The Impact of Using the Quick Response Code Indonesian Standard (QRIS) on The Income of Micro Small and Medium-Sized Enterprises (MSMEs) in Pangkep District

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Abstract. This research was conducted in Pangkep Regency. This study aimed to determine the impact of using the Quick Response Code Indonesian Standard (QRIS) on the income of MSMEs in Pangkep Regency. The data analysis method used in this research is the quantitative method. The sample in the study was 40 respondents, while the technique in sampling this study used purposive sampling. The instrument test consists of validity and reliability tests to answer the hypothesis. The regression test consists of simple regression analysis, correlation coefficient test (R), and determination coefficient test (R2). Hypothesis testing using a partial test (t-test). All analysis methods are processed using the SPSS version 25 program. The results showed that the variable use of Quick Response Code Indonesian Standard (QRIS) obtained a count value of 3.519 > table of 1.685. The use of the Quick Response Code Indonesian Standard (QRIS) has a positive effect on SMEs' income. The variable use of the Quick Response Code Indonesian Standart (QRIS) obtained a significant value of 0.001 <0.05, so the use of the Quick Response Code Indonesian Standart (QRIS) has a significant effect on MSME's income. The results showed that using the Quick Response Code Indonesian Standard (QRIS) positively and significantly affected MSME's income in Pangkep Regency.

Keywords: MSMEs Revenue, Regression, Quick Response Code Indonesian Standard (QRIS)

1 Introduction

1.1 Research Background

Quick Response Indonesian Standard (QRIS), introduced by Bank Indonesia in 2019, serves as a national standard for QR code payments, aiming to facilitate non-cash transactions and enhance financial inclusion across the country [1], [2]. The implementation of QRIS is particularly significant in the wake of the *Covid*-19 pandemic, which accelerated the shift towards digital payment solutions as businesses sought to minimize physical interactions and streamline payment processes [3], [4].

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The literature indicates that QRIS has been instrumental in transforming the payment landscape for Micro Small and Medium-Sized Enterprises (MSMEs), enabling them to adopt more efficient transaction methods that can potentially increase their income [5], [6], [7]. The standardization of QR codes through QRIS allows various digital wallets to operate under a unified system, thereby simplifying the payment process for both merchants and consumers [2], [5]. This transformation is crucial for MSMEs, which often face challenges related to cash flow and transaction efficiency. By adopting QRIS, these enterprises can enhance their operational capabilities, attract more customers, and ultimately improve their financial performance [6], [7] [8].

Research has shown that the perceived benefits and ease of use of QRIS significantly influence the decision of MSMEs to adopt this payment system [9], [10]. Factors such as technological readiness, organizational support, and environmental conditions play critical roles in determining the extent to which MSMEs embrace QRIS [7], [11]. Furthermore, studies have highlighted the importance of socialization and education regarding QRIS to ensure that SMEs understand its advantages and functionalities [1], [3]. The successful implementation of QRIS not only supports individual businesses but also contributes to the broader economic recovery and digitalization efforts in Indonesia [11], [12].

The impact of QRIS on MSMEs income is multifaceted. On one hand, the adoption of QRIS can lead to increased sales due to the convenience it offers to customers, who prefer digital payment methods over cash transactions [6], [13]. On the other hand, the transition to digital payments may also present challenges, such as the need for adequate infrastructure and public understanding of the technology [3], [4], [14]. The balance between these opportunities and challenges is critical for assessing the overall impact of QRIS on MSMEs income in specific regions, such as Pangkep District.

Moreover, the role of government support and regulatory frameworks is essential in facilitating the adoption of QRIS among MSMEs. Studies have indicated that government initiatives aimed at promoting digital payment systems can significantly enhance the willingness of MSMEs to adopt QRIS [11], [12]. This support can take various forms, including financial incentives, training programs, and public awareness campaigns that highlight the benefits of digital payments [6], [12]. The collaboration between government entities and financial institutions is vital for creating an ecosystem that fosters the growth of digital payment solutions like QRIS.

However, the study about the impact of QRIS on MSMEs income in Pangkep District is grounded in the transformative potential of digital payment systems in Indonesia. The literature underscores the importance of QRIS in enhancing transaction efficiency, promoting financial inclusion, and ultimately improving the income of MSMEs. However, the successful implementation of QRIS requires addressing various challenges, including technological readiness, public understanding, and the need for supportive government policies.

