

The Impact of Digitalization on Traditional Markets: Transformation and Challenges in the Era of E-commerce

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Abstract: This study examines the impact of digitalization on traditional markets, with a particular focus on understanding the transformations and challenges faced by these markets in the era of e-commerce. A quantitative approach was employed to collect data from conventional market vendors in Rappang City, which were then analyzed using simple linear regression and other statistical methods via SPSS 26. The findings indicate a notable and positive correlation between digitalization and the performance of traditional markets, with a regression coefficient of 0.771, suggesting that digitalization significantly enhances traditional markets' competitiveness and operational efficiency. Moreover, the study underscores that while digitalization offers a plethora of avenues for conventional markets to integrate with digital platforms and extend their reach, it also presents challenges, including intensified competition from e-commerce and the necessity for rapid adaptation to new technologies. The findings indicate that digitalization is not merely a supplementary tool but rather a critical component for sustaining the relevance and competitiveness of traditional markets in the modern digital economy. The study concludes that stakeholders in traditional markets must adopt strategic digitalization initiatives, supported by appropriate policies and infrastructure investments, to ensure these markets can thrive alongside emerging e-commerce platforms. Despite the study's regional focus, the implications extend to broader contexts, offering insights into how traditional markets globally can navigate the challenges posed by digital transformation. Future research should consider a mixed methods approach to explore the nuanced impacts of digitalization in different cultural and economic settings.

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INTRODUCTION

The convergence of globalization and the rapid advancement of information technology has profoundly reshaped how consumers engage with markets (Gürel et al., 2017), leading to unprecedented connectivity and a fundamental shift in commercial dynamics (Lane & Levy, 2019). This transformative wave has not spared traditional markets, which have long served as vital repositories of local wisdom, cultural heritage, and community identity (Mısırlısoy, 2020). However, in this era of digitalization, traditional markets are increasingly finding themselves at a crossroads as the relentless pace of technological development drives consumers toward digital platforms, altering established patterns of interaction and commerce.

As technology evolves, the proliferation of digital platforms has dramatically influenced consumer behavior, pushing a significant shift from physical marketplaces to

virtual ones (Jaiwant, 2023). The rise of e-commerce, facilitated by widespread internet access and the ubiquitous use of smartphones, has opened new avenues for consumer engagement, allowing individuals to explore, compare, and purchase products with unprecedented ease (Stone, 2012). This shift presents a formidable challenge to traditional markets, which now struggle to maintain their relevance in the face of rapidly changing consumer preferences and the growing dominance of online shopping (Vel et al., 2015). The resulting decline in foot traffic and sales for many traditional vendors raises concerns about the future viability of these markets and the livelihoods they support.

Amidst this digital upheaval, traditional markets face a pressing dilemma: how to adapt to a rapidly digitizing world without losing their unique cultural significance and role in the local economy (Davies et al., 2022). While digitalization offers potential opportunities for traditional market vendors to expand their reach and modernize their operations, many are hindered by a lack of resources, digital literacy, and access to necessary technology (Kallmuenzer et al., 2024). This digital divide exacerbates these markets' challenges, threatening to widen the gap between those who can adapt and those who cannot. As such, it becomes crucial to explore strategies that can help traditional markets navigate this digital transformation, ensuring they remain vital components of the community while embracing digitalization's possibilities.

The proliferation of digital platforms has fundamentally altered the landscape of consumer behavior, with online shopping becoming an integral part of daily life for many individuals (Wallström et al., 2017). This shift is particularly evident in the growing preference for e-commerce platforms offering unparalleled convenience, a wide range of products, and competitive pricing (Demirkan, 2015). As more consumers turn to online shopping, traditional markets face significant challenges in retaining their customer base (Molenaar, 2016). The ability to compare prices instantly, access global products, and complete transactions from the comfort of one's home has made e-commerce a formidable competitor to the traditional market model (China et al., 2019).

Furthermore, integrating digital payment systems has streamlined the purchasing process, further enhancing the appeal of e-commerce (Basmantra et al., 2024). Mobile wallets, online banking, and other digital payment methods have reduced the need for cash transactions, making it easier and faster for consumers to shop online (Soun et al., 2023). This convenience, combined with the widespread adoption of smartphones and the internet, has accelerated the growth of e-commerce, making it a dominant force in the retail industry (Goswami & Goswami, 2022). Traditional markets, historically relying on face-to-face transactions and cash payments, are now under pressure to adapt to these new consumer expectations (Kemppainen, 2020).

However, the impact of digitalization on traditional markets is not solely negative. There are opportunities for these markets to leverage technology to enhance their competitiveness (Martinčević & Kozina, 2021). By adopting digital tools, conventional market vendors can reach a broader audience, improve inventory management, and offer additional services such as online ordering and delivery (Tkachuk et al., 2022). These innovations could help traditional markets retain their unique cultural identity while

meeting modern consumers' demands (Ángel-Bravo, 2021). The challenge lies in bridging the digital divide, as many conventional market vendors may lack the necessary skills, resources, or knowledge to effectively implement digital strategies.

