and economies, such as government regulations or barriers to entry (Miller, 2013). Thus, it can be concluded that the resources in each company are heterogeneous. How a company manages its resources will determine how much profitability it obtains yearly.

Competitive advantage

A company has a sustainable competitive advantage when it implements a valuecreation strategy not implemented concurrently by current or potential competitors (Barney, 1991). Competitive advantage can be measured by four indicators: price advantage, product innovation excellence, customer relations excellence, and differentiation advantage (Bruque-Cámara et al., 2003). This research uses Porter's basic ideas about product differentiation and cost leadership to define generic strategies companies implement to describe product characteristics such as uniqueness, high quality, low prices, delivery flexibility, and product services such as after-sales service

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(Chenhall, 2005). Economies of scale in production, experiencing curve effects, exercising tight control, and minimizing costs are important considerations in implementing cost leadership. Some examples of costs that can be minimized are research and development costs, services, sales force, or advertising (Anthony et al., 2014). Meanwhile, the differentiation strategy aims to differentiate the business unit's product offering and create a unique value proposition for customers. Product differentiation strategies include brand loyalty, exceptional customer service, a strong dealer network, innovative product design and features, and technological advancements (Anthony et al., 2014). This explanation shows that competitive advantage in the market comes from better value provided to customers at equivalent cost or equivalent customer value at lower costs.

Management Accounting Information System (MAIS)

MAIS has a significant role in companies as sources of information for users; these systems provide information based on historical and current data and include a future vision regarding conditions that influence the business environment (Abu Afifa & Saleh, 2022). MAIS has four characteristics: broad scope, timeliness, aggregation, and integration (Chenhall & Morris, 1986). Broad scope describes a broad scope of information that shows that the information comes from the organization's internal and external environment and includes financial and non-financial information, as well as information containing estimates of future events (Chenhall & Morris, 1986 and Hadiyat, 2020). Timeliness refers to the frequency and speed of reporting. Timely information can help to report current events so that decisions can be made as soon as possible (Chenhall & Morris, 1986). Aggregation refers to summarizing information based on function, period, and decision model, aggregate information is a combination of temporal and functional sums (e.g., sales areas, cost centers, marketing and production departments), and information generated specifically for a formal decision model (Chenhall & Morris, 1986). Integration refers to the unification of goals and coordination between one sub-unit segment and another (Hadiyat, 2020). Integrated information plays a crucial role for decentralized sub-unit managers and operations managers who have interdependent relationships with one another (Chenhall & Morris, 1986). Thus, applying a management accounting information system to SMEs will assist SMEs in making short-term and long-term decisions accurately because the

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information provided by the system provides complete, accurate, timely, and integrated information from various existing units.

SME performance

The comprehensive performance measurement used in this study adopted the balanced scorecard (BSC). BSC is a performance measurement that can help management to translate strategy into operational terms. BSC has four perspectives, namely financial, customer, internal business process, and learning and growth (Kaplan & Norton, 2001). In the context of implementing BSC in SMEs, Malagueño et al., (2018) Found that firms that use BSC for feed-forward control obtain better financial performance and show higher levels of exploitative innovation.

Hypothesis Development

Referring to the RBV Theory, a company can achieve a competitive advantage depending on the ownership and management of assets, capabilities, knowledge and internal resources existing in the company (Wernerfelt, 1984). Furthermore, a company can rely on its resources optimally and can then achieve a competitive advantage and deliver the company to continuous sustainability (Barney, 1991). SME performance can be measured in various ways, including increased sales, more significant market share, or increased profitability. SME performance refers to increasing profits and several other non-financial aspects, such as customer perspective, internal business processes, and learning and growth (Kurniawati & Meilianaintani, 2016).

SME's owners can manage their tangible and intangible resources; this can lead SME to achieve a competitive advantage that is acceptable in the market and sustainable and will subsequently have an impact on improving their performance. Both financially and non-financially. Several studies show that competitive advantage influences the performance of SME (Daengs et al., 2019; Ferreira & Coelho, 2020; ; Kiyabo & Isaga, 2020; Puspaningrum, 2020; and Khattak et al., 2021). Competitive advantage refers to the ability of an SME to offer better or unique value compared to its competitors. When SME can create competitive advantages, such as better product quality, more competitive prices, or better customer service, this can improve their performance. Based on the explanation above, the hypothesis in this research is formulated as follows: Hypothesis 1: Competitive advantage effect on the performance of SME

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MAIS provides financial and non-financial information for managers for planning, controlling, and decision-making (Ahrens & Chapman, 2007). Current competitive conditions have forced SMEs to adapt and develop robust decision-making processes to address issues such as inadequate access to capital, limited resources, and concerns about survival (Fatima & Bilal, 2020). Thus, SMEs must maintain a conducive climate to face the challenges of business survival; in this case, the management accounting information system can help maintain economic sustainability (Latif et al., 2023).