1.2 Objectives

The objective of this study aims to determine whether the use of Quick Response Code Indonesian Standard (QRIS) has an impact on Micro Small and Medium-Sized Enterprises (MSMEs) income in Pangkep Regency.

2 Literature Review

2.1 Introduction to QRIS

The Quick Response Code Indonesia Standard (QRIS) serves as a national payment standard in Indonesia, introduced by Bank Indonesia on August 17, 2019, and effectively implemented in January 2020. QRIS aims to unify various QR codes from different payment service providers into a single, standardized code, facilitating seamless transactions across diverse platforms. This initiative is particularly significant for micro, small, and medium enterprises (MSMEs), which form a crucial part of Indonesia's economy. By adopting QRIS, MSMEs can streamline their payment processes, enhancing efficiency and reducing the complexities associated with managing multiple payment systems [13], [15].

The primary purpose of QRIS is to improve the digital payment ecosystem and promote financial inclusion in Indonesia. By providing a standardized payment method, QRIS enhances the accessibility and reliability of electronic transactions, which is essential for fostering trust among users [16], [17]. The integration of QRIS into the payment landscape has led to increased competition among financial service providers, encouraging them to innovate and improve their offerings [17], [18]. Furthermore, QRIS has been instrumental in advancing financial literacy among users, as it simplifies the payment process and encourages more individuals to engage in digital transactions [19], [20].

The introduction of QRIS has been particularly beneficial for MSMEs, which often face barriers to adopting digital payment methods due to the complexities of existing systems. By standardizing payment processes, QRIS allows MSMEs to accept payments from various digital wallets without needing multiple QR codes, thus reducing operational burdens [21], [22]. Studies indicate that the implementation of QRIS has led to increased transaction volumes for MSMEs, as it not only simplifies payment acceptance but also enhances customer satisfaction through faster and more secure transactions [13], [23], [24]. Additionally, the QRIS framework supports the growth of the digital economy in Indonesia by encouraging more businesses to transition to cashless transactions, thereby increasing overall economic activity [14], [25].

In summary, QRIS represents a significant advancement in Indonesia's payment landscape, unifying various payment systems into a single standard that enhances the efficiency of transactions, particularly for MSMEs. Its role in promoting financial inclusion and improving the digital payment ecosystem is critical for the continued growth of Indonesia's economy, especially in the post-pandemic recovery phase [15], [17], [19], [23].

2.2 QRIS & Digital Payments

The literature on the growth of digital payments, particularly in Indonesia, highlights a significant transformation in transaction methods, driven by advancements in technology and the increasing adoption of digital payment systems like the Quick Response Code Indonesian Standard (QRIS). Globally, the trend towards digital payments has been accelerated by the COVID-19 pandemic, which necessitated contactless transactions and highlighted the efficiency of digital payment systems in facilitating business operations [26].

In Indonesia, QRIS has emerged as a pivotal tool for Micro, Small, and Medium Enterprises (MSMEs), enabling them to streamline transactions, reduce operational costs, and enhance customer engagement. Studies indicate that the adoption of QRIS positively impacts the financial performance of MSMEs by increasing transaction volumes and improving cash flow [27], [28]. The convenience and security offered by QRIS have led to a notable shift from cash to digital payments, thereby fostering a more efficient business environment [14], [29]. Furthermore, the promotional benefits associated with QRIS, such as discounts and cashback offer, have been particularly appealing to consumers, further driving its adoption among MSMEs [30], [31].

The literature also emphasizes the correlation between the adoption of digital payment systems and business growth. For instance, firms that integrate QRIS into their operations report enhanced customer retention and satisfaction, which are critical for sustaining competitive advantage in the market [32], [33]. The ease of transactions facilitated by QRIS not only attracts new customers but also encourages repeat business, thereby contributing to overall business growth [34], [35]. Additionally, the operational efficiency gained through digital payments allows MSMEs to allocate resources more effectively, ultimately leading to improved financial outcomes [28], [36].

