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IMPACT OF PRODUCT DIFFERENTIATION, CULTURE, AND E-COMMERCE KNOWLEDGE ON TRUST AND INTENTION TO USE E-COMMERCE AMONG MSMES

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Product Differentiation, Culture, E-Commerce Knowledge, Trust, Intention to Use E- Commerce, MSMEs.

ABSTRACT

Purpose : *This study explores the effect of product differentiation, culture, and e-commerce knowledge on trust and intention to use e-commerce among MSMEs in Palopo City.* ***Methodology:*** *It employs a quantitative approach using questionnaires, with data analyzed through Partial Least Squares Structural Equation Modeling (PLS-SEM).* ***Results:*** *show that product differentiation and e-commerce knowledge have a significant positive effect on trust and intention to use e-commerce, while culture only affects the intention to use e-commerce. Trust mediates the relationship between product differentiation and e-commerce knowledge with intention to use e-commerce.* ***Novelty:*** *this study lies in its integrative approach, combining multiple factors influencing e-commerce adoption by MSMEs in one model.* ***Finding:*** *It also tests the mediating role of trust, a factor not extensively explored in previous studies on this topic.research contributes to theory by expanding understanding of the variables that affect e-commerce adoption by MSMEs. It also offers practical insights, suggesting MSMEs focus on product innovation and improving e-commerce education to increase competitiveness.****Originality:*** *The study's limitations include its narrow geographic focus and cross-sectional approach. Future research should expand the scope and use longitudinal methods to explore the dynamics of e-commerce adoption.* ***Type of Paper:*** *Empirical Research Paper.*

INTRODUCTION

The development of digital technology has had a significant impact on various aspects of life, including economic and business activities. E-commerce, as one of the innovation (Kathiarayan, 2023) E-commerce platforms enable micro, small, and medium-sized enterprises (MSMEs) to expand their market reach, reduce operational costs, and improve business efficiency. However, the implementation and success of e-commerce is highly dependent on various factors, including product differentiation, culture, knowledge of e-commerce, as well as the level of user trust. Product differentiation is an important strategy for MSME players to create added value and competitiveness in an increasingly competitive market. With differentiation, businesses can highlight the uniqueness of products that competitors do not have. In addition, local culture also plays an important role in shaping consumer behavior and trust in e-commerce platforms.

Knowledge about e-commerce is another important determinant, especially in terms of MSMEs' ability to utilize technology to support their business operations (Tanveer et al., 2021).

Trust is a key element in the implementation of e-commerce, considering that transactions conducted virtually without direct interaction between sellers and buyers. Trust in e-commerce platforms, such as transaction security, information transparency, and service quality, can encourage users' intention to use e-commerce on an ongoing basis. Therefore, an understanding of the relationship between product differentiation, culture, e-commerce knowledge and trust is essential to create an effective strategy to increase the use of e-commerce by MSMEs. Previous research has explored various aspects related to e-commerce (Rahman, 2021). found that product differentiation contributed significantly to increasing consumer trust (Silitonga et al., 2020). showed that culture has an influence on trust and intention to use technology. (Ajenaghughrure et al., 2018). highlighted the importance of e-commerce knowledge in driving technology adoption by businesses. However, most of these studies were conducted in the context of specific industries or regions, so they do not reflect the diverse characteristics of MSMEs in Indonesia. In addition, the mediating relationship between trust and the effect of product differentiation, culture, and e-commerce knowledge on e- commerce usage intention has not been widely studied.

This study aims to fill the gap by comprehensively examining the effect of product differentiation, culture, and e-commerce knowledge on trust and intention to use e-commerce by MSME players. The novelty of this research lies in the integrative approach that combines these variables in one structural model, as well as testing the mediating role of trust in the relationship between independent variables and intention to use e-commerce. The objectives of this study are to: (1) analyze the effect of product differentiation, culture, and e-commerce knowledge on trust; (2) analyze the effect of trust on intention to use e-commerce; and (3) identify the mediating role of trust in the relationship between product differentiation, culture, and e-commerce knowledge with intention to use e-commerce. Thus, the results of this study are expected to contribute to the development of management science, especially in understanding the factors that encourage the adoption of e-commerce by MSMEs in Indonesia (Alqahtani et al., 2012).

