


## A Cultural Perspective on Digital Transformation for Competitiveness: Integrating AI-Assisted E-Commerce, Product Diversification, Relationship Marketing, and Consumer Satisfaction

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### ABSTRACT

The aim of this study is to examine how digital transformation might enhance SMEs' competitiveness from a cultural standpoint via relationship marketing, product diversification, AI-based e-marketplaces, and customer happiness. This study's mixed, sequential, exploratory research question may have helped the data gathering lean more sharply toward quantitative or qualitative methods. 374 digitally enabled SMEs working in the culturally different areas of Malang, Yogyakarta, and Denpasar, Indonesia, made up the population. Interviewers employed questions that reflected various socio-cultural and market situations as a study tool. Data analysis was done using PLS-SEM. The empirical results show that the competitiveness of SMEs in AI-based e-commerce environments depends on product variety, relationship marketing, and customer satisfaction. AI is what drives e-commerce. This study makes significant scholarly contributions to marketing-driven digital transformation and managerial insights for those SMEs who are keen to maintain their competitive sustainability. It does this by revealing the role of customer satisfaction as a strategic bridging link between digital transformation and competitive advantage generation. As far as culture is concerned, the findings support the Resource-Based View (RBV) by showing that competitive advantage in digital transformation is deeply rooted in organizational capabilities, customer relationships, and market-oriented processes that are influenced by culture rather than being solely driven by technology.

**Keywords:** e-commerce, AI, product diversification, relationship marketing, competitive advantage, digital transformation.

### INTRODUCTION

Nascent companies are naturally dynamic and have the potential to create jobs and contribute to a country's economy. These businesses can create many jobs and business transactions (Keelson et al., 2024). Startups in developing countries can account for as much as 40% of the economy and 60% of jobs (Amoah et al., 2022). SMEs are also significant for their role to provide jobs and generate income for the places of creativity and innovation (Widayani et al., 2024). In the current digital era, the use and adoption of digital technology are absolutely essential to induce SMEs to survive any stiff competition (Firdausya & Ompusunggu, 2023) and improve their competitiveness (Alviani & Munawaroh, 2025; Kanojia, 2024; Omowole et al., 2024). However, the digital transformation in SMEs is not to be understood as a technical process only. From a cultural perspective, the ICT

uptake and impact are significantly influenced by social-cultural beliefs, market traditions, as well as personal relationship-oriented business that guide the way SMEs interact with customers and respond to competitive threats. For example, in several emerging markets such as Indonesia, the cultural dimensions of collectivism, relationship-based trust, and long-lasting consumer engagement may further influence the usage of digital tools in both company practices and competitive tactics. In order to be able to penetrate into the ever-changing international market, SMEs need to know what customer requirements and emerging technological developments (Castagna et al., 2020). The application of digital technology in businesses may also result in improved performance, increased production, and better environmental performance practices (Alojail & Khan, 2023; Hilali et al., 2020; Li & Zhao, 2024). To face this new challenge created by digitalization, the use of e-commerce alongside artificial intelligence (AI) will help increase the competitiveness of SMEs (Denmamode & Panchoo, 2024; Huang & Rust, 2018; Mufid et al., 2019; Zhong, 2023), sales performance (Bunea et al., 2024; Cui, 2023; Dai et al., 2024), and competitive advantage (Malhotra & Kharub, 2024).

The application of e-commerce with Artificial Intelligence (AI) can forecast sales, market trends, and buying behavior, leading to enhanced productivity, greater market share, and efficient operations (Denmamode & Panchoo, 2024; Huang & Rust, 2018; Mufid et al., 2019; Zhong, 2023). It can further improve customer satisfaction and loyalty (Dwivedi, Hughes, et al., 2021; Evelina, 2022), and predict the consumer purchasing behavior from digital data, in turn, enabling companies to grade their customers for differential treatments, as has been observed in many organizations. Small and medium enterprises in Indonesia take a lot of time to utilize digital technology properly (Kaur et al., 2024; Rahayu & Day, 2016). This is due to the fact that many SMEs have low or poor digital literacy and technical skills and incomplete or inadequate infrastructure (Alviani & Munawaroh, 2025; Bican & Brem, 2020; Husriadi et al., 2024; Nambisan et al., 2019). Moreover, several prior studies also indicated that SMEs' sales and competitiveness are affected by product innovation, which is also referred to as product diversification (Dwivedi, Hughes, et al., 2021; Evelina, 2022). In addition, other intellectual researchers also emphasized relationship marketing as a significant factor in the drive to gain competitiveness, customer loyalty, and profitability due to creating customer satisfaction as well as a strong relationship between SMEs and their acquirer (Dwivedi, Ismagilova, et al., 2021).

