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Proactive Strategies, Absorptive Capacity and Competitive Advantage of Small and Medium Enterprise (SMEs) firms in East Java Indonesia

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Abstract

Proactive strategy and absorptive capacity are crucial components in building a competitive advantage, particularly in the Small and Medium Enterprise (SMEs) sector. This study examines the moderating role of absorptive capacity in strengthening the relationship between proactive strategy and competitive advantage among SMEs in East Java, Indonesia. The sampling technique employed was non-probability sampling, specifically a purposive sampling method, involving 65 SME owners as respondents. Data were collected through surveys and analyzed using Smart PLS. The findings reveal that a proactive strategy significantly positively affects competitive advantage, and absorptive capacity reinforces this relationship. This research provides theoretical contributions and practical implications for SMEs to remain competitive in dynamic markets, offering new empirical evidence on the moderating role of absorptive capacity in the context of Indonesian SMEs, which has been rarely explored in prior studies.

Keywords: Proactive Strategy, Absorptive Capacity, Competitive Advantage, Small and Medium Enterprises (SMEs)

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1.0 Introduction

A proactive strategy is an approach that aims to anticipate and take preventive action before a problem or challenge arises. This strategy focuses on developing long-term solutions to avoid problems and optimize existing opportunities (Makhloufi et al., 2021). In order to be proactive, organizations need to have a firm understanding of future challenges that may arise and take the necessary actions to overcome them (Hussain et al., 2015). Besides proactive strategies, absorptive capacity also plays a crucial role in organizations, which refers to a person's ability to absorb and process new information and learn from new experiences (Liu, 2018). Thus, the proactive strategy and absorptive capacity both create an organizational competitive advantage, especially in the small and medium enterprises (SMEs) sector. In the Indonesian economy, SMEs play a crucial role, as data from the Ministry of Cooperatives and SMEs shows that SMEs contribute more than 60% of the Gross Domestic Product and absorb more than 97% of the national workforce. This significant contribution makes SMEs the backbone of the economy and the primary driver of economic growth (Dwi, 2020).

To succeed and thrive, SMEs must implement a proactive strategy to face challenges and take advantage of opportunities in the market. This is because the competitiveness of SMEs in Indonesia is a top priority for the local government to contribute to the overall Indonesian economy (Suardhika & Adriati, 2018). More specifically, SMEs significantly contribute to economic growth, job creation, and poverty alleviation. However, SMEs in Indonesia still need help increasing their competitiveness, such as limited access to capital, technology, and markets. Therefore, by implementing a proactive strategy, SMEs can strengthen their position in the market and achieve long-term goals (Mahmood & Hanafi, 2013). In addition, the absorptive capacity of SMEs is also vital because it can affect business success and growth (Makhloufi et al., 2021). As small or medium business owners, having good absorptive capacity can help them acquire new knowledge and skills needed to grow their business and achieve a competitive advantage.

Drawing on dynamic capability theory (Teece et al., 1997; Arifin & Komaryatin, 2020; Cardeal, 2012; Paoloni et al., 2020; Cepeda-Carrion et al., 2023), SMEs can adopt proactive strategies to remain competitive and resilient in today's rapidly changing business environment (Permana et al., 2017). A proactive approach requires SMEs to enhance their competitive advantage through continuous product and service innovation, competitive pricing strategies, and the adoption of appropriate technologies. Complementing this, the knowledge-based view (Grant, 1996) underscores the importance of developing absorptive capacity, enabling SMEs to acquire new knowledge, respond to market shifts, and pursue sustainable growth (Kiyabo & Isaga, 2020). This can be achieved through continuous learning, active engagement with business partners and customers, and seizing opportunities to build relevant skills and knowledge.

In addition, competitive advantage is the ability to compete in a competitive market. Competitive advantage is measured by various indicators, such as innovation, product or service quality, productivity, cost efficiency, marketing capabilities, supporting regulations, and other factors that affect an entity's ability to compete (Heriyanto et al., 2021). In a competitive business environment, strong competitiveness helps an entity maintain or increase market share, increase profits, and strengthen its position in the global market. Absorptive capacity is an essential factor that supports the successful implementation of proactive strategies. Companies with high absorptive capacity can more effectively identify and exploit market opportunities and develop innovations that align with market needs (Cepeda-Carrion et al., 2023).

Hence, this study examines the moderating role of absorptive capacity in SMEs in East Java, considering the influence of the interaction of absorptive capacity between proactive strategies and competitive advantages of SMEs. This research takes empirical facts about SMEs in East Java, considering that SMEs have an essential role in the Indonesian economy as a large contributor to gross domestic product (GDP) and job creation (Suardhika & Adriati, 2018). Several previous studies including Zhai et al., (2018), Gancarczyk and Gancarczyk (2018) and Makhloufi et al. (2021) that have examined proactive strategies in SMEs only focus on factors that influence the implementation of proactive strategies but examine the effect of strategies' proactiveness

for the competitive advantage of SMEs is still rare, as well as the absorptive capacity of SMEs where the absorptive capacity of SMEs moderates the relationship between proactive strategy and competitive advantage, still requires further research (Müller et al., 2021 & Lukito-Budi et al., 2022).

