

CHAPTER 1

INTRODUCTION

1.1 Background of the Research

Economic growth and stability is a foundation and priority for many countries, one of which is Indonesia. According to Kadin (2022) there are many ways to grow the economy, growing the domestic economy is one of the way. They explain that one of the contributors to the Indonesian economy is the domestic economy at 55% of gross domestic product (GDP), which is a purchasing power of people that causes the wheels of economy to keep going. One of the largest contributors to the domestic economy is Micro, Small and Medium Enterprises (MSMEs). The Coordinating Ministry for Economic Affairs explained that Micro, Small and Medium Enterprises (MSMEs) contributed 61% of Indonesia's total GDP or worth 9,580 trillion rupiah. They also play an important role in labor absorption in Indonesia, where it absorb up to 97% of the Indonesian workforce (Coordinating Ministry for the Economy, 2024). This makes Micro, Small and Medium Enterprises (MSMEs) have an important role in the Indonesian economy, where Micro, Small and Medium Enterprises (MSMEs) support the Indonesian economy.

The development of MSMEs in Indonesia has been very rapid in the last decade. Data records that MSMEs in Indonesia continue to grow, where the latest report from databoks (2024) recorded that it reached the number of 65.46 million.

One of the cities in Indonesia with the most Micro, Small and Medium Enterprises (MSMEs) is the city of Yogyakarta.

Since MSMEs play a major role in economic growth (CNBC, 2022) this phenomenon could be seen in Yogyakarta, as a city with many residents working as MSME owners. The growth of MSMEs in The Special Region of Yogyakarta has been increasing steadily. Since 2019 to mid-2023, there has been a phenomenal surge in MSME growth in Jogja, with the number reaching 342,586 spread across all regencies. Such an impressive achievement, considering the fact that 10 percent of the DIY population now chooses to pursue a career in this sector (Krijogja, 2023) The following table shows the number of MSMEs in D.I. Yogyakarta in 2024:

Table 1. 1 Number of MSMEs in Special Region of Yogyakarta

Regency	Number (MSMEs)
Bantul Regency	91.775
Gunung Kidul Regency	57.761
Kulon Progo Regency	37.398
Sleman Regency	86.129
Yogyakarta City	39.807
Others (Non-DIY Residents)	29.716
Total	342.586

Source: (Bappeda, 2024)

Many of MSMEs in Yogyakarta are in the field of art, considering that the city has heritage written all over it. One of which is batik craft, a cultural heritage and an art form involving painting and writing designs on fabric. This could be seen in the table below:

Table 1. 2 Number of Batik MSMEs in Yogyakarta in 2024

Regency	Number (MSMEs)
Bantul Regency	5
Gunung Kidul Regency	0
Kulon Progo Regency	1
Sleman Regency	2
Yogyakarta City	120
Total	128

Source: (Bappeda, 2024))

The data shows that there are 128 Batik MSMEs in the Special Region of Yogyakarta, with the highest concentration in Yogyakarta City, where there are 120 batik craft entrepreneurs. The rapid development in the city can be leveraged to promote its batik, making the art more widely known and appreciated by the public. Preserving the existence of traditional Yogyakarta batik by maintaining the history and meaning embedded in each batik pattern can help sustain its title as the World Batik City and support the cultural aspect of the city.

However, the growth of Yogyakarta is accompanied by the influx of national and international tourists, which could threaten the existence of its traditional batik if not protected and developed in the right way, even potentially leading to a decline in the performance of Batik MSMEs (Tanjung et al., 2019)

MSMEs have been facing many obstacles and challenges. The first one is an outbreak of the Covid-19 virus which has caused them to go bankrupt. But beside that, economic uncertainty has hit the world, including Indonesia, which has caused people's purchasing power to decline, causing market access to be limited and competition to be very tight. Data from Tirto.id, 2024) notes that there are hundreds

of MSMEs in D.I Yogyakarta that are experiencing bankruptcy and are threatened with having their assets confiscated by the Bank. This is a problem considering they support the Indonesian economy to a large extent. One of the things that raise the issue is also due to the lack of digital knowledge understanding by MSMEs owners.

Nowadays, MSMEs should keep up with the globalization since the world has changed in many aspects, one of which is how to develop a business by utilizing technology. Because even though the business world has now entered a digitalization era. (Kompasiana, 2024) confirms that 35% of MSMEs in Indonesia are lack digital knowledge. This also happens in Special Region of Yogyakarta, where most MSMEs only rely on tourists without having the desire to digitalize. The large number of MSMEs who haven't been digitalizing their business, has resulted in them experiencing a decrease in business performance, where it is characterized by a significant and continuous negative number.