However, the implementation of QRIS is not without challenges. Barriers such as limited internet connectivity, lack of awareness among MSME owners, and concerns regarding transaction limits can hinder the widespread adoption of digital payment systems [37], [38]. Addressing these challenges is crucial for maximizing the potential benefits of QRIS and ensuring that MSMEs can fully leverage digital payments to enhance their operational capabilities and market reach [39].

In conclusion, the literature underscores the transformative role of digital payment systems like QRIS in Indonesia and globally. By facilitating transactions, reducing costs, and promoting ease of doing business, these systems are integral to the growth and sustainability of MSMEs. The positive correlation between digital payment adoption and business performance highlights the need for continued investment in digital infrastructure and education to overcome existing barriers and fully realize the benefits of digital payments.

2.3 MSMEs in Indonesia

Micro, Small, and Medium Enterprises (MSMEs) play a pivotal role in Indonesia's economy, contributing significantly to employment and national GDP. As of 2013, there were approximately 57.9 million MSMEs in Indonesia, which accounted for 99% of the total workforce and contributed around 60% to the national GDP [40], [41]. This sector not only drives economic growth but also serves as a crucial mechanism for poverty alleviation and income distribution, particularly in rural areas [42]. The diversity of MSMEs, ranging from food production to handicrafts, showcases their adaptability and potential for innovation, which is essential for sustaining economic development in Indonesia [43].

Despite their importance, MSMEs face numerous challenges that hinder their growth and sustainability. Key barriers include limited access to finance, inadequate financial literacy, and a lack of technological adoption [44], [45]. Financial inclusion remains a significant issue, as many MSME owners lack the necessary knowledge and resources to navigate financial systems effectively [46], [47]. This gap in financial literacy often leads to poor financial management and ultimately affects the performance of these enterprises [48]. Moreover, the COVID-19 pandemic exacerbated these challenges, highlighting the need for robust support systems to enhance the resilience of MSMEs [49].

Digital adoption trends among MSMEs in Indonesia have gained momentum, particularly in response to the challenges posed by the pandemic. The integration of digital platforms and financial technologies (fintech) has emerged as a viable solution to enhance financial inclusion and operational efficiency [50], [51]. Digital tools enable MSMEs to access funding, manage finances, and reach broader markets, thereby improving their competitiveness [52], [53]. For instance, the use of e-commerce and social media has been shown to significantly boost the visibility and sales of MSME products [54]. Furthermore, fintech solutions provide alternative financing options for MSMEs that are often excluded from traditional banking systems, thus fostering a more inclusive economic environment [51], [55].

In the context of Pangkep District, while specific literature may be limited, the trends observed in similar regions suggest a growing recognition of the importance of MSMEs in local economic development. Studies from nearby districts indicate that local governments are increasingly focusing on empowering MSMEs through training programs and digital literacy initiatives [42], [49]. Such efforts are crucial in addressing the barriers to financial inclusion and enhancing the overall performance of MSMEs in the region.

In conclusion, MSMEs are integral to Indonesia's economic landscape, yet they face significant challenges that impede their growth. The adoption of digital technologies and financial inclusion strategies presents a promising pathway to overcome these barriers, ultimately enhancing the sustainability and competitiveness of MSMEs across the country.

2.4 Impact of Digital Payments on MSME Income

The adoption of digital payment technologies has been increasingly recognized for its potential to enhance business revenue, particularly in the context of small and medium enterprises (SMEs). A growing body of literature examines how these technologies, such as Quick Response Code (QR) payment systems, can lead to significant improvements in income and overall business performance.

One key study by Acopiado et al. highlights that the adoption of digital payment technologies during the COVID-19 pandemic was influenced by factors such as internet access and the age of business owners, which in turn affected business performance metrics like revenue and cash flow [56]. This aligns with findings from

Tang et al., who argue that digital payments reduce transaction costs and enhance financial access, thereby contributing to the success of electronic businesses [57]. The convenience and efficiency offered by digital payment systems are critical, as they facilitate quicker transactions and improve customer satisfaction, which can lead to increased sales [58].

Moreover, the literature suggests that improved transaction processes, facilitated by digital payments, can enhance cash flow management for businesses. For instance, Ilyas discusses how digitalization alters business models, making them more efficient and responsive to market demands [59]. This is supported by findings from Klapper, who notes that digital payments streamline interactions between entrepreneurs and their stakeholders, thereby fostering better financial management and compliance with tax obligations [60]. The ability to track transactions digitally also provides businesses with valuable data that can inform strategic decisions and enhance revenue generation [61].