This study offers both theoretical and empirical contributions through a novel approach that has been scarcely explored in the context of SMEs in Indonesia. Prior research (e.g., Zhai et al., 2018; Gancarczyk & Gancarczyk, 2018) has primarily focused on the direct relationship between proactive strategy and competitive advantage. In these studies, proactive strategy is viewed as a managerial approach to enhance firm performance and competitive positioning, yet the role of internal organizational capabilities, particularly the ability to absorb new knowledge (absorptive capacity), has been largely overlooked. In contrast, this study introduces a new dimension by examining the moderating role of absorptive capacity in strengthening the relationship between proactive strategy and competitive advantage. As a key construct within the dynamic capabilities framework, absorptive capacity is believed to play a critical role in enabling SMEs to translate proactive strategies into tangible competitive advantages through learning, innovation, and adaptation to market changes.

2.0 Literature Review and Hypotheses Development

2.1 Dynamic Capability as Theoretical Basis

This study refers to the dynamic capability theory introduced by Teece et al. (1997), which emphasizes the importance of organizational capabilities to 1) identify external opportunities and threats and 2) combine and reconfigure internal resources to respond to environmental changes. This study explains how SMEs can use proactive strategies to strengthen competitive advantage through product and service innovation, competitive pricing, and adopting appropriate technology. All of these aspects are in line with the concept of dynamic capabilities, which emphasizes adaptation and innovation in a dynamic business environment.

2.2 Absorptive Capacity as an Element of Dynamic Capability

This study highlights absorptive capacity as an important element of dynamic capability. Absorptive capacity is an organization's ability to: 1) absorb and process new information from the external environment, and 2) apply this knowledge to generate innovation and competitive advantage. In SMEs, absorptive capacity helps business owners understand market changes, respond to consumer needs, and take strategic actions (Cepeda-Carrion et al., 2023).

2.3 Proactive Strategy as the Implementation of Dynamic Capabilities

The proactive strategies discussed in this study reflect the ability of SMEs to: 1) anticipate market changes and new opportunities, 2) take preventive actions before problems arise, and 3) make changes necessary to remain competitive. Implementing proactive strategies requires dynamic capabilities because SMEs must continuously learn from experience, evaluate existing processes, and incorporate new knowledge to achieve their goals (Albhirat et al., 2023; Alhamdi, 2022; Bernoster et al., 2020).

2.4 Relevance in the Context of Small and Medium Enterprise (SMEs)

This study also shows the relevance of the dynamic capability theory in the context of SMEs in Madiun, East Java. As a vital sector for the Indonesian economy, SMEs face various challenges, such as limited access to capital, technology, and markets. By utilizing dynamic capabilities, SMEs can: 1) adapt quickly to market changes, 2) increase competitiveness through continuous innovation, and 3) utilize resources efficiently to generate added value.

2.5 Proactive Strategy and Competitive Advantage of Small and Medium Enterprises (SMEs)

Proactive strategies enable SMEs to anticipate market changes and create relevant product or service innovations (Kuo et al., 2021). Previous research by Zulkifli and Rosli (2013) shows that implementing this strategy increases competitiveness by improving operational efficiency, product quality, and marketing capabilities. Research on the effect of proactive strategies on the competitive advantage of SMEs can provide insight into how proactive strategies can help SMEs to achieve a competitive advantage in the market (Hussain et al., 2015). Internal factors such as management capacity, resources, and employee skills can affect the ability of SMEs to implement proactive strategies (Kuo et al., 2021). Besides that, external factors such as competition in the market, economic conditions, and technological changes also influence proactive strategies for the competitive advantage of SMEs (Basco et al., 2020).

Several previous studies, including Basco et al. (2020); Mahmood and Hanafi (2013), and Torugsa et al. (2012), show that implementing a proactive strategy involving aspects such as marketing, continuous improvement, product and service quality, and effective business management can increase the competitiveness of SMEs in the market. Therefore, SME businesses can use the results of this research to develop their business strategy. In addition, Ogundare and Merwe (2024) found that proactiveness enhances the performance of SMEs in Nigeria by fostering competitive advantage. Proactive owners and managers tend to respond more swiftly to market changes and opportunities, enabling them to create added value that strengthens both their competitiveness and overall business performance. The level of implementation of proactive strategies in SMEs also affects the competitive advantage of SMEs (Kraus et al., 2016). The effect of a proactive strategy on the competitiveness of SMEs can vary depending on the type of industry that SMEs run. The effect of a proactive strategy on the competitiveness of SMEs is also influenced by the size and resources owned by SMEs (Alarape, 2013). Market conditions can influence proactive strategies for SME competitiveness due to their impact on customer needs and competition in the market (Hussain et al., 2015). As a result, this research can contribute to developing a proactive strategy for SMEs and

help SMEs achieve a competitive advantage in the market. Thus, the proposed hypothesis is:

H1: The proactive strategy has a positive and significant effect on the competitive advantage of SMEs in East Java

2.6 The Role of Moderating Absorptive Capacity

Absorptive capacity refers to a firm's ability to understand, absorb, and apply new knowledge to drive innovation. Studies by Cepeda-Carrion et al. (2023) and Zahra and George (2002) revealed that firms with high absorptive capacity can better adapt to market and technological changes, ultimately strengthening competitive advantage. SMEs with high absorptive capacity catch market changes more quickly and make the right decisions in anticipating these changes. With high absorption, it is easier for SMEs to implement proactive strategies and increase their competitiveness (Müller et al., 2021). In addition, SMEs with high absorption can learn from failures and take lessons to improve themselves. On the other hand, SMEs with low absorption may find it difficult to implement a proactive strategy. They may be unable to predict market changes well and make informed decisions anticipating them. This can result in a lack of competitiveness and reduce the ability of SMEs to survive in a competitive market (Paoloni et al., 2020). In this context, absorptive capacity can moderate the relationship between proactive strategy and SME competitive advantage (Zhai et al., 2018). If SMEs have high absorption, a proactive strategy helps increase their competitive advantage. However, a proactive strategy may not significantly impact their profitability if SMEs have low absorption.