Product Differentiation

Product differentiation is a strategy used by companies to create uniqueness or differences in their products compared to competitors' products. According to marketing theory, differentiation aims to create added value that is recognized by consumers so that products become more attractive and competitive. Differentiation can be in the form of functional aspects, such as quality, additional features, design, and innovation, as well as emotional aspects, such as brand image and user experience. In the context of e-commerce, product differentiation is often the key to attracting consumer attention in a market full of choices. Companies that successfully implement product differentiation effectively are able to increase customer loyalty and reduce price sensitivity. Product differentiation plays an important role in increasing consumer trust in service providers, especially in the context of e-commerce (Thakare & Deshpande, 2018). Effective product differentiation not only creates uniqueness but also provides added value that is recognized by consumers. Product differentiation can be in the form of design innovation, quality, or specific product features, all of which increase consumers' positive perceptions of the service provider's professionalism. The trust established through the right differentiation strategy will minimize consumers' distance from the risks of online transactions, thereby strengthening customer loyalty. (Mohammad Ebrahimzadeh Sepasgozar et al., 2020)

Culture

Culture is a system of values, norms, and beliefs shared by individuals in a group or society. In the context of e-commerce, culture has a significant influence on consumer behavior, including online shopping decisions (Pratesi et al., 2021). According to Hofstede, cultural elements such as individualism, collectivism, power distance, and their influence on the rate of technology adoption, including e-commerce. For example, people with individualist culture tend to adopt e-commerce faster because they prioritize convenience and efficiency. In contrast, collectivist societies are more likely to rely on social recommendations before using e-commerce services. Culture is an important variable that influences technology usage behavior, including e-commerce. states that cultural elements, such as individualism and collectivism, affect the rate of technology adoption in society. Individualist societies tend to adopt e- commerce faster due to the values of efficiency and convenience that are upheld. In contrast, collectivist societies are more likely to rely on social recommendations, meaning they need validation from social groups to use (Rahman, 2021).

E-Commerce Knowledge

E-commerce knowledge includes consumers' understanding of how e-commerce platforms work, their features, and the benefits that can be gained from using them. Based on the Technology Acceptance Model (TAM), better knowledge of technology affects perceived usefulness and perceived ease of use, which in turn drives e-commerce adoption.(Pratesi et al., 2021) Consumers with a high level of knowledge tend to be more confident in navigating e-commerce platforms, understanding payment systems, and utilizing features such as discounts or product personalization, so they are more likely to adopt and use the service. Culture reflects the system of values, norms, traditions and beliefs held by individuals in a particular society. Components of culture, such as individualism, collectivism, and power distance, affect consumer behavior, including in the adoption of e- commerce technology. Hofstede (1980) emphasizes that societies with high levels of individualism tend to be more open to new technologies such as e-commerce, due to the values of efficiency and convenience that are (Bylok et al., 2019).

Trust

Trust is a core element in the relationship between consumers and e- commerce service providers. According to Trust Theory, trust is formed from three main dimensions: competence, integrity, and benevolence. (Jr et al., 2018) In e-commerce, trust is influenced by factors such as transaction security, information transparency, and customer reviews. Trust plays an important role in reducing the perceived risks inherent in online transactions, such as fraud or unsuitable products. A high level of trust increases consumer confidence in e-commerce services, which in turn drives intention and loyalty to shop online. Trust is an important mediating variable in the relationship between variables such as product differentiation and e- commerce knowledge e-commerce intention. Consumer trust in e- commerce platforms is built through positive experiences, transaction security, and transparency of information provided by service providers. According to Su et al. (2024), trust plays a central role in reducing the perceived risks often associated with online transactions, such as fraud or products that do not match the description (Fish, 2020).

Intention to Use E-Commerce

E-commerce usage intention (intention to use e-commerce) refers to the level of consumer willingness to utilize e-commerce platforms to meet their needs. In the Theory of Planned Behavior (TPB), intention to use is influenced by attitude towards use, subjective norms, and perceived behavioral control. A positive attitude towards e-commerce, supported by good experiences, ease of use, and perceived benefits, encourages an increase in intention to use the platform. In , external factors such as promotions, positive reviews, and recommendations from

friends or family also influence consumers' intention to adopt e-commerce (Ahluwalia & Merhi, 2020). E-commerce usage intention refers to the level of individual willingness to utilize e-commerce platforms to meet their needs. In the Theory of Planned Behavior (TPB), the intention to use e- commerce is influenced by three main factors: attitude towards use, subjective norms, and perceived behavioral control. Positive attitudes towards e-commerce, such as perceived ease of use and perceived benefits, play an important role in driving this intention. (Mohd Noor et al., 2024).

Theory of Reasoned Action (TRA)

The theoretical framework of this study is based on the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975). TRA explains that the intention to perform behavior is determined by two main factors: attitude toward behavior and subjective norm. In the context of e- commerce, the intention to use e-commerce by MSME actors is influenced by beliefs about the benefits and social support received (Rogers et al., 2019).