Several theoretical frameworks help explain the relationship between digital payment adoption and income improvements. The Unified Theory of Acceptance and Use of Technology (UTAUT) has been employed to analyze factors influencing the adoption of digital payment systems, revealing that perceived ease of use and perceived usefulness significantly affect user intentions [62]. This theoretical perspective is reinforced by findings from Bernad et al., who emphasize that the formalization of transactions through digital payments can lead to increased business growth and compliance with regulatory frameworks [61].

In summary, the literature consistently indicates that the adoption of digital payment technologies, particularly QRIS, can lead to significant improvements in business revenue and cash flow. The combination of enhanced transaction efficiency, improved customer satisfaction, and better financial management underpins this relationship, supported by various theoretical models that explain user adoption and the resulting economic benefits.

2.5 Challenges of QRIS Adoption

The adoption of the Quick Response Code Indonesian Standard (QRIS) by Micro, Small, and Medium Enterprises (MSMEs) in Indonesia faces several obstacles, which can be broadly categorized into technical, financial, and cultural barriers. Understanding these challenges is crucial for developing effective strategies to facilitate the integration of QRIS into MSME operations.

Technical Barriers

One of the primary technical obstacles is the quality of internet connectivity, which can significantly hinder the effective use of QRIS. Many MSMEs operate in areas with unreliable internet access, making it difficult to process transactions smoothly [38]. Additionally, the complexity of the QRIS system itself can pose challenges for MSMEs that lack the necessary technical skills to implement and maintain digital payment solutions [63]. The perception of QRIS as a complicated system can deter potential users, particularly among those who are not technologically savvy [64]. Furthermore, transaction limits imposed by QRIS can restrict MSMEs from fully utilizing the system for larger sales, thus impacting their revenue potential [38].

Financial Barriers

Financial constraints also play a significant role in the slow adoption of QRIS among MSMEs. Many small businesses struggle with limited capital, which can affect their ability to invest in the necessary technology and infrastructure for QRIS implementation [65]. The costs associated with transitioning to digital payments, including transaction fees and the need for compatible devices, can be prohibitive for many MSMEs [38]. Moreover, the initial investment required to train staff and upgrade systems can deter businesses from adopting QRIS, particularly if they are uncertain about the return on investment [64].

Cultural Barriers

Culturally, there is often a resistance to change among MSME owners who are accustomed to traditional cash transactions. This reluctance can stem from a lack of awareness regarding the benefits of QRIS, such as increased efficiency and improved financial accountability [66]. Many MSME owners may also have a distrust of digital payment systems, fearing potential fraud or technical failures [64]. The perception that cash transactions are more secure and straightforward can further complicate efforts to promote QRIS adoption [67].

Strategies for Overcoming Challenges

To address these barriers, various studies suggest implementing targeted training and awareness programs. Educational initiatives can help demystify QRIS and demonstrate its benefits, thereby increasing acceptance among MSME owners [66]. Government incentives, such as subsidies for technology upgrades or training programs, can alleviate financial burdens and encourage more businesses to adopt QRIS [25]. Additionally, fostering partnerships between government agencies and MSME support organizations can facilitate knowledge sharing and provide resources for businesses to transition to digital payments [11].

Moreover, creating a supportive ecosystem that includes reliable internet infrastructure and affordable access to technology is essential for the successful adoption of QRIS. Policymakers should focus on enhancing digital literacy among MSME owners and employees to build confidence in using digital payment systems [68]. By addressing these technical, financial, and cultural barriers through comprehensive strategies, the adoption of QRIS can be significantly improved, leading to enhanced financial performance and sustainability for MSMEs in Indonesia.

2.6 Research Gap

Several studies have explored the general benefits of QRIS for MSMEs, indicating that the adoption of digital payment systems can enhance transaction efficiency and security, ultimately leading to increased sales and customer satisfaction [13], [14]. For instance, research conducted in Jakarta highlighted how QRIS shortens payment processes and improves transaction security, yet it also identified challenges such as public dependence on cash transactions [14]. Similarly, a study in Depok City demonstrated that QRIS significantly improved digital payment efficiencies for culinary MSMEs, suggesting a positive correlation between QRIS usage and business performance [69]. However, these studies do not specifically address the income impacts on MSMEs in Pangkep District, which is a unique economic context that warrants further investigation.