Previous research, such as Elbaz et al. (2018), Hernandez-Perlines (2018), Lee and Song (2015), and Prajogo et al. (2020) recognized absorptive capacity as a moderating variable. As mentioned by Istikhomah and Bs (2021) and Zahra and George (2002), absorptive capacity is the ability of an organization to understand and absorb new knowledge from the external environment and apply it to product and process innovations that can improve organizational competitiveness. In addition, research on the

effect of innovation on SME performance shows that absorptive capacity can be a moderating variable because it can influence the relationship between innovation and SME performance (Raymond et al., 2015). Aligned with Tzokas et al. (2015), who show that absorptive capacity can strengthen the relationship between innovation and SME performance, SMEs with high absorptive capacity can perform better than SMEs with low absorptive capacity. Therefore, research on the effect of proactive strategy on SMEs' competitiveness can consider absorptive capacity as a moderating variable that strengthens the relationship between proactive strategy and SME competitiveness.

Therefore, SMEs need to focus on developing their absorptive capacity to moderate the effect of proactive strategies on their competitiveness (Elbaz et al., 2018). Studies have shown that absorptive capacity influences competitive advantage through innovation, market adaptation, and the ability to adopt technology and engage in digital collaboration among business actors (Ferreira et al., 2020; Waehning et al., 2023). Absorption development can be implemented in various ways, such as increasing employee skills and knowledge, building a strong learning culture, and investing in technology to improve SMEs' operational efficiency and effectiveness. Thus, SMEs can maintain their competitive advantage and continue to compete in a competitive market. Based on this explanation, the hypothesis proposed is:

H2: The effect of proactive strategy on competitive advantage is stronger when the level of absorptive capacity is higher.

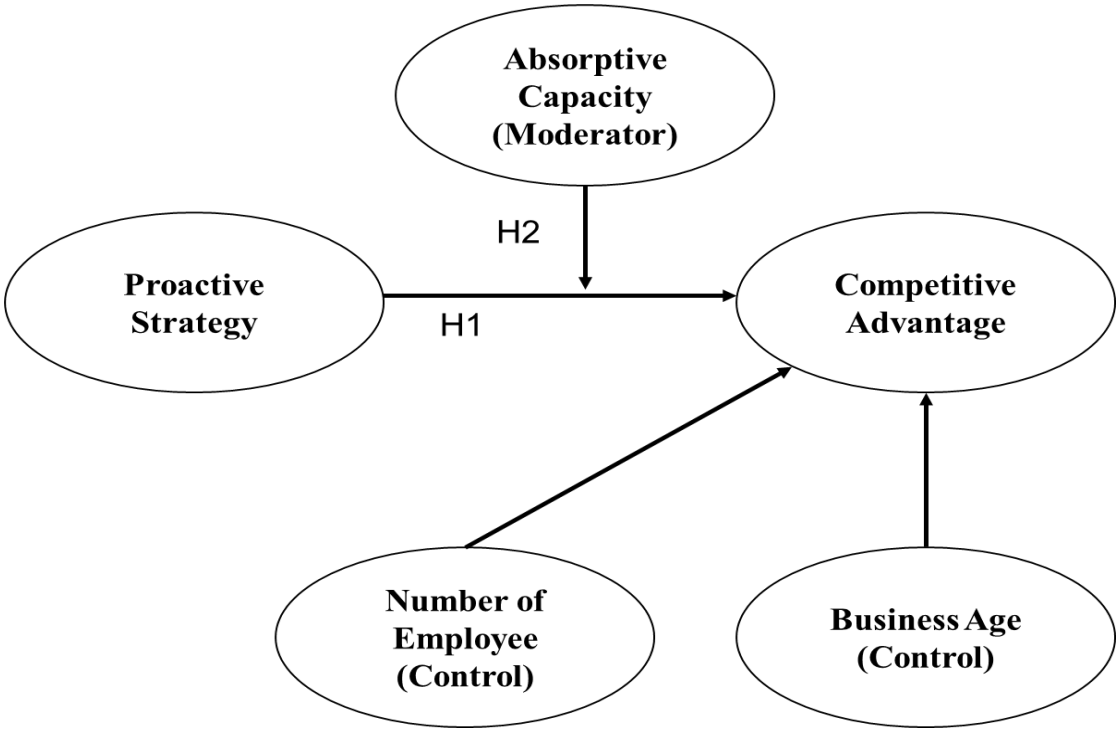

Figure 1: Research Framework

2.7 Control variable

This study uses control variables, namely the age of SMEs (Business Age) and the number of employees. Business age and the number of employees are two variables that can be important factors in SME research as control variables (Younis & Sundarakani, 2020). The age of the business reflects how long the business has been operating and can provide an idea of how mature the business is in terms of management and development (Behmiri et al., 2019). Older businesses may have better resources and experience in overcoming business challenges, while younger businesses may be more vulnerable to market fluctuations and competition (Han, 2021). Conversely, the number of employees reflects the size and complexity of business operations. SMEs with more employees may have the ability to carry out more extensive and more complex operations, but also require more significant resources to meet employee needs and may face challenges in employee management and cost control (Behmiri et al., 2019; Demirkan et al., 2022; Ogunyomi & Bruning, 2016). In research, these two variables are used as dummy

variables to ensure that the effects of the independent variables tested are not influenced by other factors that can influence the research results. By considering business age and number of employees as dummy variables, research can focus more on the independent variables to be tested and increase confidence in the research results. In short, business age and number of employees can be used as control variables to ensure these factors do not affect the research results.