Several previous studies have also found that the application of digital technology, including e-commerce and artificial intelligence, is very much needed by MSMEs to compete in both regional and international markets (Madanchian, 2024; Saladin & Faoziyah, 2024). To be able to respond faster to the market so that revenue can grow bigger (Bunea et al., 2024; Cui, 2023; Dai et al., 2024) and can improve competitiveness through competitive advantages (Malhotra & Kharub, 2024). Both e-commerce and internet marketing are potential ways to increase customer service/satisfaction, number of customers, or revenue stream for SMEs (Bocean & Vărzaru, 2023; Choshin & Ghaffari, 2017; Djajanto, 2017; Evelina, 2022; Huang & Rust, 2018; Rosyidah et al., 2023). Despite this, there is still a barrier to the digitalization of technology-based SMEs because they experience low digital literacy and a lack of digital infrastructure (Erlangga et al., 2024; Panduwinata et al., 2025; Purnomo et al., 2024; Sanguinetti & Zucchella, 2023; Sun & He, 2023). Other than e-commerce, few of the strategies have been examined by a lot of the following researchers, who learned that product innovation in terms of product line extension is used as a strategy for firms to face dynamic market requirements and could also contribute to sales increment and SME growth (Erlangga et al., 2024; Fatmawati & Hariyana, 2023; Le & Nguyen, 2024; Singh et al., 2010). The product diversification will influence the efficiency of resource allocation, the broadening of the market, and thereby the enhanced competitiveness in terms of competitive advantage (Castaldi & Giarratana, 2018; Kook et al., 2017; Nagle & Teodoridis, 2020). Previous scholars also showed that the role of relationship marketing is to enhance and develop strategic relationships between SMEs and their consumers in the long term, thus enhancing customer satisfaction, which will lead to improving the SME's competitive advantage (Djajanto et al., 2019; Farida & Nuryakin, 2021; Istikhoro et al., 2024; Lemon & Verhoef, 2016; Yeh, 2023). The relationship marketing has a positive impact on competitiveness, resulting in enhanced customer satisfaction and higher profits (Njeri et al., 2015; Nyaga & Whipple, 2011) found that relationship marketing increases customer loyalty and prevents customers from switching to the company's competitors. While previous research and publications are still partial and concentrate only on one or two aspects that will be generated in this study.

Despite the wide research on relationship marketing, product diversification, and AI-assisted e-commerce in separate studies, few have integrated them all together to seek their integration effect on the individual side. Few studies have combined three variables such as these in the case of SMEs. This results in a research void that this study is to fill. The novelty of this work is that it intends to give an overall view combining the above-mentioned three dimensions, which have hardly been studied in a single and comprehensive way. Following the path of a number of micro, small, and medium enterprises (SMEs) in Indonesia, here are the features that can predict SME competitiveness. These have also been widely studied. Digital transformation based on e-commerce and AI skill development is a product diversification relationship marketing.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### AI-Assisted E-Commerce

AI has already littered the e-commerce industry in many significant ways. AI has managed to invent the use of sophisticated algorithms and deal with enormous data in order to provide an automated system and personalized user experience, as well as data-driven decision making (Bawack et al., 2022). Examples of some AI tools utilized for the purpose of predicting how customers would make purchases on e-commerce are recommender systems, chatbots, visual searching, and dynamic pricing (Chatterjee et al., 2023). Predictive analytics predictions are used within an e-commerce system (Madanchian, 2024). Real-world studies demonstrate that AI helps to surface the products relevant to each customer, shorten the time it takes customers to decide on a purchase, and push up conversion rates. AI chatbots further enhance customer service in that they provide real-time assistance, reducing response time and enabling more efficient operations (Chatterjee et al., 2023). Yet confidence of consumers in the use of data, readiness in terms of technology, and quality of data are also critical for successful AI adoption in e-commerce (Dwivedi, Hughes, et al., 2021). Challenges associated with limited financial and digital literacy and high implementation costs still pose major barriers, especially for SMEs (Kahveci et al., 2025). The efficacy of AI-assisted e-commerce is impacted by both algorithmic complexity and culturally moulded expectations of timeliness, personalisation, and trust in interactions between customers and businesses.