RBV emphasizes that organizations must make strategic decisions based on their internal resources. MAIS provides the information needed for strategic decision-making, such as cost analysis, performance analysis, and monitoring target achievement. The explanation above shows that the accounting information system can help SME owners make the right business decisions by presenting comprehensive financial and non-financial information that is fast and integrated. So, in the end, implementing this accounting information system is directly proportional to increased performance for SMEs. MAIS helps organizations measure the performance of internal resources and capabilities. This allows management to evaluate the effectiveness of the organization's use of resources and capabilities in achieving its strategic goals. Several previous studies show that MAIS influences the performance of SME (Hariyati et al., 2022; Alliyah & Dewi, 2023; and Maharani & Wuryaningsih, 2024). So, the hypothesis in this research is formulated as follows:

Hypothesis 2: Management Accounting Information Systems Effect on Performance of SME

The RBV theory's primary approach is to comprehend the connections among resources, capabilities, competitive advantage, and profitability, particularly the mechanisms that determine how competitive advantage is maintained over time (Barney, 1991). Thus, sustainable competitive advantage will also impact company performance over time. SMEs that have a competitive advantage and can maintain it with the resources they have will have an impact on increasing their performance from year to year. Several studies show that competitive advantage has a significant effect on SME performance (Daengs et al., 2019; Ferreira & Coelho, 2020; Kiyabo & Isaga, 2020; and Puspaningrum, 2020; and Khattak et al., 2021). However, some studies do not confirm

these results, competitive advantage does not affect the performance of SME (Razali et al., 2018; and Qamariah and Muchtar 2019).

Based on the RBV theory, how can companies manage their internal resources to create long-term competitive advantages? On the other hand, in creating a competitive advantage, the role of a system that supports providing financial and non-financial information within the company is essential. Information obtained from management accounting essential for employees, managers, and executives as a basis for making better decisions; good decisions will lead to improved company performance (Hariyati et al., 2022). Thus, the MAIS is vital for the company because it can help managers make relevant and timely decisions.

Organizations use MAIS to collect, store, process, and communicate financial and non-financial information relevant to management in decision-making. Concerning the context of this research, MAIS practices in SMEs can lead SMEs to have a sustainable competitive advantage. In other words, SME owners are supported by relevant information due to exemplary MAIS implementation in making business decisions. SMEs can better track production costs, inventory, sales, and other finances using MAIS. With timely and accurate information, SMEs can make better decisions, improve operational efficiency, and optimize performance. Several previous studies show that MAIS influences the performance of SME (Hariyati et al., 2022; Alliyah & Dewi, 2023; Maharani & Wuryaningsih, 2024). These results confirm that MAIS is an integral part of providing information that is very useful in decision-making for SME owners. Based on the explanation above, researchers suspect that MAIS can strengthen the relationship between competitive advantage and SME performance. MAIS can effectively support SMEs to achieve and maintain competitive advantage. The hypothesis in this research is formulated as follows:

Hypothesis 3: Management Accounting Information Systems Moderate the Relationship between Competitive Advantage and SME Performance

RESEARCH METHOD

This survey research uses managers or owners of SMEs in the Greater Malang area as respondents. Data was collected by distributing questionnaires to respondents via a Google Form link and paper distributed to SME managers and owners. The sample in this study was 129, with details of 10 samples being SMEs operating in the service

sector, 86 samples being SMEs operating in the trade sector, and 31 samples being SMEs operating in the production sector. The sample was determined using a convenience sampling technique. The variables are measured using instruments that several previous studies have used; the competitive advantage variable is measured using instruments developed by Chenhall (2005), the SME performance variable refers to the instrument developed by Kurniawati & Meilianaintani (2016), and measurement of accounting information system variables adapted from instruments by Chenhall & Morris (1986).

RESULTS AND DISCUSSION

The results of this research data were processed using WarpPLS version 8.0 before being tested further; missing values were identified, and no missing values were found in this study. Refers to (Hair et al., 2021). The PLS path model consists of two elements: a structural (inner) model and a measurement model (outer model). Measurement analysis includes indicator reliability, internal consistency, convergent, and discriminant validity. Table 1 below presents the convergent validity of the constructs in this study. Rule of thumb according to Hair et al., (2021), to meet convergent validity, the average variance extracted (AVE) value for all indicators in the construct is at least 0.5. The results of this research, AVE has reached 0.5 after removing several indicators that had outer loading values below 0.7, however, indicators that were below 0.7 in this study were not immediately removed, and indicators that had outer loading values between 0.4 - 0.7 will be deleted gradually if after being deleted it will increase the AVE value. Table 1 shows that all constructs in this research met convergent validity.

The next validity test is discriminant validity; a construct can be assessed as meeting discriminant validity if the square root value of AVE is greater than the correlation bettween constructs, and the loading of indicators on the construct being measured must also be greater than the loading on other constructs (Sholihin & Ratmono, 2021). Table 2 shows that the square root value of AVE is in bold, indicating it is greater than the correlation of other constructs, so it can be concluded that all constructs in this study have met discriminant validity. The reliability test results are presented in Table 3, showing that all constructs met the reliability requirements,

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namely Cronbach's Alpha and Composite Reliability values >0.7. Thus, all constructs in this research can be declared reliable or reliable.