Culture and beliefs

Culture and trust have a positive influence on technology adoption, including e-commerce usage intention, because both factors reflect social and psychological. (Kathiarayan, 2023). A culture that supports change and modernization can increase the acceptance of new technologies, while trust in e-commerce platforms reduces the perceived risks inherent in online transactions. Research shows that cultures with individualistic values tend to encourage individuals to utilize e- commerce technology because of the convenience and efficiency it offers. However, this influence may become insignificant due to the presence of other more dominant factors. In the context of e-commerce, functional aspects such as price, (Sherratt et al., 2025). product quality, and ease of use of technology are often more important than cultural influences or trust levels. (Ayob, 2021) In addition, respondent diversity, such as education level or access to technology, can lead to large variations in the results of cultural influence and trust. This study supports that although culture and trust have a positive direction of influence, their impact may not be statistically strong enough to be significant when compared to other more directly relevant variables.

H1. Culture has a negative and insignificant influence on trust

Culture and Intention to Use E-Commerce

Culture has a positive influence on e-commerce intention to use because values and norms in culture can shape people's attitudes and behaviors in accepting technology. In the context of a society that values efficiency and modernity such as an individualistic culture, implementing e-commerce becomes easier because individuals have a preference for solutions that are practical and save time. (Sun, 2020). shows that cultural elements such as individualism and collectivism affect the level of technology adoption. People with individualistic culture are more likely to use e-commerce because it emphasizes personal convenience. In contrast, in collectivist societies, social recommendations and group trust play an important role in increasing the intention to shop online. In addition, a culture that encourages trust in technology also contributes to increasing the intention to use e-commerce. A culture that supports modernization and digitalization creates a social environment where online transactions are seen as safe and trustworthy (Abunadi, 2023). found that a technology-adaptive culture has a significant influence on trust and intention to use e-commerce. Thus, culture not only influences users' perceptions of the benefits of e-commerce but also provides social support that strengthens individuals' confidence to transact online (Silitonga et al., 2020).

H2. Culture has a positive and significant influence on the intention to use e-.commerce

Product Differentiation and Trust

Product differentiation has a positive influence on trust because this strategy allows businesses to create unique value that competitors do not have. Successful differentiation, whether through product features, quality, design, or emotional elements such as brand image, enhancing customer perceptions of the credibility and competence of the service provider. In the context of e-commerce, product uniqueness can be an indicator that the company has expertise and focuses on customer needs, thus fostering trust. Firdausi et al. (Tanveer et al., 2021). Found that strong product differentiation contributes significantly to increasing consumer trust because it provides confidence that the product or service offered has value in accordance with customer expectations. Trust is also influenced by how product differentiation strengthens customer loyalty. By providing a positive experience through innovation or customization of customer needs, companies build long-term relationships based on trust. This is important in e- commerce, where trust plays a central role as transactions are conducted virtually. With high trust, customer-perceived risks, such as fraud or products that do not match the description, can be minimized. Proper product differentiation increases customer trust in the service provider's ability to deliver on product promises, which in turn strengthens loyalty and intention to transact further. (Ahluwalia & Merhi, 2020)

H3. Product differentiation has a positive and significant influence on the value of products.
trust

Product differentiation and Trust

Product differentiation has a positive effect on e-commerce usage intention because it can create a unique attraction for consumers. A differentiation strategy allows companies to offer products that have added value and features that stand out compared to competitors. In the context of e-commerce, this is especially relevant because consumers have many choices on digital platforms. By offering different products, companies can increase consumer interest to try and buy through e-commerce. (Rochani & Puspasari, 2023). Stating that product differentiation provides value that is recognized by consumers, which ultimately increases their intention to use the e- commerce platform. In addition, successful product differentiation also supports consumers' perceptions of the credibility and quality of e-commerce platforms. Products that are innovative or have a certain uniqueness are often associated with companies that are professional and focused on consumer needs. This not only creates initial interest but also strengthens the ongoing intention to use e-commerce in the long term. In the study, product differentiation was found to be a factor that drives consumers' intention to continue using digital services because consumers feel they get greater benefits compared to conventional transactions (Yuvira et al., 2021).

H4. Product differentiation has a positive and significant influence on intention.

Product Differentiation and Intention to Use E-Commerce

Knowledge about e-commerce has a positive effect on trust because it increases consumers' understanding of how e-commerce platforms work, payment systems, and security features offered. With sufficient knowledge, consumers can project the credibility and reliability of an e-commerce platform based on the information available. (Karunasingha & Abeysekera, 2022). This supports the formation of trust because consumers feel more confident that the platform is able to provide a safe and transparent transaction experience. Research shows that consumer knowledge about e-commerce is directly related to reduced risk perception and increased trust in digital systems. addition, knowledge about e-commerce also allows users to better understand the added value offered by the platform, such as loyalty programs, discounts, or product personalization. This understanding not only increases trust in the platform but also strengthens the long-term relationship between consumers and service providers (Andhry

Quodvultdeus Darmawan, 2020). In a study conducted by Noor et al, higher knowledge of e-commerce was found to significantly strengthen users' trust through their ability to assess the integrity and competence of service providers. Thus, the more consumers know the benefits and mechanisms of e-commercethe higher the level of trust they give to the platform (Venkatesh et al., 2003).