Moreover, the cultural significance of traditional markets cannot be overlooked. These markets are not just centers of commerce but also hubs of social interaction and cultural exchange (J. J. Yang & Ahn, 2020). They play a crucial role in preserving local traditions, fostering community ties, and supporting small-scale entrepreneurs (Gurău & Dana, 2018). As such, the decline of traditional markets in the face of digitalization would represent an economic loss and a cultural one (Budzinski & Stöhr, 2019). It is essential to explore how traditional markets can coexist with digital platforms, maintaining their cultural relevance while embracing the benefits of technology.

The rise of e-commerce offers immense potential for contributing to economic growth by providing new avenues for interaction, product exploration, price comparison, and quick, easy purchasing without the need to leave home. However, this shift has brought about significant changes in traditional markets as consumer preferences increasingly favor online platforms. Despite the onslaught of digitalization, vendors in traditional markets like Rappang are compelled to adapt and find ways to survive amidst intensifying competition. This competition is exacerbated by the digital divide and the varying levels of digital literacy among market traders.

There has been a noticeable decline in sales, particularly for clothing, bags, footwear, and household items, as consumer interest has gradually shifted towards online marketplaces (Chen et al., 2018). In contrast, in the Rappang traditional market, traders selling daily necessities have managed to maintain relatively stable sales figures, even though they face fierce competition from fellow market traders. On the consumer side, some still prefer shopping for daily needs at the market, valuing the tangible experience, while others are drawn to the convenience and lower prices offered by online shopping. These initial findings highlight the challenges and opportunities facing the Rappang traditional market in this digital era.

The urgency of this research lies in the need to understand and address the profound implications of digitalization on traditional markets, particularly as they face mounting pressure from rapidly expanding e-commerce platforms. With the increasing shift of consumer behavior towards online shopping, traditional markets are at risk of losing their relevance, which could lead to a decline in local economies, the erosion of cultural heritage, and the marginalization of traders who lack the resources or digital literacy to compete in this new landscape. By examining the specific challenges and opportunities that digitalization presents to the Rappang traditional market, this research aims to provide valuable insights that could inform strategies to support these markets in adapting to the digital era, ensuring their sustainability and continued contribution to the socio-economic fabric of the community. In doing so, the study not only contributes to academic discourse but also has practical implications for policymakers, market stakeholders, and communities who are invested in preserving the vitality of traditional markets in an increasingly digital world.

Despite these challenges, the Rappang traditional market continues to play a vital role in meeting the daily needs of many in the community. Its enduring presence underscores its importance, even as it navigates the pressures of competition with digital marketplaces. Given this context, the research seeks to address the following questions: What is the impact of digitalization on the Rappang traditional market? How does digitalization affect e-commerce within the Rappang traditional market? The objective of this study is to explore the effects of digitalization on traditional markets and e-commerce within the Rappang traditional market, offering insights into the transformation and challenges faced in this evolving landscape.

RESEARCH METHOD

The research methodology employed in this study is quantitative (Do-Thi & Do, 2022), aiming to systematically gather and analyze data to understand the impact of digitalization on traditional markets. The research was conducted over two months, with the study site in Rappang traditional market, Sidenreng Rappang Regency. The study population consisted of 2,030 conventional market vendors, providing a comprehensive basis for the investigation. To select the sample, the study utilized a sampling technique with the sample size determined by the Yount formula, ensuring that the sample accurately represents the broader population.

Data collection was carried out using questionnaires distributed among the selected vendors to gather information on their experiences, perceptions, and challenges related to digitalization. The questionnaires were designed to capture detailed responses, allowing for robust data analysis (Setia, 2017). The study employed a modified Likert scale with four levels to measure the responses, providing a nuanced understanding of the vendors' attitudes and behaviors in an increasingly digital marketplace.

Once the data was collected, it was subjected to statistical analysis to identify trends, correlations, and patterns within the responses (Creswell & Creswell, 2023). The study was conducted using quantitative methods, ensuring reliable and valid findings. The results were then interpreted descriptively, providing a clear picture of the current state of traditional markets in Rappang and the impact of digitalization on these markets. This approach allowed the research to draw meaningful conclusions and offer insights into potential strategies for traditional market vendors to adapt and thrive in the digital era.