### Product Diversification

According to Tarida (2012), product diversification is a tactic businesses use to create diverse products. The products produced are no longer singular; they differ only along the lines of competing companies in the same industry, but they expand into various varieties so they can attract consumer sympathy at different levels of purchasing power or dominate other market segments. The main goal of the product diversification plan is to reduce the risks and uncertainties a company faces. New and interesting products will make people more inclined to buy them. This method of product diversification gives the company a wide range of products to choose from. Product diversification is also an effort to create and grow new markets and products, or to expand existing ones, with the aim of maximizing sales, growth, flexibility, and profitability (Arief & Nurlina, 2021). Wang et al. (2024) stated that diversification is a strategy to increase a company's sales by entering new businesses or acquiring other companies with different products and markets, thereby enhancing firm performance. Diversification of related products improves the performance of geographically diversified SMEs (Benito-Osorio et al., 2020). Improving both performance and profitability are the primary goals of any company's diversification plan from its different products (Setianto, 2020). Product diversity gains significance in culturally diverse markets, as customer preferences and perceived value are influenced by social conventions and localised consumption trends.

### Relationship Marketing

Relationship marketing involves all efforts to establish, develop, and sustain positive connections (Mishra & Li, 2008). Activities undertaken by a company to maintain beneficial customer networks over time to enhance corporate performance are classified as relationship marketing (Harker & Egan, 2006). Relationship marketing has established enduring positive connections between businesses and their clients (Borishade et al., 2022). In addition, relationship marketing strategies enable companies to share, develop, and utilize resources quickly with other companies. It also improves the company's capacity to recognize, cultivate, and oversee collaborative relationships with essential customers, as evidenced by trust, dedication to the connection, and efficient interaction (Arnett & Badrinarayanan, 2005). Parvatiyar & Sheth (2000) contended that relationship marketing encompasses cooperative efforts with customers and end users to generate or augment shared financial benefit at reduced cost. Relationship marketing will be substantially enhanced when companies help customers create greater utility. In addition, using information technology can facilitate improving customer relationship management (Payne & Frow, 2017). Relationship marketing is the process by which businesses build enduring alliances through a customer-focused culture. Its foundation is the inclusion of competitive advantage (Riley & Nicewicz-Scott, 2025), so companies need to retain their customers by improving relationships through effective communication and enhancing customer service and product quality (Patsioura et al., 2009). Relationship marketing is culturally rooted because it depends on trust, emotional connections, and a long-term focus. These things are especially important in collectivist and relationship-oriented markets.

## Customer Satisfaction

Customer satisfaction is the extent to which a client is satisfied after comparing the goods or service to their expectations (Danurdara & Masatiff, 2025). Consumers who assess their level of satisfaction with a product both emotionally and quantitatively contrast their expectations with the actual results. A product that meets or at least minimizes perceived expectations is said to satisfy customers. According to Hult et al. (2022), customer happiness may be a sign of a business's loyalty, client retention agreements, and long-term competitiveness in addition to being a short-term result. After a product is tried, customer satisfaction shifts from only assessing it to assessing everything. Among the most crucial elements used to gauge sales are the advantages obtained, the expenses paid, and the sacrifices made for the product or service. According to Blut et al. (2023), a product's perceived level of satisfaction, both utilitarian and hedonistic, can expand its client base when it is acknowledged as useful. In a similar vein, Herman (2023) and Manzano (2024) found that a business enhances consumer value perceptions and scope. Increased client growth is a result of improved service quality, distribution, attention, and tangible services. According to Achra et al. (2024), in the retail and service industries, effective customer relations and product and service may work in tandem to influence consumers. Furthermore, customer satisfaction is influenced by e-commerce, good relationship, response speed, and transaction security (Siwi, A., & Dermawan, 2024). Mittal (2023) stated that customer satisfaction can also improve company performance and competitiveness. In general, consumer satisfaction can be affected by several causes, including initial expectations, service quality, product quality, customer relationships, customer experience, and the quality of interactions between the company and consumers. Byun et al. (2023) proved that the alignment between consumer goals and promotional messages can significantly increase satisfaction. In culturally ingrained market contexts, satisfaction encompasses not just functional performance but also relational quality, trust, and perceived commitment, all of which affect the translation of digital transformation into competitive success.