H5. E-Commerce Knowledge has a positive and significant influence on trust

E-Commerce Knowledge and Trust

It increases consumers' understanding of the benefits, features, and conveniences offered by digital platforms. Based on the Technology Acceptance Model (TAM), good knowledge about e-commerce has a significant effect on perceived usefulness and perceived ease of use (Mohammad Ebrahimzadeh Sepasgozar et al., 2020). Consumers who understand how e-commerce works, such as transaction mechanisms or data security, tend to have a positive attitude towards its use, which in turn increases their intention to use the platform. In addition, knowledge about e-commerce makes consumers confident in exploring the features offered, such as product personalization, loyalty programs, or discount offers. This not only increases the appeal of the platform but also strengthens consumers' belief that e-commerce is an efficient and relevant solution to meet their needs (Bylok et al., 2019). Noted that consumers with better knowledge of e-commerce tend to be more proactive in adopting the technology, as they are able to reduce the perception of risk that is often a barrier to digital transactions (Hong & Zhu, 2006).

H6. E-Commerec Knowledge has a positive and significant influence on Intention to Buy.

E-Commerce Knowledge and Intention to Use E-Commerce

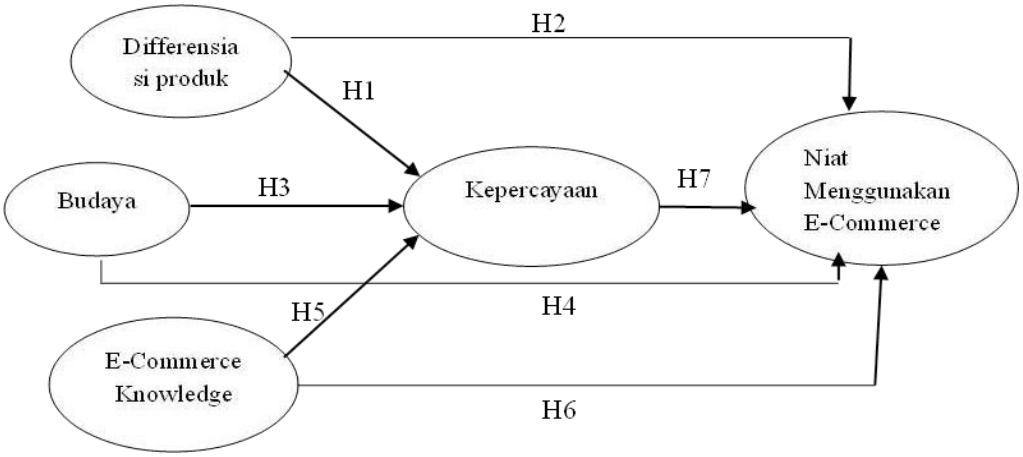
Trust has a positive influence on intention to use e-commerce because trust creates a sense of security and confidence for consumers to make transactions in a virtual environment. According to trust theory, elements such as competence, integrity and goodwill of the platform provider play an important role in building consumer trust. When consumers feel confident that an e- commerce platform can provide services that meet their expectations, including transaction security and information transparency, they tend to be more motivated to use the platform. (Alqahtani et al., 2012). Research by Su et al. shows that trust is a key factor in driving consumer intention to continue shopping through e-commerce. In addition, trust also helps reduce the perception of risk often associated with digital transactions, such as fraud or products that do not match the description. With trust, consumers feel more comfortable and confident that they will get the benefits they want without having to worry.

This trust not only increases the likelihood of consumers to try the e-commerce platform but also strengthens their loyalty to the platform. (Lee et al., 2018). This is consistent with research findings that high trust in e-commerce directly affects consumers' intention to use technology repeatedly and continuously.(Mcknight et al., 2002).

H7. Trust has a positive and significant influence on intention using e-commece.

Research Framework Image

Figure 1: Research Framework



METHOD

Population and Sample

This study included all MSME actors in Palopo City as the population. Since the overall population of this study is unknown, we applied non-probability sampling for data collection. When the number of samples that cannot be calculated is very large, the use of non-probability sampling is considered appropriate (Latan et al., 2021). Social media helped identify respondents through snowball sampling techniques. There were 271 respondents from Palopo City who agreed to participate in this study. However, this study only received 221 responses. In the initial analysis, the study excluded 50 incomplete responses. Thus, the study had a response rate of 59.89%. According to (Baruch & Holtom, 2008), a response rate that exceeds 15% is considered acceptable for survey methodologies. , this study has collected 221 responses and met all the requirements. (Ibrahim et al., 2020)