3.0 Methodology

This research employed a quantitative approach using survey methods. A non-probability sampling method with a purposive sampling technique was applied to collect data from 65 SMEs in the Madiun area, East Java (Cooper & Schindler, 2014). The purposive sampling technique was chosen because SME owners or leaders possess the most comprehensive understanding of their firms' strategies and operational conditions, making them the most appropriate respondents for this study. The sample size of 65 SMEs meets the minimum requirements for Partial Least Squares (PLS) analysis, as Wong (2010) recommended. The classification of SMEs in this study follows the criteria set by the Indonesian Ministry of Cooperatives and SMEs. The decision to include 65 respondents also considered limited access to the target population and resource constraints. The Madiun region was selected purposively because this area has a relatively active concentration of SMEs and various business sectors, so it is considered representative for studying the relationship between proactive strategies, absorptive capacity, and competitive advantage. The type of data used in this study is primary data in the form of self-reports using a questionnaire.

This study began with the implementation of a pilot study during the initial phase of the research process, targeting SMEs in the Madiun region. The pilot study involved 30 respondents and aimed to assess the feasibility of the research design, evaluate the effectiveness of the data collection instruments, and identify potential technical challenges that might arise during the main study. The instruments used in the pilot study were developed based on findings from a preliminary investigation, which focused on exploring basic information regarding the conditions, characteristics, and challenges

SMEs face within the research context. A total of 30 SME respondents participated in this preliminary phase to assess the initial validity of the statement items adapted from previous studies, ensuring that the instrument was both valid and reliable for use in the subsequent full-scale research. The questionnaire consists of two parts: the first part contains the demographic characteristics of the respondents, and the second part contains statements of proactive strategy variables (5 items adopted from Paulus, 2018 & Hussain et al., 2015), absorptive capacity (6 items adopted from Zahra & George, 2002) and competitive advantage (5 items adopted from Zeebaree & Siron, 2017 & Sirivanh et al., 2014). Statements are measured by a Likert scale of 1 to 5.

Table 1: Measurement Items and Construct

Variable	Acronym	Item	Authors
Proactive Strategy	Pro1	Always take the initiative	Paulus (2018) and Hussain et al. (2015)
	Pro2	Always anticipate	
	Pro3	Always looking for new opportunities	
	Pro4	Always exploring the market profit potential	
	Pro5	Always make changes for the better	
Absorptive Capacity	AC1	Regularly hold meetings	Zahra and George (2002)
	AC2	Get new knowledge quickly	
	AC3	Assess consumer desires	
	AC4	Always learn from previous experiences	
	AC5	Evaluate existing processes	
	AC6	Look for new ways to combine knowledge	
Competitive Advantage	CA1	Follow the changes that occur	Zeebaree and Siron (2017) and Sirivanh et al. (2014)
	CA2	Competent employees	
	CA3	Implement a different service	
	CA4	Valuable resource	
	CA5	A resource that is difficult to imitate	

Data were analyzed using a structural equation measurement model (SEM) with the Partial Least Squares (PLS) approach. PLS makes it possible to model structural equations with relatively small sample sizes. It does not require normal multivariate assumptions (Hair et al., 2022) consisting of the outer model analysis: cross-loading factor, average variance extract (AVE), and Cronbach's alpha. Then, testing the inner

model is carried out, namely testing the structural model, which is carried out to examine the relationship between latent constructs (Hair et al., 2022). Several tests in the structural model consist of R-squares on endogenous constructs and estimates of path coefficients. The R-squared value is the coefficient of determination in the endogenous construct, which is a test of the goodness-of-fit model. Meanwhile, the estimation of the path coefficient is the value of the path coefficient or the magnitude of the relationship/influence of the latent construct, which is carried out by the bootstrapping procedure (Chin, 2010).

Then, the testing and analysis of moderation in this study use references from Memon et al. (2019), which states that moderator variables can affect the strength and direction of the relationship between the independent and dependent variables. Besides strengthening or weakening the relationship between the two variables, the moderator variable can also change the direction of the relationship to be positive or negative (Baron & Kenny, 1986). In this study, absorptive capacity is proposed as a moderating variable. A moderator fit test can be conducted to assess its moderating effect statistically. This test evaluates whether the relationship between the independent variable and the dependent variable changes depending on the level of the moderator. In other words, it determines whether the strength or direction of the effect of the independent variable on the dependent variable varies based on absorptive capacity.

4.0 Results and Discussion

The respondents in this study were SMEs located in the Madiun area, with the unit of analysis being the SMEs as represented by their owners or leaders. Respondent characteristics were categorized based on gender, business age, number of employees, and type of business. A total of 70 questionnaires were distributed to SMEs identified in the 2020 database of the Madiun City Industry and Trade Office. Of these, 65 questionnaires were returned, met the eligibility criteria, and were deemed suitable for analysis. A detailed summary of respondent characteristics is presented in Table 2.