## Competitive Advantages

The existence of an organization's ability to sustain a competitive advantage in order to give shape to that which is distinct and lasting is drawn upon in its competitiveness. There are many internal and external factors that can lead small businesses to success or failure. In the enterprises, there are many factors that are important: managing money, running business well, maintaining customer satisfaction, developing new ideas, focusing on market leadership using technology, being flexible, HRM quality, and an entrepreneurial approach (Sharabati et al., 2024). Through improved efficiency, streamlined procedures, and market data, digitalization boosts competitiveness. It has long been recognized as being crucial for boosting SMEs' competitiveness, especially in industrial sectors that face difficulties with innovation and globalization (da Silva et al., 2025). One strategy for SMEs to compete successfully is to offer products or services that are really different and differ significantly from other offerings in the market. To get there, you need to always be innovating, making kick-ass products, and delivering amazing service for your clients, or creating a really powerful brand. From a cultural point of view, competitive advantage in digital transformation contexts goes beyond technological assets to encompass relational skills and customer-focused processes that are hard to copy. Also, SMEs can analyze their value chain to identify value-creating activities and competitive advantages (Keelson et al., 2024).

## Hypothesis

Based on the background and review of literature, three hypotheses are formulated as follows:

- H1: AI-based e-commerce has a positive impact on competitiveness.
- H2: Product diversification has a positive effect on competitiveness.
- H3: Relationship marketing has a positive impact on competitiveness.
- H4: AI-based e-commerce contributes to an increase in customer satisfaction.
- H5: Product diversification positively affects satisfaction with a firm's products.
- H6: Relationship marketing has a positive effect on customer satisfaction.
- H7: Competitiveness is affected positively by customer satisfaction.

## METHODOLOGY

This research measures the competitiveness of small and medium-sized businesses (SMEs) by combining a qualitative approach with a nice approach to surveys that assess the amount of digital performance. Examined is the cause-and-effect link between the appeal of SMEs and entertainment delight, as well as external elements like relationship marketing, product diversity, and AI-powered e-commerce. 374 SMEs in Indonesia were the subject

of this study, with a focus on those from Malang, Yogyakarta, and Denpasar, primarily in the Bali, East Java, and Central Java areas. There are many small and medium-sized businesses in the chosen sample towns, which aids in their expansion and prevents the usage of digital copies. Using these techniques, they are chosen based on the researcher's calculated figures.

The research includes studies on digitally compliant small and medium-sized businesses with many years of continuous operation. Out of 400 respondents who completed the questionnaire, 374 met the criteria for analysis. The questionnaire for this study used a five-point Likert scale, with each statement scored from 1 to 5. The data were gathered through a questionnaire administered via Google Forms and interviews. The distributed questionnaire instrument has met the standards for validation and reliability testing. A SmartPLS structural equation model called Partial Least Squares (PLS-SEM) was used for the data analysis.

## RESULT AND DISCUSSION

### Description of Respondents

Demographics for the participants are presented in Table 1. There were 374 respondents in total, and 42% were female and 58% male. The most common were 36-41 years, 30%. Most had a senior high school education (49%). Respondents were primarily 1-4 years into their business experience (40%).

**Table 1. The demographic data of the respondents**

Description		Frequency	Percent
Gender	Male	217	58
	Female	157	42
Age	18-23 years old	42	11
	24-29 years old	56	15
	30-35 years old	67	18
	36-41 years old	112	30
	>41 years old	97	26
Education	Junior high school	5	1
	Senior high school	184	49
	Diploma	76	20
	Bachelor	106	28
	Master	3	1
	Doctor	0	0
Length of business	1-4 years	148	40
	5-9 years	141	38
	10-14 years	77	21
	>14 years	8	2

### Validity and Reliability Test

The average variance extracted (AVE) is a suitable metric to use in evaluating the measurement model, with a robust model indicated by each construct's AVE above 0.5. The measuring model's reliability in SEM can be evaluated with Cronbach's alpha ( $\geq 0.70$ ).

**Table 2. Validity and Reliability**

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
AI-assisted E-Commerce	0,724	0,723	0,845	0,647
Competitive Advantage	0,800	0,808	0,870	0,627
Customer Satisfaction	0,838	0,839	0,903	0,756
Product Diversification	0,744	0,747	0,855	0,663
Relationship Marketing	0,816	0,820	0,879	0,645

The variables AI-assisted e-commerce, product diversification, relationship marketing, competitive advantage, and customer satisfaction, along with the learning outcome value, form a strong model, further confirming that all construct variables in the estimated model satisfy the criteria for discriminant validity. Based on the scores provided in Table 2, each and every construction has an AVE rating greater than 0.5. The dependability of the composite is

evaluated by expanding the outer model. Composite reliability evaluates the dependability of the indicator sectors that comprise a construct. The construct is reliably represented if the composite reliability is more than 0.6 and the Cronbach's alpha is greater than 0.6. The construct's reliability is deemed excellent if the Cronbach's alpha value is more than 0.70. According to Table 2, the Cronbach's alphas for AI-assisted e-commerce, competitive advantage, customer satisfaction, product diversification, and relationship marketing are 0.724, 0.800, 0.838, 0.744, and 0.816, respectively. There is more than a 0.6 Cronbach's alpha for each of the seven model structures. Consequently, the variables of AI-assisted e-commerce, product diversification, relationship marketing, competitive advantage, and customer satisfaction exhibit high construct dependability, indicating high reliability. Thus, the model in this study satisfies the criteria for construct reliability.