RESULTS AND DISCUSSION

Descriptive Profile of Respondents

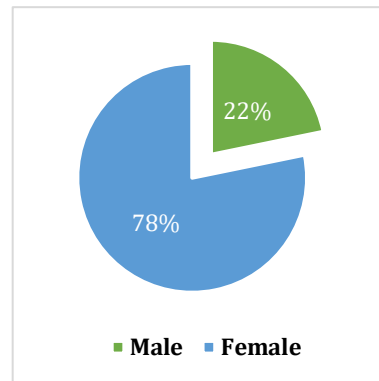


Figure 1. Respondent profile based on gender

Based on the respondent profile, out of 101 total respondents, the majority are female, accounting for 78.2% of the sample, with 79 individuals. In contrast, male respondents represent a smaller portion, comprising 21.8% of the total, with 22 individuals. This distribution highlights a significant gender disparity among the respondents, indicating that females are more prominently represented in this study.

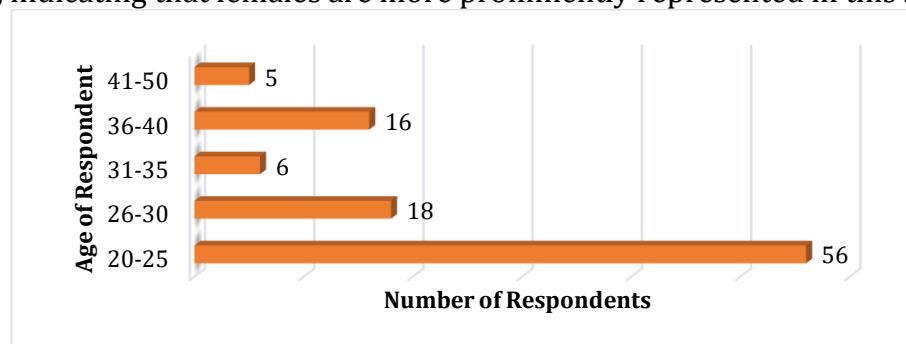


Figure 2. Profile of respondents based on age

Based on the age distribution of the 101 respondents, the majority are within the 20-25 age range, accounting for 55.4% of the total respondents. This is followed by the 26-30 age group, which makes up 17.8%, and the 36-40 age group, representing 15.8% of the respondents. Smaller proportions are observed in the 31-35 and 41-50 age groups, contributing 5.9% and 5.0% respectively. This demographic breakdown indicates that a significant portion of the respondents are young adults, with over half being under 26 years old, suggesting that younger individuals are more actively involved in the market activities surveyed.

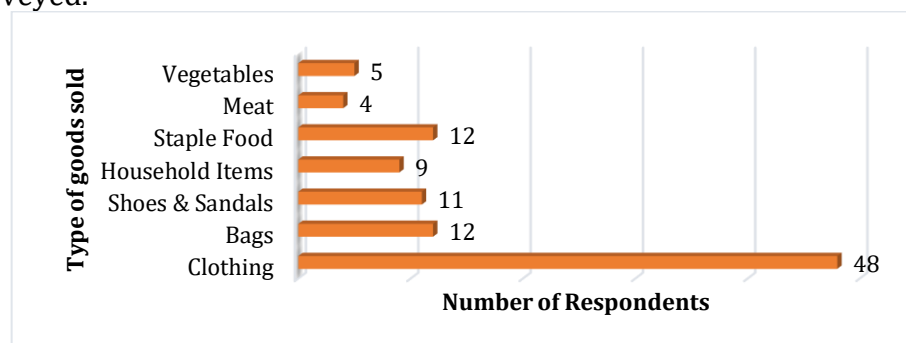


Figure 3. Profile of respondents based on type of goods sold

The profile of respondents based on the type of goods sold reveals that out of the 101 respondents, the majority (47.5%) are engaged in selling clothing, making it the most

common type of goods sold among the vendors. This is followed by those selling bags (11.9%), shoes and sandals (10.9%), and staple food (11.9%). A smaller percentage of respondents are involved in selling household items (8.9%), meat (4.0%), and vegetables (5.0%). This distribution highlights a significant focus on clothing and fashion-related items, indicating a potential market preference or demand in the Rappang traditional market.

Validity and reliability test

Table 1. Validity Test

Variable	Indicator	Correlation Coordination	Information
Digitalization	X1	0.800	Valid
	X2	0.791	Valid
	X3	0.725	Valid
	X4	0.376	Valid
	X5	0.806	Valid
Traditional Market	Y1.1	0.796	Valid
	Y1.2	0.812	Valid
	Y1.3	0.810	Valid
	Y1.4	0.484	Valid
	Y1.5	0.499	Valid
	Y1.6	0.617	Valid
E-commerce	Y2.1	0.802	Valid
	Y2.2	0.849	Valid
	Y2.3	0.812	Valid
	Y2.4	0.776	Valid
	Y2.5	0.712	Valid

Table 1 presents the results of the Pearson correlation validity test conducted at a 5% significance level, with a critical value (label) of 0.1937. The validity test was performed on 16 instruments, yielding correlation coefficients ranging from a minimum of 0.376 to a maximum of 0.849. These values exceed the critical threshold, indicating that each item in the instrument significantly correlates with the overall construct it intends to measure. Consequently, it can be concluded that all the indicators used in this study's instrument are valid, meaning they effectively measure what they are intended to assess. This validation process is crucial for ensuring the reliability and accuracy of the research findings, as it confirms that the data collected through these instruments are both meaningful and representative of the underlying variables.