Moreover, while some literature discusses the factors influencing the adoption of QRIS, such as perceived ease of use and trust [12], [70], there is limited empirical evidence directly linking these factors to income outcomes for MSMEs. For example, research has shown that government support and consumer behavior significantly affect QRIS adoption [12], yet the subsequent effects on income generation for MSMEs remain underexplored. This presents an opportunity for new research to fill this gap by examining how these adoption factors translate into tangible income benefits for MSMEs in Pangkep District.

This research aims to address these gaps by conducting a comprehensive analysis of the direct effects of QRIS on the income of MSMEs in Pangkep District. By employing a mixed-methods approach that includes quantitative data collection from MSME owners and qualitative interviews, this study will provide a nuanced understanding of how QRIS adoption influences income levels. Additionally, it will explore the contextual factors unique to Pangkep District, such as local economic conditions and consumer behavior, which may impact the effectiveness of QRIS as a tool for enhancing MSME income. This research will contribute new insights into the economic implications of QRIS, thereby informing both local business strategies and broader policy initiatives aimed at supporting MSMEs in the region.

2.7 Hypothesis

According to Sugiyono, (2019: 99) the hypothesis is a temporary answer to the formulation of the problem, because it is still temporary, it needs to be proven through the collected empirical data. The hypothesis is:

H_a: Use of Quick Response Code Indonesian Standard payment system (QRIS) has a positive and significant impact on MSME income.

3 Methodology

The type of data analysis used in this research is quantitative or statistical, with the aim of testing predetermined hypotheses. The independent variable in this study is the use of the Quick Response Code Indonesian Standard (QRIS) payment system. In contrast, the dependent variable is the income of MSMEs in Pangkep Regency. Besides, this study uses quantitative data to measure how much influence the utilization of the Quick Response Code Indonesian Standard (QRIS) has on MSME income through questionnaires to Pangkep Regency MSME players.

The research instrument used in this research is data collected using a questionnaire or questionnaire distributed to several QRIS user MSMEs in the

Pangkep Regency. In answering this questionnaire, the researcher used a Likert scale, measured using a five (5) point scale.

The population in this study is based on data from the Pangkep Regency Cooperative and MSME Office; the number of MSMEs in 2022 was 56,524 in Pangkep Regency. This study uses purposive sampling, a sampling technique with certain considerations. This means sampling is based on certain considerations or criteria formulated in advance by the researcher. So, the researchers used a sample of the population in this study of 56,524 MSMEs based on data from the Office of Cooperatives and MSMEs in Pangkep Regency, and the sample had to meet certain criteria, namely:

a. Samples or respondents are active MSMEs in the Pangkep Regency area.
b. The sample or respondent has used QRIS as a means of payment in a business that has been running for at least one year.
c. The sample or respondent is over 20 years old and understands QRIS technology.

Based on these criteria, in this study, the number of samples used was 40 samples with a description: the total population of MSMEs from 2015 to 2022 based on data from the Pangkep Regency Cooperative and MSME Office was 56,524 MSMEs, then the number of active MSMEs in Pangkep Regency taken in 2022 was 2,642 MSMEs. Furthermore, of the 2,642 MSMEs that have used QRIS as a means of payment in their business, 260 MSMEs, further reduced to only MSMEs that use QRIS for at least one year as many as 150 MSMEs, then MSMEs that are over 20 years old and understand QRIS technology as many as 40 MSMEs. So, the sample in this study based on the results of field observations that match the requested criteria is 40 MSMEs or respondents.

4 Results

4.1 Description of Respondent Characteristics

Gender

Characteristics of respondents based on gender, namely describing, or describing the gender of the respondent. This is grouped into 2 groups, namely men and women. The characteristics of respondents based on gender can be seen in the following table:

Table 1. Characteristics of Respondents Based on Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	8	20.0	20.0	20.0
Female	32	80.0	80.0	100.0
Total	40	100.0	100.0	

Source: Data processed, 2024

Based on table 1, it is known that the research respondents based on gender totaled 40 respondents consisting of 8 male respondents or 20.0% and 32 female respondents or 80.0%. So, it can be concluded that the most respondents are women, namely 32 people.