The dependent construct's R-squared (R<sup>2</sup>) value was utilized for model assessment. An R-squared value above 10% (or the model's goodness-of-fit) or 0.10 (the overall model's predictive power) is indicative of a strong model. Table 3 displays the R-squared value, which is the result of using PLS to process the data.

**Table 3. R-squared Value of the First Model**

Variables	R-Square
Competitive Advantage	0.750
Customer Satisfaction	0.468

The value of R-squared competitive advantage = 0.750, as shown in Table 3, which means that this variable indicates that competitive advantage is affected by AI-assisted e-commerce, product diversification, relationship marketing, and customer satisfaction up to 75.0%. The other 25.0% is influenced by all other factors. The adjusted R-square between customer satisfaction and social media marketing is 0.468, suggesting that customer satisfaction is influenced by social media marketing for 46.8%. The remaining 53.2% is influenced by other factors. However, the AI-enabled e-commerce, product diversification, and relationship marketing are not dependent on the Y variable. So they do not have an R-squared value.

### Hypothesis Testing

Coefficients or parameters that reveal causal linkages or the impact of latent variables on other latent variables are evaluated in hypothesis testing.

**Table 4. Direct effect**

Hypothesis	Path Coefficient direct effect	p-value	Description
AI-assisted E-Commerce -> Competitive Advantage	0.185	0.036	Significant
AI-assisted E-Commerce -> Customer Satisfaction	0.273	0.013	Significant
Customer Satisfaction -> Competitive Advantage	0.405	0.000	Significant
Product Diversification -> Competitive Advantage	0.213	0.029	Significant
Product Diversification -> Customer Satisfaction	0.296	0.023	Significant
Relationship Marketing -> Competitive Advantage	0.225	0.004	Significant
Relationship Marketing -> Customer Satisfaction	0.213	0.015	Significant

This indirect effect signifies the extent of the direct impact of exogenous variables on endogenous variables through mediating variables.

**Table 5. Indirect effect**

	Path Coefficient direct effect	p-value	Description
AI-assisted E-Commerce -> Customer Satisfaction -> Competitive Advantage	0.110	0.029	Significant
Product Diversification -> Customer Satisfaction -> Competitive Advantage	0.120	0.036	Significant
Relationship Marketing -> Customer Satisfaction -> Competitive Advantage	0.086	0.044	Significant

Table 5 presents that the p-value of 0.029, which is smaller than alpha 0.05, is rendered by the inner model estimation for the indirect influence of AI-assisted e-commerce on competitive advantage via customer satisfaction. This indicates a positive indirect effect of 0.110 from AI-assisted e-commerce via customer satisfaction to competitive advantage. The favorable impact of AI-assisted e-commerce on competitive advantage, mediated by customer satisfaction, indicates that greater AI-assisted e-commerce is associated with higher customer satisfaction. Therefore, the competitive advantage grows in direct proportion to the level of consumer satisfaction. Conversely, consumers are less satisfied when e-commerce is not aided by AI. Therefore, competitive advantage decreases in conjunction with customer satisfaction. This shows that AI-assisted e-commerce not only makes MSMEs less competitive, but it also makes them more competitive by satisfying customers. AI technology helps MSMEs understand customer needs, spot industry trends, and adjust their service plans to make customers happier. This higher level of customer satisfaction makes MSMEs more competitive, in line with the digital transformation goal of promoting the growth of the creative economy and helping the Indonesian government achieve its goals.

The inner model calculates the indirect impact of product variety on competitive advantage using customer happiness as an intermediate variable; the resultant p-value is 0.036, which is less than alpha 0.05. Thus, we may conclude that product variety has a positive indirect impact of 0.120 on competitive advantage via customer happiness as an intermediate variable (see Table 5). Increased product variety is linked to improved customer satisfaction, according to the positive effect of product diversification on competitive advantage, which is mediated by customer happiness. Advantage in the market rises in step with customer satisfaction. Conversely, customer satisfaction decreases when product diversity decreases. As a result, competitive advantage will likewise decline as customer satisfaction declines. This means MSMEs can adapt their products to meet market requirements and trends, giving customers more options. A broader product range makes customers happier, which in turn makes MSMEs more competitive. So, diversifying products is not only a way for businesses to stay in business, but it also supports digital transformation and strengthens the creative economy of small and medium-sized businesses.