Table 2: Characteristics of Respondents

Description	Total	Percentage (%)
Gender		
Male	52	80.0
Female	13	20.0
Total	65	100
Business Age (Years)		
< 3	18	27.7
> 3	47	72.3
Total	65	100
Number of Employees (Person)		
< 20	18	27.7
> 20	47	72.3
Total	65	100
Type of Business (Sector)		
Apparel	11	16.9
Crafts	12	18.5
Souvenirs	12	18.5
Food and Beverage	6	9.2
Total	65	100

Based on the data in Table 2, the majority of SMEs in this study were owned by males, 52 people (80.0%), while females only numbered 13 people (20.0%). The dominance of men in SME ownership can reflect socio-cultural factors that still influence business structures in specific sectors. Regarding business age, most SMEs in this study have been established for more than three years (72.3%), while the rest (27.7%) are still under three years old. This shows that most SMEs in the sample have a reasonably good level of sustainability. Regarding the number of workers, 47 (72.3%) have more than 20 workers, while the remaining 18 SMEs (27.7%) have less than 20 workers. These data show that most SMEs in this study are medium-scale businesses that are more stable and can potentially make a more significant economic contribution. Meanwhile, from the business sectors studied, there are four main categories, namely Ready-to-wear Clothing (16.9%), Crafts and Souvenirs, which each cover 18.5% of the total SMEs, and the Food and beverage sector, which has the fewest number of SMEs (9.2%). The high number of SMEs in the Crafts and Souvenirs sector shows that this sector has quite promising

potential compared to other sectors. Overall, the results of this study illustrate that men dominate the SMEs involved in this study, have mature business experience, and are more active in the crafts and souvenirs sector. With these characteristics, the SMEs in the research sample have the potential to continue to grow and make a significant contribution to the regional economy.

Before testing the research model, a Common Method Bias (CMB) assessment was conducted using Harman's Single-Factor Test to ensure that bias did not significantly affect the data. The analysis revealed that a single factor accounted for 28.732% of the total variance, which is below the recommended threshold of 50%, indicating that common method bias was not a major concern in this study (Podsakoff et al., 2003). Furthermore, an outer model analysis is carried out to ensure that the measurements used are feasible to be used as measurements (valid and reliable). Tests performed on the outer model consist of a cross-factor loading test (value above 0.7), average variance extracted (AVE above 0.5), and Cronbach's alpha (value above 0.6). The results of the outer model analysis can be seen in Table 3. However, several measurement items listed in Table 1 were excluded (Pro2, Pro4, AC2, AC4, AC6, CA1, CA5) from the outer measurement model because the loading factor value was less than 0.7, as suggested by Hair et al. (2022).

Table 3: Results of Validity and Reliability

Construct	Item	Loading Factor	Cronbach's Alpha	AVE	Description
Proactive Strategy	Pro1	0.848	0.634	0.577	Valid and Reliable
	Pro3	0.792			
	Pro5	0.836			
Absorptive Capacity	AC1	0.757	0.860	0.781	Valid and Reliable
	AC3	0.797			
	AC5	0.724			
Competitive Advantage	CA2	0.929	0.766	0.682	Valid and Reliable
	CA3	0.867			
	CA4	0.854			

Based on the discriminant validity analysis results using the Heterotrait-Monotrait (HTMT) ratio presented in Table 4, all inter-construct values were below the recommended threshold of 0.90. These results indicate that each construct in the model possesses adequate discriminant validity, with no significant conceptual overlap between constructs. Therefore, the requirement for discriminant validity has been satisfactorily met in accordance with established guidelines.

Table 4: Discriminant Validity (HTMT) Matrix

	AC	CA	NE	Pro	BA
CA	**0.671**				
NE	0.146	**0.179**			
Pro	0.576	0.526	**0.324**		
BA	0.045	0.158	0.229	**0.066**	
CA*Pro	0.125	0.146	0.120	0.088	**0.292**

Notes: Absorptive Capacity (CA); Competitive Advantage (CA); Number of Employees (NE); Proactive Strategy (Pro); Business Age (BA)

Analysis of the inner model or structural model in Figure 2 and Table 5 shows that business age and the number of employees do not affect the competitive advantage of SMEs in Madiun, East Java, greater than a significance value of $p > 0.10$ or 10%. A proactive strategy toward competitive advantage has a path coefficient of 2.107, with a significant effect (p-value = 0.035 <0.10 or sig. 10%). The path coefficient for the moderating variable Absorptive Capacity has a t-statistic value of 1.825, with a significance level of $p = 0.068$, which falls within the acceptable threshold of < 0.10 (10%). This indicates that the moderating effect of Absorptive Capacity on the relationship between Proactive Strategy and Competitive Advantage is statistically significant at the 90% confidence level. It is concluded that the influence of the moderating variable (absorptive capacity) is a statistically significant interaction between proactive strategy and absorptive capacity of competitive advantage. So the absorptive capacity variable is a moderating variable.