Table 1. Description of Respondents

Variables	Percentage %	Variables	Percentage %
Age		**Services**	
20 years old	115 (49.4%)	Culinary	33 (14.2%)
20-25 yrs	85 (36.5%)	Trade	57 (24.5%)
25-30 yrs	24 (10.3%)	Manufacturing	66 (28.3%)
30-35 yrs	11 (4.7%)	Others	18 (7.7%)
		Types of Al you use for	60 (25.8%)
Education Level		**Business activities**	
SMP	7 (3%)	Chat gpt	70 (30%)
SMA/SMK	186 (79.8%)	CopyAl	38 (16.3%)
Diploma (D3)	8 (3.4%)	Pictory	32 (13.7%)
Bachelor (S1)	3 (1.3%)	Synthesia	22 (9.4%)
Master (S2)	3 (1.3%)	Others	83 (35.6%)
Gender		**Business Turnover**	
Male	97 (41.6%)	< Rp. 500,000	76 (32.6%)
Female	139 (59.7%)	Rp.1,000,000 - Rp.5,000,000	80 (34.3%)
		Rp.6,000,000 - Rp.10,000,000	52 (22.3%)
		Rp.11,000,000	30 (12.9%)

The duration you usually use		Time-The time you usually use AI for business activities in one day day	
AI in a day	92 (39.5%)	Morning (06:00 - 10:00)	49 (21%)
1> 2 Hours	100 (42.9%)	Daytime (11:00 - 15:00)	76 (32.6%)
2> 3 Hours	31 (13.3)%		
4 Hours	13 (5.6%)	Afternoon (16:00 - 18:00)	66 (28.3%)
		Nighttime (18:00 - 00:00)	58 (24.9%)

Source : Data Processed, 2025

Measurement items and scales

Measurement items and scales are key components of quantitative research that often influence research results. The right measurement item must be able to capture the concept of the construct being measured. (Thakare & Deshpande, 2018) The same measurement items were used in previous empirical research. Due to the complexity of scale development, the use of existing measurement items is usually considered more practical than creating new measurement items (Latan et al., 2021). Product Differentiation (DP); Culture (B); E-Commerce Knowledge (ECK); Trust (K); Intention to Use E-Commerce (NMEC) was measured using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly) (Ayob, 2021).

Table 2. Measurement items

Construction	Loading
Innovation	0.724
Down pyment	0.725
Social Networking	0.731
Levers Of Control	0.736

Note : Product Differentiation (DP) Adapted from Firdausi, Novandina Izzatillah (2020)

Construction	Loading
Safety Performance	0.96
Belief	0.978
Pragmatic	0.978
Anthropological	0.956

Note : Culture (B) Adapted from Sherratt, Fred Szabo, Emi Hallowell, Matthew R. (2024)

Construction	Loading
Entrepreneurship	0.875
Skills	0.73
Women Entrepreneurship	0.869
Businesswoman	0.773

Note : E-Commerce Knowledge (ECK) Adapted from Mohd Noor, Nurul Hidayana Yaacob, Mahazril Aini Omar, Noralina (2024)

Construction	Loading
Trust In Platform	0.796
Customer Identification With Company	0.764
Customer Citizenship Behavior	0.911
Signals Sent By The Platform	0.921

Note: Trust (K) Adapted from Su, Linlin Cheng, Xusen Zarifis, Alex (2024)
Intention to Use E-Commerce (NMEC) Adapted Hong, Weiyin Zhu, Kevin (2006)

Construction	Loading
Partner	0.849
Technology Integration	0.905
Use Of EDI	0.715
Web Expenditure	0.773

Notes: Product Differentiation (DP); Culture (B); E-Commerce Knowledge (ECK); Trust (K); Intention to Use E-Commerce (NMEC).

Data collection procedure

This study used several steps in the data collection procedure. First, in developing the questionnaire, this study applied the reverse translation procedure from English to Bahasa Indonesia and back to English. This aims to ensure the clarity of the questionnaire content (Sekaran and Bougie, 2016). Second, after obtaining the final version of the questionnaire, an initial pilot test was conducted by sending the questionnaire to 50 respondents for preliminary data analysis. This procedure minimizes potential bias that may affect the validity of the research results. This stage includes calculating possible measurement errors in the survey method, such as method bias, response bias, and social desirability bias, to improve survey quality (Latan et al., 2020) as well as ensuring the questionnaire is understood by respondents (Fowler, 2013; Latan et al., 2020). Third, the main research was conducted by distributing questionnaires through social media and email. This distribution was followed by notification via text message to ensure that the questionnaires sent had been received by the respondents. This method is considered one of the best methods to reach a wide range of respondents at low cost and in a short period of time (Dillman et al., 2014; Latan et al., 2020). To increase the response rate, at the end of each month during the study period, we sent an email to respondents as a reminder. To keep the respondents' personal data confidential, we ensured that their names and identities would not be disclosed in this study. Data collection was conducted during the period September 2024 to November 2024 (Henseler et al., 2015).