According to  $\alpha = 0.05$ , the estimate of the inner model for the indirect impact of relationship marketing on competitive advantage via customer satisfaction as an intervening variable is 0.044, which is smaller than the p-value. Thus, we may draw the conclusion that relationship marketing has a significant positive indirect impact of 0.086 on honesty (see Table 5), which in turn affects competitive advantage. Competitive advantage benefits from relationship marketing, both directly and via client happiness. In other words, more relationship marketing will result in more customer satisfaction. If customer satisfaction increases, competitive advantage too will increase. On the contrary, a lower relationship marketing means that customers become less satisfied. So, when customer satisfaction goes down, competitive advantage will go down as well. This demonstrates that the MSME engaged in relationship marketing, such as trying to get closer to customers, retaining their trust, and having interaction with them, which would lead to satisfaction. In this way, ultimately, such a feeling of satisfaction will enable MSMEs to be competitive in a challenging market. The use of AI in e-commerce can help relationship marketing to become more personalized and customized to each individual customer. This corresponds to the objective of MSME digital transformation, which is being used as a means to drive the creative economy.

Additionally, the measurement path diagram model (outer model) and the structure model are illustrated in Figure 1.

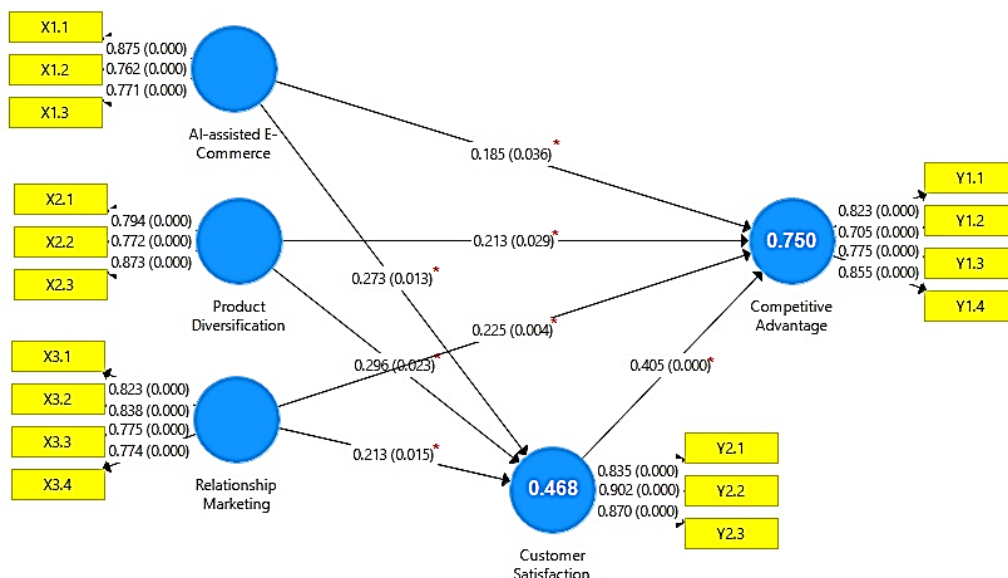


Figure 1. Path diagram model and structural model

## DISCUSSION

MSMEs in Indonesia contribute a lot to the national economy and employment. The more sophisticated technology and the higher degree of business competition are directly affecting long-term sustainability for MSMEs. This predicament has forced MSMEs to embrace technology, including AI, that can change the manner in which they conduct business. Consistent with what was noted by Madanchian (2024), when adding AI to their marketing line-up, services will improve, adverts will become more effective, and navigation on e-commerce sites will be seamless, thus making business more of a competitive venture. Based on Table 4 and Figure 1, it demonstrates that the impact of AI-based e-commerce on competitive advantage was found to be statistically significant, with a p-value of 0.036, which is less than the alpha value of 0.05. With a score of 0.185, it can be concluded that there is a very large positive direct impact of AI-enabled e-commerce on competitive advantage. Better AI-assisted e-commerce performance at a competitive advantage will rise as a result of the mild effect of AI-assisted e-commerce on competitive advantage. As for the poor, AI-assisted e-commerce will mean less competitive advantage. From a cultural point of view, the impact on customer satisfaction of AI-oriented e-commerce can be described with reference to some expectations culturally formed by trust, and reactivity in relation to personalized interpersonal communication. In relational markets, AI-based attributes that mimic human-like engagement levels can increase perceived credibility and emotional trust in e-commerce. This result is consistent with the conclusion of Madanchian (2024), who identifies that companies have a strategic advantage in AI-assisted e-commerce by leveraging data, changing processes to digital, and being able to reach client information in real time, which improves the competitive performance. Other research that is in line with this study (Barata et al., 2024; Firly, 2024; Muhammad et al., 2023; Rahman & Ervina, 2021) argues that the use of technology, particularly AI-based e-commerce, will create MSMEs' competitiveness. Predictive modeling: But artificial intelligence (AI) can also forecast retail buying patterns, market trends, and e-commerce sales. In this situation, customer loyalty and happiness might rise (Dwivedi, Hughes, et al., 2021; Evelina, 2022), increasing the duration of sale and the company's payback (Denmamode & Panchoo, 2024; Huang & Rust, 2018; Mufid et al., 2019; Zhong, 2023).