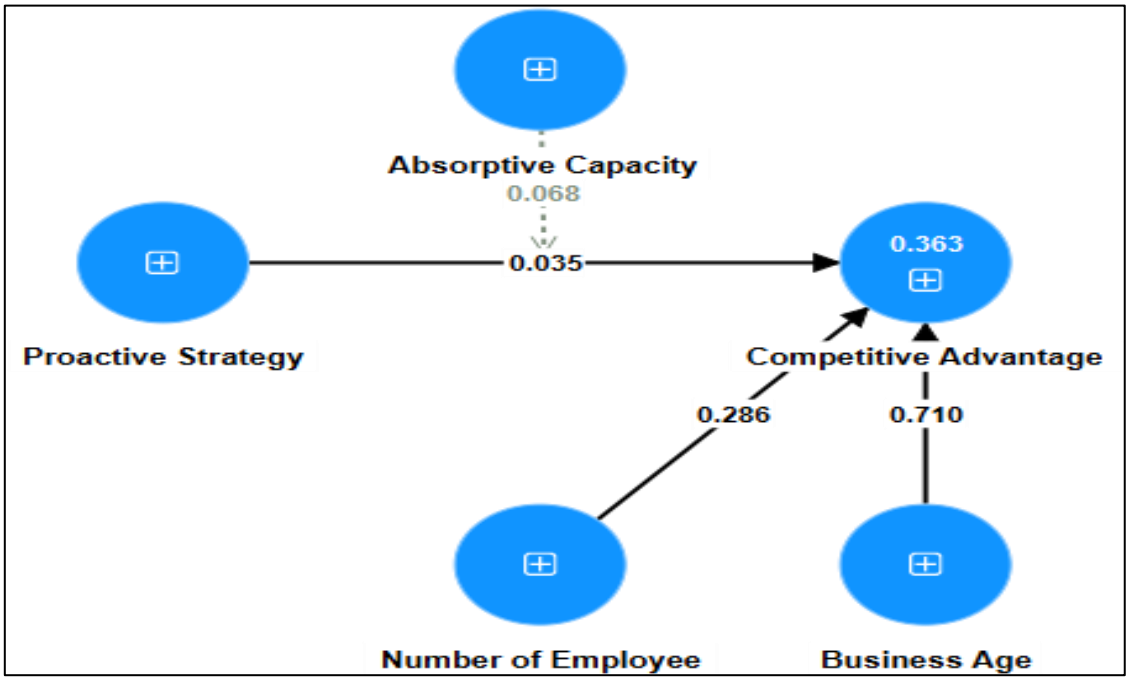

Figure 2: Structural Inner Model Analysis

Table 5 presents the results of a path coefficient analysis that evaluates the relationships between several variables and competitive advantage. The analysis employs T-statistics, p-values, and a 90% significance level ($p < 0.10$) to determine the significance of each relationship.

Table 5: Path Coefficient Analysis

Path Relationship	T Statistic	*p*-Value	Significance
Business Age → Competitive Advantage	3.120	0.710	Not Significant
Number of Employees → Competitive Advantage	1.066	0.286	Not Significant
Proactive Strategy → Competitive Advantage	2.107	0.035*	**Significant**
Absorptive Capacity × Proactive Strategy → Competitive Advantage	1.825	0.068*	**Significant**

Notes: *Significant at 90% confidence level ($p < 0.10$); R^2 for Competitive Advantage: 0.363 (36.3%)

Based on the analysis results in Table 5, the business age and the number of employees do not significantly affect competitive advantage because the p-values obtained are 0.710 and 0.286, respectively, far above the significance limit of 0.10. These

results show that the time a business has been established or the number of employees does not necessarily increase the company's competitiveness. The business age of SMEs in Madiun, East Java, does not affect the competitive advantage of SMEs in this study. There are several reasons why the business age of SMEs only sometimes affects the competitive advantage of SMEs in Indonesia, as shown by our findings, including innovation and creativity, product or service quality, capital, and resources. Thus, the business age of SMEs, especially in Madiun, East Java, is only sometimes the main factor determining their competitive advantage. However, SMEs that have been around for a long time have the potential to develop and expand their market, so they can still become formidable competitors in the market, as found by Younis and Sundarakani (2020) and Behmiri et al. (2019).

In addition, the number of employees is also one of many factors that determine the competitive advantage of an SME in Indonesia, especially in Madiun, East Java. There are several reasons why the number of employees only sometimes affects the competitive advantage of SMEs in Indonesia; as we found, SMEs with a small number of employees tend to be more efficient in managing operational costs and spending on employee salaries. In addition, SMEs with a small number of employees can be more flexible in dealing with changing market needs and changes in the business environment. SMEs with few employees can focus more on developing the quality of their products or services. Thus, the number of employees is only sometimes the main factor that determines the competitive advantage of an SME. The key to success for SMEs in competing is the ability to innovate, utilize technology, provide quality products or services, and be flexible in dealing with changes in the market and business environment, as discovered by Ogunyomi and Bruning (2016), Demirkan et al. (2022), and Behmiri et al. (2019).

In Table 5, the proactive strategy has been shown to significantly affect competitive advantage, with a p-value of 0.035 (< 0.10). This output means that companies with a proactive strategy are more likely to gain a competitive advantage compared to companies that do not have it. In addition, the interaction between absorptive capacity and proactive strategy (Absorptive Capacity x Proactive Strategy) also significantly affects competitive advantage with a p-value of 0.068. This shows that

the company's ability to absorb external information and respond proactively to market opportunities effectively can increase the company's competitiveness. Regarding model strength, the R Square (R^2) value of 0.363 (36.3%) shows that this model can explain 36.3% of the variability of competitive advantage. In comparison, the rest (63.7%) is influenced by other factors not included in this study.

The proactive strategy positively and significantly affects competitive advantage. SMEs need to take the initiative to seek opportunities because this will help SMEs expand the market, increase market share, and increase competitiveness in an increasingly competitive market. Thus, SMEs need to take the initiative to look for opportunities in a proactive strategy because it can help SMEs find new business opportunities, anticipate market changes, increase competitiveness, expand business networks, and increase consumer confidence (Wibowo et al., 2021). In a proactive strategy, SMEs must always take the initiative to seek new business opportunities. This is because SMEs that are only reactive and passive in running their business tend to find it more difficult to survive and develop in an increasingly competitive market (Kraus et al., 2012). By always taking the initiative to seek new business opportunities, SMEs can expand their market and increase their market share. Proactive SMEs can read market opportunities and trends more quickly and precisely, so they can take advantage of existing business opportunities before competitors do. In addition, by always taking the initiative to seek new business opportunities, SMEs can increase the added value of their products or services. SMEs can innovate products or services to meet unmet or unknown market needs (Kuo et al., 2021). This can increase the competitiveness of SMEs and create greater added value for consumers.