Age

The characteristics of respondents based on age in this study are grouped into respondents aged 20-30 years, 31-40 years, and 41-50 years. The characteristics of respondents based on age can be seen in the following table:

Table 2. Characteristics of Respondents by Age

Age	Frequency	Percent	Valid Percent	Cumulative Percent
20-30 years	29	72.5	72.5	72.5
31-40 years	6	15.0	15.0	87.5
41-50 years	5	12.5	12.5	100.0
Total	40	100.0	100.0	

Source: Data processed, 2024

Based on table 2, it is known that respondents aged 20-30 years were 29 people or 72.5%, respondents aged 31-40 years were 6 people or 15.0%, and respondents aged 41-50 years were 5 people or 12.5%. So, it can be concluded that the most respondents based on age are respondents aged 20-30 years, namely 29 people.

Business Type

The characteristics of respondents based on the type of business in this study are grouped into service, trade, culinary and production businesses, for complete results can be seen in the following table:

Table 3. Characteristics of Respondents Based on Type of Business

Business Type	Frequency	Percent	Valid Percent	Cumulative Percent
Service	1	2.5	2.5	2.5
Trade	16	40.0	40.0	42.5
Culinary	18	45.0	45.0	87.5
Production	5	12.5	12.5	100.0
Total	40	100.0	100.0	

Source: Data processed, 2024

Based on table 3, it is known that the number of respondents with the type of service business is 1 person or 2.5%, the type of trade business is 16 people or 40.0%, the type of culinary business is 18 people or 45.0%, and the type of production business is 5 people or 12.5%. So, it can be concluded that the characteristics of respondents based on the type of business are mostly in the culinary business type as many as 18 people or 45.0%.

Gross Business Income per Year

The characteristics of respondents in this study describe the gross annual business income of Pangkep Regency MSMEs, where gross annual business income is grouped into 3 parts, namely a maximum of 300 million, 300 million-2.5 billion, and 2.5 billion-50 billion. The characteristics of respondents based on gross annual business income can be seen in the following table:

Table 4. Characteristics of Respondents Based on Gross Business Income (GBI) per Year

GBI per Year	Frequency	Percent	Valid Percent	Cumulative Percent
Max 300 million	33	82.5	82.5	82.5
300-2.5 million	5	12.5	12.5	95.0
2.5-50 billion	2	5.0	5.0	100.0
Total	40	100.0	100.0	

Source: Data processed, 2024

Based on table 4, it is known that the maximum GBI is 300 million as many as 33 people or 82.5%, annual gross business income of 300 million-2.5 billion as many as 5 people or 12.5% and annual gross business income of 2.5 billion-50 billion as many as 2 people or 5.0%. So, it can be concluded that respondents with the most annual gross business income are respondents who have a maximum annual gross business income of 300 million as many as 33 people or 82.5%.

Length of Business Using QRIS

The characteristics of respondents in this study based on the length of business using QRIS are grouped into 2 parts, namely 1 year, and more than 1 year. For complete results can be seen in the following table:

Table 5. Characteristics of Respondents Based on Length of Business (LoB) Using QRIS

LoB Using QRIS	Frequency	Percent	Valid Percent	Cumulative Percent
1 year	21	52.5	52.5	52.5
More than 1 year	19	47.5	47.5	100.0
Total	40	100.0	100.0	

Source: Data processed, 2024

Based on table 5 it is known that respondents who used QRIS in their business for 1 year were 21 people or 52.5% and respondents who used QRIS in their business for more than 1 year were 19 people or 47.5%. So, it can be concluded that the length of business using QRIS is the most for 1 year as many as 21 people or 52.5%.