The need for a wide choice of items to assist MSMEs in growing their businesses is another important support factor. By providing a greater range, MSMEs may draw in more clients and make it simpler for them to choose what's best for them. This makes them more competitive. The findings of this study reveal a significant relationship between product diversification and competitive advantage, with a p-value of 0.029, which is lower than the alpha level of 0.05 (see Table 4 and Figure 1). Thus, this research supports that there is an association between product diversification and competitive advantage. The direct effect size of 0.213 is significant. The greater the product diversification, the higher the competitive advantage. Positive Impact of Product Diversity on Competitive Advantage. The findings in this paper are complemented by Castaldi and Giarratana (2018), Nagle and Teodoridis (2020), and Singh et al. (2010), who showed that diversification of product value is because of increasing market share and competitiveness. Previous studies have shown the relationship between product innovation and diversity and the sales performance as well as competitiveness of MSMEs (Dwivedi, Hughes, et al., 2021). However, the worse the product diversification, the smaller its competitive advantage. The findings of this study are in line with Fauzani (2021), that product diversification has a positive and significant effect on sales volume. Research conducted by Fadilla & Nurhadi (2024) supports the results, as it demonstrates that a product with a variety of types and an adjusting feature for consumer needs can build perceived value and improve user experience in product use. A broader choice of products, too, increases the likelihood that a company will not only meet but exceed customer needs, lifting overall satisfaction levels. Product variety, a range of consumer preferences affected by regional tastes, societal conventions, and symbolic consumption are all part of this culturally driven behavior. Because of cultural variations, product diversity is more significant for perceived value and position. In this instance, product diversity is solely used as a tactic in one account and as a core value to discreetly keep clients in the face of competition.

Another factor that contributes to the success of MSMEs is relationship marketing. It is by relationship marketing that emotional and psychological linkages are created between customers and the firm through frequent communication, customized communication, and dependable service. When companies work to establish long-term relationships, customers consider both the product's functional attributes and psychological ones, like how much they like, trust, and feel safe with the brand. Proximity-based relationship marketing in digital contexts. With the increasing use of digital channels such as WhatsApp Business, Instagram, TikTok Shop, and various marketplaces by more people, time experiences may be digitally incorporated by delivering personalized engagement quickly. The results support relationship marketing theory, which holds that loyalty and satisfaction depend on open communication, sustained dedication, and trust. According to Table 4 and Figure 1, the result of  $p = 0.004$  indicates that relationship marketing has a direct impact on competitive advantage ( $p < 0.05$ ). This suggests a 0.225 favorable direct impact. Relationship marketing's beneficial impact on competitive advantage