Taking the initiative to seek new business opportunities can also help SMEs reduce the risk of business failure. In a dynamic and uncertain situation, SMEs that are proactive and able to pursue new business opportunities will be better able to survive and generate greater profits (Mady et al., 2022). Thus, SMEs must always take the initiative to seek new business opportunities in a proactive strategy because it can help SMEs expand their market, increase the added value of their products or services, reduce the risk of business failure, and increase competitiveness in an increasingly competitive market.

In addition, SMEs always need to make changes for the better to achieve competitive advantage because an increasingly competitive market demands that SMEs always innovate and improve the quality of their products or services (Torugsa et al., 2012). By making better changes, SMEs can increase operational efficiency and effectiveness, adapt to market and technological changes, and increase customer satisfaction (Uchenna et al., 2019). Changes for the better can also help SMEs find new ways to differentiate themselves from competitors and expand market share. Therefore, SMEs must have the courage to make changes and continue improving the quality of their products or services to achieve a competitive advantage in an increasingly competitive market.

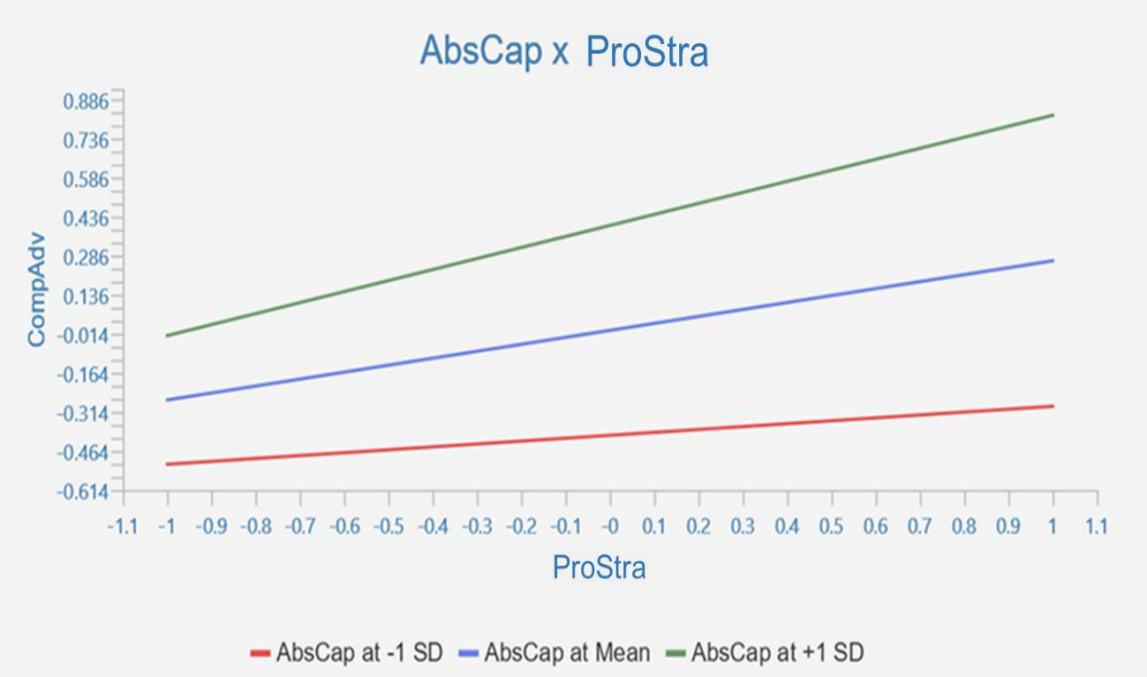

Figure 3: Slope Analysis

SMEs with high absorptive capacity strengthen the influence of proactive strategic relationships compared to SMEs with low absorptive capacity. This can be seen in Figure 3, with a significant difference in the degree of slope. Thus, SMEs with high absorptive capacity tend to have a better ability to absorb and process new information

and adapt to changes in the business environment (Lee & Song, 2015). In the context of a proactive strategy, SMEs with high absorptive capacity can be more effective in taking the initiative to seek new opportunities, make better changes, and anticipate risks that may occur in the future. With high absorptive capacity, SMEs can also be more responsive to customer needs and wants and can better develop strong relationships with business partners (Hernandez-Perlines, 2018).

The findings show that absorptive capacity moderates the relationship between proactive strategy and competitive advantage of SMEs in Madiun, East Java. The findings of this study support research conducted by Elbaz et al. (2018), Raymond et al. (2015), and Tzokas et al. (2015) by increasing absorptive capacity, SMEs can acquire new knowledge, adapt to market changes, and sustainably develop business. This can be achieved by continuing to learn, interacting with business partners and customers, and looking for opportunities to improve skills and knowledge in relevant fields (Prajogo et al., 2020). In line with dynamic capabilities theory and a knowledge-based view, it can help SMEs develop proactive strategies to deal with a dynamic business environment (Ferreira et al., 2020). Therefore, SMEs with high absorptive capacity have an advantage in strengthening the influence of proactive strategic relationships compared to SMEs with low absorptive capacity. Even so, SMEs with low absorptive capacity can still develop proactive strategic relationships if they can use existing resources well and make efforts to develop their absorptive.