In the context of research, validity refers to the degree to which an instrument accurately measures its intended concept. The use of Pearson correlation in this validity test helps determine the strength and direction of the linear relationship between individual items and the total score of the instrument. A higher correlation coefficient indicates a stronger relationship, suggesting that the item is a valid indicator of the construct. This study's correlation coefficients are well above the critical value, affirming that the instrument items are valid. This means that the researchers can confidently use these items to draw meaningful conclusions about the relationship between variables in their study. The rigorous validity testing enhances the credibility of the research, ensuring that the results are based on sound and reliable measurements.

Table 2. Reliabilitas

Variable	Value	Information
Digitalization	0.741	Reliable
Traditional Market	0.766	Reliable
E-commerce	0.866	Reliable

Table 2 illustrates that the Cronbach's alpha value for each variable in this study demonstrates a satisfactory level of reliability. The Cronbach's alpha value for the digitalization variable is 0.741, while the traditional market variable exhibits a value of 0.

The Cronbach's alpha value for the e-commerce variable is 0.866. Cronbach's alpha is a coefficient used to assess the internal consistency of a measurement instrument, which means how well the items in the instrument correlate with each other. A higher Cronbach's alpha value indicates that the items in the instrument demonstrate a higher level of consistency in measuring the same concept. In this context, these values indicate that each variable has adequate internal consistency, exceeding the generally accepted standard criterion of 0.60, which is typically used as the minimum limit to declare that an instrument is reliable.

This indicates that all instruments utilized to assess the variables of digitalization, traditional markets, and e-commerce are deemed reliable in this study, as they have either met or exceeded the generally accepted reliability threshold. This is significant because a reliable instrument guarantees that the measurement outcomes are consistent and dependable, thereby ensuring that the research findings can be relied upon to support the conclusions drawn. Consequently, the Cronbach's alpha values obtained reinforce the validity of the results of this study, ensuring that the instruments used consistently measure the aspects to be revealed in the context of digitalization, traditional market dynamics, and e-commerce development in the Rappang traditional market.

Simple Linear Regression Analysis Test

Table 3. Simple Linear Regression Test Between Digitalization (X) and Traditional Markets (Y1)

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	7.601	1.143		.00
	X	.771	.073	.727	.00

1. Dependent Variable: Y1

Source: SPSS 26 Data Processing, 2024

The results of the simple linear regression analysis indicate that the regression model's constant is 7.601, which suggests that when the digitization variable (X) is equal to zero, the value of the traditional market variable (Y1) is estimated to be 7.601. This demonstrates that in the absence of digitalization, the traditional market retains a substantial baseline value. Nevertheless, the regression coefficient for the digitalization variable, 0.771, indicates a positive and significant relationship between digitalization and traditional markets. A one-unit increase in the digitalization variable is associated with an increase of 0.771 units in the traditional market variable, provided that other factors remain constant.

The regression equation generated from this analysis is $Y1 = 7.601 + 0.771X$, which clearly demonstrates the impact of changes in digitalization on traditional markets. The positive sign on the regression coefficient indicates a unidirectional relationship between the two variables. That is to say, the better the implementation of digitalization, the higher the resulting value on the traditional market variable. This is significant in that it demonstrates that adapting to digital technology presents both challenges and opportunities for traditional markets, allowing them to flourish and maintain their relevance in the digital era.

Moreover, the coefficient value of 0.771 indicates that digitalization exerts a considerable influence on traditional markets. This coefficient can be interpreted as an indicator of the sensitivity or elasticity of traditional markets to changes in digitalization. In other words, traditional markets demonstrate a notable responsiveness to improvements in digitalization, which presents opportunities for traditional markets to

integrate with digital platforms in order to expand their reach and enhance their competitiveness. In light of these findings, it can be concluded that there is empirical evidence to support the adoption of effective digital strategies for the management and sustenance of traditional markets in the context of rapid technological developments.

The results of this simple linear regression test indicate that digitalization plays a significant role in determining the performance and sustainability of traditional markets. The positive relationship identified suggests that digital technology can support and strengthen traditional markets, provided it is implemented effectively. Therefore, this study suggests that stakeholders in traditional markets should not only be aware of the importance of digitalization but also strive to leverage it strategically to ensure that traditional markets remain relevant and competitive in this digital era.