suggests that stronger relationships will boost competitive advantage. This result has also been supported by Djajanto, Afiatin, and Haris (2019) with a demonstration that relationship marketing determines the significant effect on customer satisfaction and competitive advantage. Yet the effect on competitive advantage of bad relationship marketing will be more deleterious. The findings of this study are in line with Palmatier et al. (2006), a study that found that relationship marketing was able to contribute strategic resources as considered by the RBV model, and it could lead to attaining a sustainable competitive advantage through increasing customer loyalty, reducing churn, and improving lifetime value for customers. Relationship Marketing also enhances market intelligence just by providing clients' input whenever the company wants. This encourages the introduction of new ideas in the market and enables a business to react fast to market opportunities. Hence, it makes them more able, as they can swivel against competitors' countermeasures (Hunt, 2011). Cultural logics can better explain how effective relationship marketing is. Due to relational change dimensions and collectivism, cultural logics embedded within relational norms significantly measure the impact of relationship marketing on customer satisfaction and shelf placement. This study corroborates the findings of Suharto & Hoti (2023), showing that relationship quality, trust, commitment, and a company's focus on meeting customer demands play a significant role in improving customer performance. Relationship marketing tools such as data-driven encryption, interactive chatbots, and digital CRM can help companies actively manage personal customer connections. Modern marketing: Customers who are valued are more likely to stay with a business, be strong advocates, and boost its long-term worth. Additionally, this research reveals that the link between digital marketing strategy elements and firm competitiveness is highly mediated by customer happiness. Thus, technology, product variety, and customer bonding strategies are not automatically antecedents of competitiveness; rather, their efficacy is largely a function of the firm's ability to create a satisfactory consumer experience.

Table 4 and Figure 1 show that the path analysis, at a  $p=0.000$  (less than the alpha limit of 0.05), indicates that customer satisfaction directly influences competitive advantage. The direct effect size is 0.405, and customer satisfaction has a positive relation with competitive advantage. Since relationship marketing positively affects competitive advantage, the greater the satisfaction of customers, the greater the competitive advantage will increase. Conversely, the lower the customer satisfaction, the less competitive advantage they will enjoy. The observations of Meier et al. These papers' results are consistent with those of Meier et al. (2025) and Zeithaml and Bitner (2020), in light of which customer satisfaction, positive word of mouth, and brand image impact competitive advantage. This finding is consistent with the theory of Resource-Based View (RBV), for which competitive advantage derives not only from physical properties or technology but also from process and customer-relationship capabilities too (Arshi et al., 2020). It is also an interface between marketing strategy and market success, considering satisfied consumers as loyal, supportive, and increasing long-term transaction value. The findings show that the success of corporate digitalization is primarily affected by the degree to which an organization puts emphasis on customers in the innovation. This result is also consistent with an earlier study by Oduro & Mensah-Williams (2023), which found that marketing capabilities such as relationships with customers and creative product development increase the competitiveness of MSMEs through enhancing their perceived customer value. According to the Resource-Based View paradigm, culturally distinctive traits are a resource, while customer loyalty and dedication to complementarity are reflected via cultural norms. By presenting pleasure as a tool and providing a comprehensive model that illustrates how it maintains competitive advantage in tandem with technical marketing strategy, this study theoretically offers value.

## CONCLUSIONS

AI-powered e-commerce, relationship marketing, and product diversity all work together to fulfill and increase consumer happiness, according to the analysis and testing of the study hypothesis. With the help of tailored suggestions, intelligent customer support, and predictive analytics that can forecast your future account use, AI-powered e-commerce greatly increases its client base. An AI-driven e-commerce platform offers predictive analytics, intelligent customer support, and tailored suggestions to increase the clientele. Online shopping experiences may be made more convenient, secure, and interactive with the use of AI-powered controls. Additionally, AI improves productivity, data-driven decision-making, and SMEs' worldwide competitive edge. By satisfying a variety of demands and tastes, product diversity promotes consumer choice and discloses the carrier's perceived worth. A business that sells goods might become less reliant on a particular product line in order to accommodate various market demographics and consumer preferences. This adaptable flexibility makes a structure more competitive and ready. It helps them keep a competitive edge and boosts volume in terms of marketing. A long-term emotional connection and trust between the organization and the client are maintained over this time. The emergence of AI-powered e-commerce, product diversification, and relationship marketing may be influenced by cultural norms, consumer expectations, and trust-based interactions in addition to technology capabilities.

Collectivism is seen in connected individual markets as a unique digital alternative for delivering customer-focused goods and preserving market competitiveness.

The findings of this study expand the marketing literature that integrating AI, product diversification, and relationship marketing can increase a company's competitiveness with higher customer satisfaction. That word goes to SMEs that can produce cheap goods but also ones whose representatives are never satisfied with the product unless customers are thrilled, and who treat their employees well and respect the communities in which they operate. In addition, this research provides some useful implications for SMEs and policymakers in order to design effective, integrated, and competitive digital transformation strategies.

There are several limitations to this study, including the use of cross-sectional data that do not account for temporal dynamics in technology adoption or variability in satisfaction over time. The sample of the study was limited to three cities. Future research should further extend the sample to additional cities and countries.

## **AUTHOR CONTRIBUTIONS**

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