This study makes a theoretical contribution by showing how dynamic capabilities can be operationalized through proactive strategies and absorptive capacity. In addition, this study extends the literature by highlighting the importance of these elements in strengthening the strategic relationship between proactivity and competitive advantage in SMEs. Dynamic capabilities theory serves as the primary foundation in this study by describing how SMEs can learn, innovate, and adapt continuously to achieve competitive advantage in a changing business environment. This is supported by the role of absorptive capacity as a link that strengthens the strategic relationship.

This study reinforces previous findings that proactive strategies positively influence competitive advantage among small and medium-sized enterprises (SMEs), as

demonstrated by Hussain et al. (2015), Zulkifli & Rosli (2013), and Basco et al. (2020). Furthermore, the results are consistent with prior research by Elbaz et al. (2018), Zhai et al. (2018 and Tzokas et al. (2015), which underscore the vital role of absorptive capacity in enhancing both innovation and organizational performance. A key contribution of this study lies in its explicit exploration of the moderating role of absorptive capacity in the relationship between proactive strategy and competitive advantage, an area that remains underexplored, particularly within the Indonesian context and, more specifically, in the Madiun region of East Java. Unlike most previous studies, such as those by Makhloufi et al. (2021) and Müller et al. (2021), which primarily examined direct or mediating effects, this research highlights moderation as a distinct mechanism.

5.0 Conclusion and Future Research

Based on the findings of this research, several managerial implications can be drawn for SMEs, particularly concerning proactive strategies, absorptive capacity, and competitive advantage. First, SMEs are encouraged to adopt a proactive approach by actively seeking new business opportunities, which can lead to the discovery of untapped markets and the creation of added value in products or services, thereby expanding market share (Kuo et al., 2021). Proactiveness enables SMEs to anticipate market changes and respond more effectively to emerging trends, helping them remain relevant in highly competitive environments (Zohoori et al., 2013). In doing so, SMEs can increase their competitiveness by differentiating themselves through innovative offerings (Hussain et al., 2015), expanding their business networks via new or enhanced partnerships (Alarape, 2013), and building consumer trust by consistently striving to provide superior products or services (Basco et al., 2020). SMEs should conduct regular meetings about absorptive capacity to strengthen internal coordination, update market knowledge, and support strategic alignment (Elbaz et al., 2018).

Additionally, continuously assessing consumer desires is essential, as it enhances SMEs' responsiveness to customer needs, improves satisfaction, and reinforces long-term relationships while increasing their ability to absorb market shifts (Raymond et al., 2015). SMEs should also regularly evaluate their internal processes to identify

inefficiencies and optimize operations, thereby improving quality and customer satisfaction (Prajogo et al., 2020). Regarding competitive advantage, SMEs must invest in competent employees, as skilled and knowledgeable staff contribute to higher productivity, innovation, and service excellence (Paulus, 2017). Differentiated services can further distinguish SMEs from their competitors by providing unique value propositions that attract and retain customers (Ferreira et al., 2020). Lastly, SMEs should leverage valuable resources, including human capital, technology, and financial assets, to enhance operational efficiency, product quality, and adaptability to change. These resources foster sustained competitive advantage and long-term business success (Maryono et al., 2021).

To increase competitiveness, SMEs must strengthen their absorption capacity by improving employee training, building a learning culture, and adopting the latest technology to adapt to industry changes. In addition, implementing proactive strategies is the primary key, where SMEs must continue to seek new opportunities and adapt to market dynamics to remain relevant and competitive. No less important, continuous innovation must be the main focus when developing new products and services that can meet the evolving needs of customers. Finally, resource management must also be considered, where investment in human resources and technology must be increased to support long-term innovation and business growth strategies. Thus, the research provides results and input that technology can help SMEs improve operational efficiency and become more competitive in the market. In addition, SMEs must regularly meet with suppliers, customers, and other business partners to strengthen their capacity to absorb market and technological changes. In addition, understanding consumer desires and behaviour changes is critical for SMEs to adjust the products or services offered to remain relevant and in demand. Evaluating business processes regularly and having competent employees can increase the success of SME businesses (Panjaitan et al., 2021). Various valuable services and resources can also help SMEs achieve a competitive advantage and strengthen their position in the market.

Future research should prioritize the development of innovative strategies that enhance SMEs' adaptability and responsiveness to dynamic market and technological shifts (Farida et al., 2022). To support this aim, further studies could explore the key

determinants of SME success, such as effective leadership, robust financial practices, strategic marketing, adoption of appropriate technologies, and the continuous development of consumer-oriented products and services. These insights would be instrumental in empowering SMEs to strengthen their competitiveness and solidify their position in increasingly saturated markets. To validate and extend the current findings, replication studies across diverse regions and industry sectors are highly recommended. For instance, comparative analyses between SMEs in East Java and West Sumatra, or across different sectors such as crafts and technology, could yield valuable insights into how strategic context and absorptive capacity shape competitive advantage in various settings.

Moreover, future research would benefit from integrating complementary theoretical lenses such as the Resource-Based View (RBV), Knowledge Management Theory, and Institutional Theory to construct a more holistic framework. These perspectives can illuminate how SMEs harness internal capabilities and navigate institutional environments to maintain a sustainable competitive edge. However, the current study's limitations must be acknowledged. The relatively small sample size of 65 SMEs from a single region constrains the generalizability of the results. Additionally, the cross-sectional design hinders analysis of long-term strategic evolution and its interaction with absorptive capacity over time. The R^2 value of 36.3% suggests that other influential factors, such as digital transformation, inter-organizational collaboration, and external environmental conditions, were not captured in this study but may play critical roles. Furthermore, reliance on self-reported data may introduce bias stemming from the subjective viewpoints of SME owners.

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