Table 4. Simple Linear Regression Test Between Digitalization (X) and E-Commerce (Y2)

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1	(Constant)	2.913	1.157	2.519	.01
	X	.816	.074	.743	.00

a. Dependent Variable: Y2

Source: SPSS 26 Data Processing, 2024

The results of simple linear regression analysis show that the constant of the regression model obtained is 2.913. This indicates that when the digitization variable (X) is zero, the e-commerce variable (Y2) value is estimated at 2.913. This means that without the influence of digitalization, e-commerce still has a positive base value. However, what is more significant is that the regression coefficient for the digitization variable is 0.816, which indicates a positive and strong relationship between digitization and e-commerce development. Each one-unit increase in the digitalization variable is expected to increase the e-commerce variable by 0.816 units, assuming other factors remain constant.

The regression equation obtained from this analysis is $Y2 = 2.913 + 0.816X$, which describes the functional relationship between digitalization and e-commerce. The positive sign on the regression coefficient indicates that these two variables move in the same direction; in other words, an increase in digitalization will directly impact an increase in e-commerce. This finding provides empirical evidence that digitalization not only supports but also drives the growth of e-commerce, which is increasingly playing an important role in today's digital economy.

The regression coefficient of 0.816 indicates that digitalization has a highly significant influence on e-commerce. This means e-commerce highly depends on how much digitalization is implemented and developed. Thus, to maximize the potential of e-commerce, the development of digital infrastructure, broad internet access, and digital literacy are key factors that need to be considered. Therefore, strategic measures that encourage digitalization will positively impact e-commerce growth, which can bring wider economic benefits.

From the results of this simple linear regression test, it can be concluded that digitalization has a central role in developing e-commerce. The strong positive relationship between these two variables suggests that an effective digitalization strategy will directly contribute to the expansion and success of e-commerce. Therefore, focusing on improving digital technology and its accessibility is a crucial step in ensuring that e-commerce can continue to grow and meet the market's needs in this digital era.

Test T (partial)**Table 5.** T test of digitalization (X) and traditional markets (Y1)

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	7.601	1.143		6.650
	X	.771	.073	.727	10.542

a. Dependent Variable: Y1

Source: SPSS 26 Data Processing, 2024

The partial T-test results showing a tcount value of 10.542 and a ttable value of 1.660 provide a strong indication that digitalization has a significant influence on traditional markets. With a tcount much greater than the ttable ($10.542 > 1.660$) and a very low significance value ($0.000 < 0.05$), it can be concluded that digitalization is not just a trend, but also a key factor that positively affects the sustainability and competitiveness of traditional markets. This finding strengthens the first hypothesis, which states that digitalization plays an important role in improving the performance of traditional markets. This provides empirical evidence that the adoption of digital technology can have a real impact on traditional market operations, especially in terms of improving efficiency, reaching a wider market, and maintaining relevance in the modern era.

Furthermore, the positive and significant impact of digitalization on traditional markets highlights the importance of technology integration in traditional business models. Digitalization allows traditional markets to not only survive amidst the growing competition with e-commerce and other digital platforms, but also to thrive by leveraging technology. Improvements in digitalization can include various aspects, such as the use of social media for marketing, the implementation of digital payment systems, or the adoption of online platforms to expand customer reach. With the right strategy, traditional markets can turn the challenges of digitalization into opportunities to innovate and improve their competitiveness.

The results of this study also show that policies and initiatives that encourage digitalization in traditional markets should be a priority for stakeholders, including the government, market managers, and businesses. Training programs and technical support for traditional market traders, for example, can be an important step to ensure they are able to utilize technology effectively. In addition, investment in digital infrastructure that supports traditional market operations, such as better internet access and the development of local e-commerce platforms, can provide additional impetus for digital integration. Thus, digitization is not just a tool, but also an essential strategy to ensure the sustainability and relevance of traditional markets amidst the rapidly changing global business landscape.

Table 6. T test of Digitalization (X) against E-Commerce (Y2)

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	2.913	1.157		2.519
	X	.816	.074	.743	11.037

a. Dependent Variable: Y2

Source: SPSS 26 Data Processing, 2024

The partial T-test results showing that the t-count value for the digitalization variable is 11.037, while the t-table value is 1.660, provides strong evidence that

digitalization has a significant influence on e-commerce development. With the tcount far exceeding the ttable ($11.037 > 1.660$) and a very low significance value ($0.000 < 0.05$), we can conclude that digitalization not only positively impacts but also significantly affects e-commerce growth. This means that as the level of digitalization increases, there is a positive direct effect on e-commerce performance, which strengthens the second hypothesis in this study. This finding is important as it confirms that digitalization is one of the key drivers in expanding and strengthening the e-commerce sector, which is increasingly becoming the backbone of the modern digital economy.