Income Earned from Using QRIS in 1 Month

Characteristics of respondents based on income obtained from using QRIS in 1 month are grouped into respondents with income less than 1,000,000, respondents with income 1,000,000-2,000,000, respondents with income 2,000,000-3,000,000, respondents with income 3,000,000-4,000,000, and respondents with income more than 4,000,000. For the full results can be seen in the following table:

Table 6. Characteristics of Respondents Based on Income Earned from Using QRIS in 1 Month

Income Earned	Frequency	Percent	Valid Percent	Cumulative Percent
< 1.000.000	9	22.5	22.5	22.5
1.000.000-2.000.000	4	10.0	10.0	32.5
2.000.000-3.000.000	14	35.0	35.0	67.5
3.000.000-4.000.000	6	15.0	15.0	82.5
> 4.000.000	7	17.5	17.5	100.0
Total	40	100.0	100.0	

Source: Data processed, 2024

Based on table 6, it is known that respondents with income from using QRIS in 1 month with an amount of less than 1,000,000 as many as 9 people or 22.5%, respondents with income from using QRIS in 1 month with an amount of 1,000,000-2,000,000 as many as 4 people or 10.0%, respondents with income from using QRIS in 1 month with an amount of 2,000,000-3,000,000 as many as 14 people or 35.0%, respondents with income from the use of QRIS in 1 month with an amount of 3,000,000- 4,000,000 as many as 6 people or 15.0% and respondents with income from the use of QRIS in 1 month with an amount of more than 3,000,000-4,000,000. 4,000,000 as many as 7 people or 17.5%. So, it can be concluded that the respondents with the most income from using QRIS in 1 month are 2,000,000- 3,000,000 as many as 14 people or 35.0%.

4.2 Assessment on Classical Assumption

The normality test is used to see in the regression model whether the dependent variable and the independent variable have a normal distribution or vice versa. A good regression model is a normally distributed regression model. To determine whether the research data is normal or not, this study uses the One Sample Kolmogorov Smimov method. The results of the normality test shows that the Kolmogorov Smimov test has a statistical value of 0.200 which is greater than 0.05. (0.200> 0.05), which means that it can be concluded that the normality test from the Kolmogorov Smimov test results that the residuals are normally distributed.

Regarding on the multicollinearity test calculation, the tolerance value shows that the independent variable QRIS usage is more than 0.10, namely 1.000 (1.000> 0.1) while the VIF value (variance inflaction factor) less than 10.0, namely 1.000 (1.000 < 10.0). So, it can be concluded that there is no multicollinearity between the independent variables in the regression model.

4.3 Statistical Analysis and Correlation

Simple Regression Analysis

Regression analysis is an analysis used to predict how a variable affects other variables and to determine the forms of these relationships. The results of simple regression calculations in this study can be seen in the following table:

Table 7. Simple Regression Analysis Test Results

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	25.175	7.843		3.210	.003
	QRIS Usage	.540	.153	.496	3.519	.001

a. Dependent Variable: Income Increase

Source: Data processed, 2024

Based on table 7 in coefficients, it can be explained about the simple regression equation in this study. The simple regression equation formula in this study is as follows:

$$Y = \alpha + \beta X$$

$$Y = 25{,}175 + 0{,}540$$

From the simple regression equation, the conclusions that can be explained are as follows:

a. The value α = 25.175 is the constant value. This means that the consistent value of the variable of increasing MSME income in Pangkep Regency is 25.175

b. The value of βX = 0.540, the coefficient value of the QRIS usage variable is 0.540, indicating that the QRIS usage variable has a strong relationship with the QRIS usage variable positive towards increasing income, in the sense that if the increase in income increases by one, it will increase income by 0.540.

Correlation Coefficient Test (R)

The correlation coefficient is a number that expresses the strength of the relationship between two or more variables. The correlation coefficient is an analysis of the size or strength of the relationship between the independent variable and the dependent variable. For the strength of the relationship, the correlation value is based on the provisions of the correlation coefficient table. The results of the correlation coefficient test can be seen in the following table:

Table 8 Correlation Coefficient Test Results (R)

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.496[a]	.246	.226	6.638

a. Predictors: (Constant), QRIS Usage

b. Dependent Variable: Income Increase

Source: Data processed, 2024

Based on the results of data processing in table 8, it shows that the correlation coefficient (R) obtained is 0.496. This states that there is a moderate correlation relationship between the independent variable and the dependent variable because it is in the range of coefficient interval numbers of 0.40 - 0.599 so it can be concluded that the use of QRIS has a moderate relationship in the sense that it is neither weak nor strong to increase MSME income in Pangkep Regency.