RESULTS AND DISCUSSION

RESULTS

This study uses structural equation modeling (SEM) with the Partial Least Squares (PLS-SEM) version 4 approach to test the hypothesis (see Figure 1). The PLS method can model the relationship between all latent constructs simultaneously, by addressing measurement error in the structural model. We chose this method because of its predictive accuracy, especially in complex cases. In addition, PLS proves valuable in situations with limited available theory or when model specification is difficult (James et al., 2024). The following are the criteria for evaluating the structural model (outer model) using SEM-PLS: Conducting reliability testing using composite reliability values and Cronbach's alpha, Factor loadings and average variance extracted (AVE) values indicate convergent validity; The correlation between latent constructs and the square root value of AVE indicates discriminant validity.

Next, we conducted reliability testing on the external model to verify the accuracy, consistency, and precision of the instruments in measuring the constructs. We measured reliability using composite reliability, Cronbach alpha, and rho-c, and found that each statistic exceeded the recommended value

(>0.70) (James et al., 2024). Therefore, Table 3 concludes that the information is reliable. We tested convergent validity by ensuring that the indicators, or real variables, of the construct had a high correlation, in accordance with the principle of convergent validity. We compared the factor loading values with the rule of thumb limit (>0.6) (Hamid et al., 2022). Since the AVE is greater than (>0.50), convergent validity is acceptable. (James et al., 2024) assess discriminant validity by comparing the correlation between latent variables and the square root of the AVE.

The convergent validity test results show that the factor loading for each construct has a value that exceeds the rule of thumb (>0.60), and the AVE (Average Variation Extracted) value for each construct also exceeds the rule of thumb (>0.50). Table 3 shows the results of the convergent validity test. We used two criteria to evaluate discriminant validity. First, we used the (Fornell & Larcker, David, 1981) technique For each construct, the square root of the AVE value should be greater than the correlation between other constructs. The heterotrait-monotrait correlation ratio (HTMT) is another novel way we recommend you use to check discriminant validity in variance-based SEM. The purpose of this method is to solve an important problem in discriminant validity testing (Henseler et al., 2015). HTMT is more sensitive to finding discriminant validity problems compared to other criteria. The HTMT value between two constructs should be less than 0.90 to ensure discriminant validity, and these two criteria supported the validity of all variables in our study (Table 3) (Fornell & Larcker, David, 1981).

Table 3. Reliability, convergent and discriminant validity

Construction	1	2	3	4	5
Culture (B) (1)	0.937	0.968	0.471	0.457	0.408
Product Differentiation (DP) (2)	0.565	0.532	0.729	0.589	0.606
E-Commerce Knowledge (EKC) (3)	0.51	0.76	0.663	0.814	0.755
Trust (K) (4)	0.442	0.767	0.889	0.724	0.851
Intention to Use E-Commerce (NMEC) (5)	0.535	0.83	0.865	0.837	0.662

Notes: The values on the diagonal in bold are the square root of the Average Variance Extracted (AVE) of each factor. The value below the diagonal is the correlation between factors, and the value above the diagonal is the HTMT 1 Heterotrait-Monotrait ratio; the criterion confidence interval does not include 1; HTMT90 -Henseler **et al. (2015)** Product Differentiation (DP); Culture (B); E-Commerce Knowledge (ECK); Trust (K); Intention to Use E- Commerce (NMEC)

The criteria for assessing the structural model (inner model) using SEM-PLS are (i) R-square for the dependent construct and (ii) bootstrapping procedure (t value> 1.96 and significance level = 5%) to determine the significance value. The following are the results of the structural model assessment (inner model) through the bootstrapping procedure to test the hypotheses proposed in this study as presented in Table 4. The structural model or inner model is evaluated by looking at the percentage of variance explained by looking at the R Square value and Q2 value for the dependent latent construct. According to Hair et al. (2017), the rule of thumb for R Square with a value of 0.75 is categorized as important; 0.50 is classified as moderate, and 0.25 is categorized as weak.

The rule of thumb value for Q2 > 0 indicates that the model has predictive relevance, and the rule of thumb value for Q2 < 0 indicates that the model has less predictive relevance. From the analysis (Table 4), the R Square value for the trust construct is 0.285, which means that the variability of trust, which can be explained by the variables of information quality, system quality, and social media marketing activities in the model, amounts to 28.5% and falls into the weak model category. On the other hand, the R Square value of the user satisfaction construct is 0.675, which means that the variability of user satisfaction that can be explained by the variables of information quality, system quality, social media marketing activities, and trust in the model is 67.5% and belongs to the moderate model category. For the Q2 value, the trust construct 0.251> 0, and the user satisfaction construct is 0.541> , which means that the model has predictive relevance (Ajenaghughrure et al., 2018).