The positive and significant effect of digitalization on e-commerce suggests that an effective digitalization strategy can be a catalyst to accelerate e-commerce growth. Digitalization encompasses various aspects ranging from the improvement of technological infrastructure, the adoption of digital payment systems, to the development of more user-friendly and accessible e-commerce platforms. Each of these components of digitization plays an important role in creating an environment conducive to the development of e-commerce. As a result, businesses that are able to integrate digital technology into their operations will not only enjoy increased efficiency and broader market access but will also be better able to compete in an increasingly globalized and connected market.

In the context of policy and economic development, these findings confirm the importance of supporting digitalization initiatives, especially in strengthening the digital infrastructure that supports e-commerce. Governments and other stakeholders need to focus on investments in technology and training that can help businesses, especially small and medium-sized enterprises (SMEs), to adapt to these digital changes. By providing adequate support, such as better internet access, digital literacy programs, and policies that support technology adoption, e-commerce is expected to continue to grow and contribute significantly to economic growth. Thus, digitalization is not only a business transformation tool but also a key strategy in advancing e-commerce as an integral part of the future digital economy.

Test F

Table 7. Test F Between Digitalization (X) Against Traditional Markets (Y1)

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	685.151	1	685.151	111.143	.000 ^b
	Residual	610.295	99	6.165		
	Total	1295.446	100			

a. Dependent Variable: Y1

b. Predictors: (Constant), X

Source: SPSS 26 Data Processing, 2024

The F test results obtained show an F value of 111,143 with a significance value of 0.000, which is below the 0.05 threshold. This indicates that the regression model used in this study is overall significant, and the independent variable, in this case digitalization, has a significant influence on the dependent variable, which is the traditional market. In other words, these results indicate that there is a strong relationship between digitalization and traditional market performance, where an increase in digitalization will contribute positively to traditional markets. This finding strengthens the argument that digitalization is not only an unavoidable phenomenon, but also a tool that can be used to improve the effectiveness and efficiency of traditional markets.

The high F value and very low significance indicate that variations in digitalization can explain most of the variations in the performance of traditional markets. This means that digitization-related factors, such as technology adoption, the use of digital media for

marketing, and the implementation of electronic payment systems, have an important role in determining the extent to which traditional markets can thrive and compete in the modern era. Digitalization provides opportunities for traditional markets to not only survive, but also to grow by adopting more efficient practices and better connecting with consumers through digital platforms.

In the context of policy and business strategy, these findings emphasize the importance of supporting digitalization initiatives for traditional markets. Stakeholders, including the government and market managers, need to see digitalization as an integral component in traditional market development strategies. Investments in digital infrastructure, training to improve digital literacy among market traders, and policies that support the integration of technology into traditional market operations are steps that can be taken to maximize the benefits of digitalization (Lawelai et al., 2023). By doing so, traditional markets can remain relevant and competitive, even in the midst of increasing competition from digital markets and e-commerce.

Table 8. Test F Between Digitalization (X) and E-Commerce (Y2)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	768.833	1	768.833	121.808	.000 ^b
	Residual	624.870	99	6.312		
	Total	1393.703	100			

a. Dependent Variable: Y2

b. Predictors: (Constant), X

Source: SPSS 26 Data Processing, 2024

The F test results in the regression analysis show an F value of 121.808 with a significance level of 0.000, which is well below the 0.05 threshold. This result provides strong evidence that digitalization has a highly significant influence on e-commerce development. With such a high F value, it can be concluded that the regression model used to analyze the relationship between digitalization and e-commerce as a whole is significant. This means that the digitization variable is substantially able to explain the variation in the e-commerce variable, suggesting that the higher the level of digitization adopted, the greater the impact on the growth and effectiveness of e-commerce.

The significant effect of digitalization on e-commerce indicates that the process of digitalization acts as a key driver in the expansion and improvement of e-commerce performance. Digitalization covers various aspects such as the development of digital infrastructure, the adoption of new technologies, and the integration of digital payment systems that facilitate online transactions. Improvements in digitalization allow e-commerce to not only reach more consumers, but also to offer a faster, safer, and more efficient shopping experience. This is particularly important in the context of intensifying market competition, where more digitally advanced e-commerce will have a greater competitive advantage.

In terms of policy and business strategy, these findings confirm the importance of prioritizing digitalization as an integral part of e-commerce development. Governments and businesses need to encourage digitalization initiatives, not only to increase technological accessibility, but also to ensure that e-commerce platforms can continue to innovate and adapt to changing consumer needs. This could include investments in technology infrastructure, human resource development through digital training, and the creation of an ecosystem that supports the adoption of new technologies. With the right strategy, e-commerce can maximize the benefits of digitalization, improve competitiveness, and make a significant contribution to the overall growth of the digital economy.