Coefficient Determinant (R^2)

The coefficient of determination is used to measure how much the independent variable, namely the use of QRIS, affects the increase in income or the dependent variable. Based on table 8, it shows that the coefficient of determination (R^2) obtained a value of 0.246 or 24.6%. It can be concluded that the dependent variable is influenced by the independent variable by 24.6% while 75.4% is influenced by other variables outside this study.

Hypothesis Testing

Hypothesis testing in this study uses the t test or commonly called a partial test. The t test (partial test) aims to determine partially and how much that whether there is a positive and significant influence. The results of the t test statistical analysis can be seen in the following table:

Tabel 9 Test Results of Partial Test Analysis

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	25.175	7.843		3.210	.003
	QRIS Usage	.540	.153	.496	3.519	.001

a. Dependent Variable: Income Increase

Source: Data processed, 2024

Based on table 9, it is known that partially shows that the variable use of QRIS obtained a tcount of 3.519, but to determine the effect of the independent and dependent variables, a t table is needed. The t-tabel is obtained from the formula df =

n - k or 40 - 2 = 38, using a two-sided test of 5% (0.05), the results obtained for t-tabel are 1.685. So, it is known that the result is t-count of 3.519> t-tabel of 1.685, so it can be stated that the use of QRIS influences increasing MSME income. The results of the regression test are positive, so it can be stated that the variable use of QRIS has a relationship with MSME income. which is in the same direction as the variable of increasing MSME income. Then the significant value obtained is 0.001 <0.05, meaning that the use of QRIS has a significant relationship with increasing MSME income. Based on these results, it is concluded that the use of QRIS has a positive and significant effect on increasing MSME income.

5 Discussion

Based on the research results that have been obtained regarding the variable use of the QRIS payment system (X) on increasing the income of Pangkep Regency MSMEs (Y), it states that the t_{count} value is 3.519> 1.685 t_{tabel} and the significant value of using QRIS (X) is 0.001 <0.05. This study's result means using QRIS positively and significantly affects MSME income in the Pangkep Regency. Besides, the study means that using QRIS positively and significantly affects the income of MSMEs in Pangkep Regency. This research result proves that even though the QRIS payment system is a new non-cash payment system launched by Bank Indonesia (BI) in 2020, it positively impacts the ongoing development of Pangkep Regency MSMEs.

The convenience felt by MSME actors in using QRIS, such as making it easier to process transactions quickly without requiring cash and making it easier to accept any QR code transaction, most MSMEs strongly agree with this convenience. Most MSME players can also understand the use of QRIS easily, although some still need to understand the procedures for using QRIS due to internal factors. However, the perceived benefits of QRIS make MSME actors feel helped and not burdened by the fees charged for each QRIS transaction. The answers are as follows regarding the cost constraints, and most strongly agree with them. These obstacles are seen as not impacting their overall business income, evidenced by the respondents' answers regarding the statement, "The fees charged in QRIS transactions do not reduce my business income." Based on this statement, most strongly agree, and only one person disagrees. This study explains that these obstacles do not affect the interest of MSMEs in using QRIS as an alternative payment transaction in their business. The security in using QRIS is also felt by MSME actors, such as avoiding counterfeit money. So, with the convenience, understanding, benefits, and security felt by MSME actors in using QRIS, customers feel happy, and of course, it will impact increasing their income.

This study is in line with research from [5], which states that the presence of QRIS can increase the daily income of MSME players. Likewise, research by Butarbutar et al., states that income expectations from using the QRIS payment system positively and significantly affect the development of MSMEs [30]. According to research opinion, this study proves that using QRIS brings success to MSMEs [25].

6 Conclusion

The results of the research and discussion that have been presented regarding the effect of using the Quick Response Code Indonesian Standard (QRIS) on MSME income in Pangkep Regency show that partially, the use of the QRIS has a positive and significant effect on MSME income in Pangkep Regency. This study means that using the QRIS positively impacts the sustainability of MSMEs and increases MSME income in the Pangkep Regency. For future researchers who want to continue this research, adding variables that still need to be included in this study is recommended. It will also expand the range of research by adding other objects with different characteristics from Pangkep Regency to become material for comparison and reference in research.

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