Evaluate the significance value by looking at the path coefficient value from the test results with Partial Least Square (PLS) and by bootstrapping calculations (Table 4). From the results of the path coefficient, it can be seen that for (H1), Culture has a negative and insignificant positive effect on trust (β = 0.018; p <0.05). For (H2), Culture has a positive and significant effect on Intention to Use E-Commerce (β=0.118; p<0.05). For (H3) Product Differentiation has a positive and significant effect on Trust (β=0.241; p<0.05). Furthermore, for (H4), Product Differentiation has a positive and significant effect on Intention to Use E-Commerce (β=0.224; p>0.05). Furthermore, for (H5), E-Commerce Knowledge has a positive and significant effect on Trust (β=0.605; p<0.05). For (H6), E-Commerce knowledge has a positive and significant effect on Intention to Use E-Commerce (β=0.302; p<0.05). Then for (H7), Trust has a positive and significant effect on Intention to Use E-Commerce (β = -0.298; p <0.05).

Table 4. Hypothesis Testing

Hypothesis	Relationship	Coefficient	T Statistics	R2 Square	Q2	p-Value	Decision
Path Effect							
directly							
H1	B→ K	-0.018	0.240ns			0.810ns	No supported
H2	B→ NMEC	0.118	2.054**			0.040**	Supported
H3	DP→ K	0.241	4.082**			0.000**	Supported
H4	D→ NMEC	0.224	3.233**			0.001**	Supported
H5	ECK→ K	0.605	8.432**			0.000**	Supported
H6	EC→ NMEC	0.302	4.016**			0.000**	Supported
H7	K→ NMEC	0.298	3.827**			0.000**	Supported
No effect directly							
	B→→ NMEC	-0.005	0.220ns			0.826ns	No supported
	DP→→ NMEC	0.072	2.719**			0.007**	Supported
	ECK→ K →→ NMEC	0.18	3.876**			0.000**	Supported
	K			0.61	0.594		
	NMEC			0.627	0.578		
Effect Total							
	B→ NMEC	-0.005	0.22			0.826ns	
	D→ NMEC	0.072	2.719			0.007**	
	EC→ NMEC	0.18	3.876			0.000**	

Notes: ** statistically significant at 5%; ns not significant. The rule of thumb for the R Square value is as follows:
0.75 for the strong category; 0.50 for the medium category, and 0.25 for the weak category. The rule of thumb value for Q2 > 0 indicates that the model has predictive relevance, and the rule of thumb for Q2 < 0 indicates that the model has no predictive relevance. Product Differentiation (DP); Culture (B); E-Commerce Knowledge (ECK); Trust (K); Intention to Use E-Commerce (NMEC).

DISCUSSION

Product Differentiation and its Effect on Trust and Intention to Use E- Commerce

Product differentiation has a positive and significant influence on trust (path coefficient = 0.241; $p < 0.05$). A successful differentiation strategy, whether in the form of unique features, superior quality, or innovation, provides added value that increases consumer perceptions of MSME credibility. This research supports the views of Firdausi et al. (2020) which asserts that product differentiation can create trust because consumers tend to view products with unique features as an indication of the professionalism and competence of service providers. In addition, product differentiation also has a significant positive impact on the intention to use e- commerce (path coefficient = 0.224; $p< 0.05$). Unique and value-added products increase the attractiveness of consumers to make transactions through digital platforms. In the context of a competitive market, product differentiation allows MSMEs to stand out amid the many choices available, thus encouraging consumer intention to use e-commerce platforms. This finding is in line with marketing theory which states that products that have unique value can create customer loyalty (Rochani & Puspasari, 2023).

Culture and its Influence on Trust and Intention to Use E-Commerce

Culture has a mixed influence on trust and intention to use e- commerce. In this study, culture has no significant influence on trust (path coefficient = -0.018; $p > 0.05$). This finding suggests that the influence of culture on trust in e-commerce platforms may be minimized by other factors such as product quality, technology, and platform security. Nevertheless, culture remains an important variable that affects consumer preferences indirectly. In contrast, culture has a positive and significant influence on the intention to use e- commerce (path coefficient = 0.118; $p < 0.05$). Cultures that are adaptive to technology and modernity tend to increase consumers' intention to use digital platforms. In societies with high values of individualism, for example, e-commerce is considered an efficient and practical solution to meet consumer needs. This research supports the findings of Hofstede (1980), which suggests that cultural elements such as individualism and collectivism influence technology adoption. (Latan et al., 2021)

E-Commerce Knowledge and Its Influence to Trust and Intention to Use E-Commerce

E-commerce knowledge is shown to have a highly significant influence on trust (path coefficient = 0.605; $p < 0.05$). Consumers with higher levels of knowledge tend to have a better understanding of how e-commerce platforms work, including security mechanisms, information transparency, and payment systems. This understanding gives consumers the confidence to transact online, while increasing trust in the platform. This finding is in line with the research of Noor et al. (2024), which states that technological knowledge is a major determinant in building consumer trust. In addition, e-commerce knowledge also has a significant effect on the intention to use e- commerce (path coefficient = 0.302; $p < 0.05$). Adequate knowledge allows consumers to explore the features offered by e-commerce platforms, such as product personalization, discounts, or loyalty programs. This knowledge also reduces uncertainty and risk, which are often barriers to the adoption of new technologies. Based on the Technology Acceptance Model (TAM), e-commerce knowledge increases perceived ease of use and perceived usefulness, which in turn drives the intention to use the technology. (James et al., 2024)