Coeficiency Test of Determination (R^2)**Table 9.** R2 Test Between Digitalization (X) and Traditional Markets (Y1)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.727 ^a	.529	.524	2.483

a. Predictors: (Constant), X

Source: SPSS 26 Data Processing, 2024

The results of the analysis show that the R value, which is the correlation coefficient, is 0.727. This coefficient indicates a fairly strong relationship between the digitalization variable (X) and traditional markets (Y1). In addition, the R Square value or coefficient of determination obtained is 0.529, which indicates that about 52.9% of the variation in traditional markets can be explained by the variation in digitalization. This means that digitalization has a significant and substantive influence on the changes that occur in traditional markets. In other words, more than half of the changes in traditional market performance can be directly attributed to the implementation and improvement of digitalization.

However, there is still about 47.1% (100% - 52.9%) of the variation in traditional markets that is not explained by the digitization variable in this model. This remaining percentage suggests that there are other factors beyond digitalization that also play a role in influencing traditional markets. Such factors may include aspects such as government policies, economic conditions, market competition, product quality (Marzuki et al., 2022), as well as consumer preferences that are independent of technology. Therefore, while digitalization is an important factor, traditional market development strategies should also consider various other variables that may affect the performance and competitiveness of such markets (Rahmawaty et al., 2022).

The findings provide insights that while digitalization is a vital component in the modernization and development of traditional markets, attention should also be paid to other factors that could affect the success and sustainability of traditional markets. These could include improved service quality, product diversification, enhanced customer experience, and policies that support a healthy business environment. Thus, a comprehensive and multidimensional approach is necessary to ensure that traditional markets not only survive but also thrive in an increasingly competitive and digitized business landscape.

Table 10. R2 Test Between Digitalization (X) Against E-Commerce (Y2)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.743 ^a	.552	.547	2.512

a. Predictors: (Constant), X

Source: SPSS 26 Data Processing, 2024

The analysis results show that the R value, which is the correlation coefficient, is 0.743. This coefficient indicates a strong relationship between the variables of digitalization (X) and e-commerce (Y2). The R Square value or the coefficient of determination obtained is 0.552, which means that about 55.2% of the variation in e-commerce can be explained by the variation in digitalization. In other words, more than half of the change or variation in e-commerce performance and growth can be directly attributed to the effect of digitalization.

However, there is still about 44.8% (100% - 55.2%) of the variation in e-commerce that is not explained by the digitalization variable in this model. This percentage suggests that there are other factors beyond digitalization that also contribute to changes and

developments in the e-commerce sector. These factors could include aspects such as marketing strategies, pricing policies, competition in the market, consumer preferences, as well as the technological infrastructure that supports e-commerce operations. While digitalization plays an important role, the success of e-commerce is also influenced by a combination of various other factors that need to be managed properly.

The findings thus emphasize that while digitalization is a key driver in e-commerce progress, a more holistic approach is needed to optimize overall e-commerce performance. E-commerce companies should consider strategies that include not only the adoption of digital technologies but also innovations in products and services, development of distribution networks, and improvement of customer experience. By integrating these various factors, e-commerce can more effectively meet market needs and compete in an increasingly complex and dynamic digital era.

The Impact of Digitalization on Traditional Market

The impact of digitalization on the Rappang traditional market is a complex and multifaceted issue that has garnered significant attention in recent years. The results from the statistical analysis using SPSS 26 reveal a substantial relationship between digitalization and the traditional market, with a p-value of 0.000, which is well below the threshold of 0.05. Additionally, the t-value of 10.542 exceeds the critical t-value of 1.660, indicating that digitalization positively influences the traditional market. These findings suggest that adopting digital technologies and practices within the conventional market framework can enhance its performance, operational efficiency, and overall competitiveness, even amidst the challenges posed by modern e-commerce platforms.

This positive impact, however, does not come without challenges. While digitalization can offer numerous benefits, such as broader market reach, streamlined operations, and improved customer engagement, it also introduces new dynamics that traditional market vendors may find difficult to navigate. Digitalization has a comprehensive effect on small and medium-sized enterprises (SMEs), driving significant transformations across various aspects of their business (Radicic & Petković, 2023). This includes changes in how they interact with customers, manage their supply chains, and compete with other market players. In the context of Rappang, these changes could mean that traditional vendors must rapidly adapt to new digital tools and platforms to remain relevant and competitive.

However, the digitalization transition has not been smooth or universally positive for all vendors. A growing concern among market vendors who perceive a decline in market conditions following the rise of e-commerce (Zhang et al., 2015). This sentiment has been particularly pronounced in the aftermath of the COVID-19 pandemic, which accelerated the shift towards online shopping and further eroded the customer base of traditional markets. Many vendors report that their sales have decreased significantly as consumers increasingly prefer the convenience and lower prices often found on e-commerce platforms. This shift has forced traditional markets to reconsider their business models and find ways to integrate digital strategies that complement rather than compete with e-commerce.