The structural model analysis consists of hypothesis testing, which includes evaluating model fit, coefficient of determination (R-squared), predictive relevance (Qsquared, path coefficient value (β), and significance value (p-value). Table 4 shows that the evaluation results The fit model was appropriate with significant APC and ARS < 0.005 and AFIV values < 5. The results of hypothesis testing in Table 5 above show that all hypotheses in this research are supported. Hypothesis 1 states that competitive advantage influences the performance of SMEs; the results of this research are confirmed with a path coefficient (β) value of 0.19 and P<0.05. Thus, the results of this study confirm several previous studiesDaengs et al., (2019; Ferreira & Coelho (2020); Kiyabo & Isaga (2020); Puspaningrum (2020); and Khattak et al., (2021). The results of this research confirmed the RBV theory, that when SME owners can maximize the resources they have and are then able to achieve a particular competitive advantage compared to their competitors, this is directly proportional to the increase in their performance, which in this case is measured using comprehensive performance measurements, namely financial and non-financial performance.

Furthermore, hypothesis 2 states that MAIS affects the performance of SMEs. The results in Table 5 show that the path coefficient value(β) is 0.35 and P<0.01; thus, hypothesis 2 in this study is supported. The results of this study also confirm several previous studies (Hariyati et al., 2022; Alliyah & Dewi, 2023; and Maharani & Wuryaningsih, 2024). These results show that applying a management accounting information system consisting of broad scope, timeliness, aggregation, and integration in this research has been proven to improve the performance of SME, including financial and non-financial performance. If viewed from the perspective of RBV theory, in this case, the management accounting information system has a significant role in managing the internal resources of an SME; implementing MAIS effectively can help SME owners to make strategic decisions so that, in the end, they can improve their performance.

Finally, the results in Table 5 show that the management accounting information system can moderate the relationship between competitive advantage and SME performance with a path coefficient (β) value of 0.21 and P<0.01. Thus these results

support hypothesis 3. The results of this study provide quasi-moderation results. This research proves that accounting information systems can strengthen the correlation between competitive advantage and SME performance. In other words, by implementing a management accounting information system, SME owners can make strategic decisions based on their competitive advantages. Sustainable competitive advantage does not mean that it will "last forever"; it only shows that other companies will not rival the company through duplicating efforts (Barney, 1991). Thus, implementing MAIS can help management maintain its competitive advantage by collecting accurate data, performing analysis, monitoring, and controlling, planning and decision-making, and integrating with other systems.

CONCLUSION

This research examines the effect of competitive advantage and MAIS on SME performance. This research proves that competitive advantage and accounting information systems significantly affect SME performance. The results of this research show that the competitive advantages possessed by SMEs determine how SMEs can survive in the market. Competitive advantages in price, innovation, differentiation, and product service allow SME owners to compete with their competitors. The better SME owners are at providing products with the advantages mentioned above, the more directly they will be proportional to increased performance, which in the context of this study includes financial and non-financial prformance.

On the other hand, this research also proves that implementing management accounting information systems also has an essential role in improving the performance of SME. An exemplary implementation of MAIS allows SME owners to obtain precise and accurate information, efficient data processing, and performance monitoring to make better decisions. Furthermore, the results prove that MAIS can moderate the relationship between competitive advantage and SME performance, showing that the existence of MAIS can help SME owners maximize their competitive advantage by managing accurate and timely information so that, in the end, they can improve performance. RBV theory provides a powerful framework for understanding how SMEs can achieve competitive advantage through effectively managing their internal resources, including MAIS.

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PICTURES, GRAPHS AND TABLES

Table 1 Convergent Validity Test Result

Construct	AVE	Information
Competitive Advantage	0.510	Valid
Performance	0.534	Valid
MAIS	0.517	Valid

Source: Research Data (2024)

Table 2 Discriminant Validity Test Result

	C.A	Performance	MAIS
Competitive Advantage	0.714	0.28	0.278
Performance	0.28	0.73	0.418
MAIS	0.278	0.418	0.719

Source: Research Data (2024)

Table 3 Reliability Construct Test Result

	Cronbach's Alpha	Composite Reliability
Competitive Advantage	0.756	0.834
Performance	0.779	0.850
MAIS	0.927	0.937

Source: Research Data (2024)

Table 4 Model Fit Indicators and P-Value

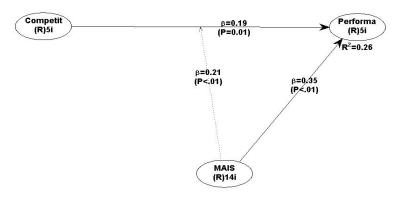
Tuble 1 Model 1 M Maleutolb and 1 Value		
	Condition	
Average path coefficient (APC)=0.250, P<0.001	P is significant	
Average R-squared (ARS)=0.256, P<0.001	P is significant	
Average block VIF (AVIF)=1.055	Acceptable if <= 5, ideally <= 3.3	

Source: Research Data (2024)

Table 5 Hypothesis Testing

	Path Coefficient (β)	P Value
H1: Competitive Advantage → Performance	0.19	0.01
H2: MAIS→Performance	0.35	< 0.01
H3: MAIS*Performance	0.21	< 0.01

Source: Research Data (2024)



Picture 1 Hypothesis Testing