Trust as a Mediator in Variable Relationships

Trust has a significant mediating role in the relationship between product differentiation, e-commerce knowledge, and intention to use e-commerce. For example, product differentiation has an indirect effect through trust (path coefficient = 0.072; $p < 0.05$). Product uniqueness that reflects the competence and integrity of the service provider increases consumer trust, which in turn strengthens their intention to transact through e-commerce. The relationship between e- commerce knowledge and intention to use e-commerce is also mediated by trust (path coefficient
= 0.18; $p < 0.05$). Adequate knowledge enables consumers to understand the risks and benefits of e-

commerce platforms, thereby increasing their confidence in the reliability and security of such services. This finding is in line with trust theory, which emphasizes the importance of competence, integrity and goodwill in building customer trust.

However, the relationship between culture and intention to use e-commerce through trust is not significant (path coefficient = -0.005; $p > 0.05$). This result suggests that culture plays more of a role in shaping consumer attitudes towards technology than building direct trust in e-commerce platforms. Other factors such as user experience and platform security tend to be more dominant in building trust (Hamid et al., 2022).

Theoretical and Practical Implications

Theoretically, this study contributes to understanding the factors that influence the adoption of e-commerce by MSME players. The findings expand insights into the role of product differentiation, culture, and technological knowledge in shaping trust and intention to use e- commerce.(Sun, 2020) This study also highlights the importance of the mediating role of trust in the relationship between the independent and dependent variables. Practically, the results of this study provide guidance for MSME players in designing strategies to increase e-commerce adoption. MSME players are advised to focus on developing unique and innovative products to create added value that can increase consumer trust. In addition, education on the benefits and features of e-commerce needs to be improved to help consumers understand and utilize the platform better. E-commerce service providers also need to create a safe and transparent environment to build consumer trust (Baruch & Holtom, 2008).

Research Limitations and Recommendations

This study has several limitations that need to be considered. First, this study uses a cross-sectional approach, so it cannot describe the dynamics of variable relationships in the long term. Further research is recommended to use a longitudinal approach to explore changes in trust and intention to use e-commerce over time. (Karunasingha & Abeysekera, 2022) Secondly, this study was conducted in the context of MSMEs in one specific region, so generalization of findings to other regions or sectors needs to be done with caution. Future research could expand the scope by investigating the role of other variables such as service quality, user experience, or government support in driving e-commerce adoption. A qualitative approach can also be used to explore deeper insights into the motivations and barriers of MSME players in adopting digital technology (Andhry Quodvultdeus Darmawan, 2020).

CONCLUSIONS

This study aims to analyze the effect of product differentiation, culture, and e-commerce knowledge on trust and intention to use e-commerce among MSME players in Palopo City. “Our findings confirm that product differentiation serves as a trust-building mechanism, which strengthens adoption.” Limitations & Future Research; this study is limited to a cross-sectional dataset from a single city: future research should explore panel data to assess adoption trends over time." Unique and innovative products are able to create added value that increases the credibility of MSMEs in the eyes of consumers and attracts them to transact online. E-commerce knowledge also contributes significantly to building consumer trust through a better understanding of the e-commerce platform mechanism. Culture has a different influence on trust and intention to use e-commerce. In this study, culture did not show a significant influence on trust, which suggests that other aspects, such as product quality and security, have a different effect on trust platform, dominates.

However, culture has a significant positive effect on the intention to use e- commerce, especially in a society that is adaptive to technology and modernity. Cultural elements such as individualism tend to increase consumers' intention to use digital platforms. Trust plays an important role as a mediator in the relationship between product differentiation, e- commerce knowledge, and

intention to use e-commerce. Product uniqueness and consumers' understanding of e-commerce platforms increase trust, which in turn strengthens their intention to transact online. However, trust does not mediate the relationship between culture and e- commerce intention to use, which suggests that culture plays more of a role in shaping attitudes towards technology than building direct trust in the platform.

Practically, this research suggests that MSME players should focus on innovative product development and consumer education about the benefits of e-commerce. E-commerce service providers are also expected to create a safe and transparent environment to build consumer trust. Theoretically, this study provides insight into the importance of product differentiation, culture, and technological knowledge in shaping trust and intention to use e-commerce. The limitations of this study, such as narrow regional coverage and cross-sectional approach, open up opportunities for further research with longitudinal methods and broader coverage (Lee et al., 2018).

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