While digitalization offers potential benefits for the Rappang traditional market, it also presents significant challenges that must be carefully managed. The statistical analysis indicates that the positive relationship between digitalization and market performance suggests that there is room for traditional markets to leverage digital tools to improve their operations. However, the concerns raised by vendors, particularly in the context of increased competition from e-commerce and the lingering effects of the pandemic, underscore the need for a balanced approach. Traditional markets must adopt

digital technologies and find innovative ways to preserve their unique value propositions and cultural significance in a rapidly changing digital landscape.

The Impact of Digitization on E-commerce

The impact of digitalization on e-commerce is both profound and transformative, reshaping how businesses operate, and consumers engage with the market (Mashalah et al., 2022). The analysis using SPSS 26 shows a significant relationship between digitalization and e-commerce, with a p-value of 0.000, well below the critical threshold of 0.05. Additionally, the t-value of 11.037, surpassing the crucial t-value 1.660, confirms that digitalization positively and substantially affects e-commerce. This suggests that as digital technologies evolve and become more integrated into business practices, the e-commerce sector benefits significantly, experiencing enhanced operational efficiencies, broader market reach, and increased customer engagement.

Digitalization has fundamentally altered the landscape of e-commerce by enabling businesses to optimize their operations, reduce costs, and easily reach a global audience. The presence of e-commerce platforms for SMEs has positively impacted local entrepreneurs and contributed to regional economic growth (L. Yang et al., 2023). This indicates that digitalization is not just a tool for large corporations but also plays a critical role in empowering small and medium-sized enterprises (SMEs) by providing them with access to new markets and customers that were previously unreachable. Adopting digital tools, such as online payment systems, digital marketing, and customer relationship management software, has allowed these businesses to compete on a level playing field with larger companies, thus democratizing the marketplace.

Moreover, the positive impact of digitalization on e-commerce is evident in the way it has facilitated the growth of new business models and revenue streams. The integration of digital platforms has enabled the rise of the gig economy, subscription services, and direct-to-consumer brands, all of which have flourished in e-commerce. With the ease with which businesses have driven these innovations, they can now collect, analyze, and utilize data to personalize their offerings and improve customer experiences. As a result, e-commerce has become more dynamic and responsive to consumer needs, leading to higher customer satisfaction and loyalty. The ability to harness digitalization effectively has become a key differentiator for businesses in the highly competitive e-commerce market.

However, while digitalization offers significant opportunities for e-commerce, it also presents challenges that must be addressed. The rapid pace of technological change can be difficult for some businesses, particularly smaller ones, to keep up with. Additionally, the increased reliance on digital platforms raises concerns about data security, privacy, and the potential for market monopolization by large tech companies. To fully realize the benefits of digitalization in e-commerce, businesses must be proactive in adopting new technologies while also being mindful of the risks involved. Policymakers and industry leaders must work together to create a supportive environment that encourages innovation while ensuring fair competition and protecting consumer rights. In doing so, they can help ensure that the positive impact of digitalization on e-commerce continues to drive growth and development across the industry.

CONCLUSION

This research has revealed significant insights into the impact of digitalization on both traditional markets and e-commerce, highlighting the profound influence that digital technologies exert on these sectors. The study found that digitalization positively and significantly affects traditional markets and e-commerce, as evidenced by the statistical analyses conducted using SPSS 26. The results showed that digitalization is a key driver of performance in both cases, with regression coefficients indicating strong and positive relationships. For traditional markets, the coefficient of 0.771 suggests that digitalization helps to enhance their competitiveness and operational efficiency, while for e-commerce, a coefficient of 0.816 demonstrates how digitalization supports and accelerates growth within this sector.

Theoretically, these findings contribute to the growing body of literature that emphasizes the transformative power of digitalization across various business contexts. The positive relationship between digitalization and market performance supports existing theories that advocate for integrating technology into traditional and modern business practices to achieve sustainability and growth. This research also reinforces the notion that digitalization is not merely a supplementary tool but a critical component of business strategy that can significantly influence market dynamics.

In practice, the implications of these findings are substantial. The research underscores the importance of adopting digital strategies for stakeholders in traditional markets to remain competitive in an increasingly digital economy. Market managers and policymakers should prioritize investments in digital infrastructure, training programs, and support systems to help traditional vendors integrate technology into their operations. Similarly, for e-commerce businesses, the study highlights the need for continuous innovation and the strategic use of digital tools to maintain a competitive edge. Companies must proactively leverage digitalization to improve efficiency, expand market reach, and enhance customer engagement.

It should be noted, however, that study is not without its limitations. The context-specific research is focused on the Rappang traditional market and e-commerce in a specific region. This geographic limitation may limit the generalizability of the findings to other markets or regions with different characteristics. Additionally, the study primarily relies on quantitative analysis, which, while robust, may not fully capture the complexity of the impact of digitalization on these sectors. Future research could benefit from a mixed-methods approach, incorporating qualitative insights to provide a more nuanced understanding of how digitalization affects traditional markets and e-commerce in diverse contexts.

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