One of many strategies that can be utilized by MSMEs is digital marketing. Digital marketing is an activity carried out by business actors by building personas on social media with the aim of identifying the needs of potential consumers and creating content to build awareness (Desai, 2019). This is supported by the findings of (Kawira et al., 2019) which explains that digital marketing has a significant influence on business performance. Other research that supports these findings is research conducted by (Mechman et al., 2021)

However, digital marketing is also not always associated with improving business performance, where findings from research conducted by Al Asheq et al (2021) and Pan et al (2021) found that digital marketing only helps in relationships

with customers, where digital business is considered to have no direct influence on business performance.

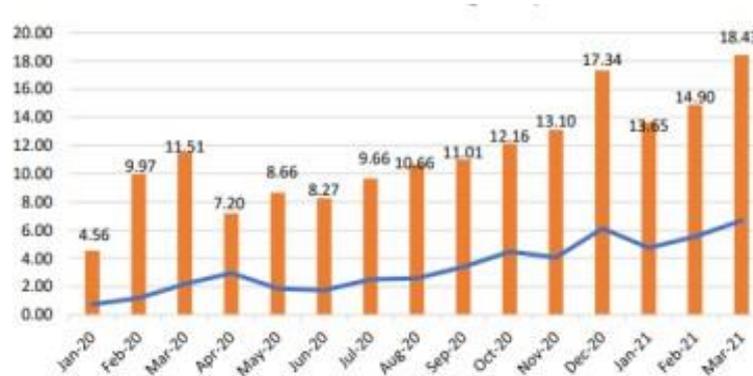
There are some initiatives implemented by the government to rejuvenate MSMEs in order to face the Industrial Revolution 4.0 era includes economic and business development, one of which is through digital marketing (Muhyiddin, 2020). Digital marketing is a promotional strategy that utilizes digital platforms and internet technologies to advertise products, services, or brands to a specific target audience. (Indrapura, 2023). Efforts to accelerate MSME digitization in the Special Region of Yogyakarta have been carried out by enhancing digital literacy among MSME actors through training related to digital marketing. This is supported by previous research findings that digital marketing can improve MSME performance (Elim et al., 2024)

Furthermore, to enhance MSME's performance, non-cash payment technologies should be utilized (Hairani et al., 2024). This aligns with Bank Indonesia's latest breakthrough, called QRIS, which is a national QR code standard designed to streamline QR code payments across Indonesia. In collaboration with the Indonesian Payment System Association, this digital payment system using QR Code scanning system and able to be used by the Payment System Service Provider. This system has made it easier and opened a one-door path for various digital wallets, even banking, to summarize and make payments to one place, also stored in the same place.

The existence of QRIS greatly simplifies the calculation of sales for sellers and makes it easier for buyers who don't need to use multiple digital wallets to shop

in various places, which is why the use of QRIS has increased sharply.

Figure 1. 1 Growth of QRIS Volume



Source: ASPI Statistics News, 2021

This statistic can be used to prove the statement above. The utilization of this new technology is very important, considering that MSMEs contribute as much as 60% to the national economy.

QRIS also greatly affects in some aspects, such as consumer behavior, business strategies, or even digital marketing strategies. According to Chaffey & Chadwick (2016) digital marketing refers to the use of the internet and associated digital technologies, alongside traditional communication methods, to accomplish marketing goals.. As the innovation is also based on technology, it intertwined realms of QRIS as digital payment and digital marketing as something to be expected.

The availability of QRIS counted as a new created service that could be a booster value and made the business performs even better, since it facilitates customers to have more choice to do a payment in such an effective and efficient way, which could improve the satisfaction of the customers and leading to the raise of business performance.

Not only that, but another factor that influences MSME performance is also a product innovation. As said by (Dühring & Zerfass, 2021) The rapid pace of innovation, coupled with advancements in marketing, will enhance the performance of MSMEs in achieving a competitive edge. According to B. D. Prasetyo (2020), product innovation is an interesting new inspiration that can be developed. Kalil et al (2020) in their research in the city of Semarang found that product innovation has an effect on business performance. This statement is in the agreement with the research results from (Noerchoidah et al., 2022). However, research from Haryono & Marniyati (2017) stated that product innovation does not have a direct effect on business performance.

The results of previous studies regarding the factors that influence business performance still have inconsistent results. Therefore, this study will place the QRIS variable as a mediating variable between digital marketing variables and product innovation with business performance variables.

As per the explanation of overview in preceding paragraph, the factors influencing MSME performance include improving digital marketing, QRIS, and product innovation. Therefore, I have chosen to focus on the topic “The Mediating Effect of QRIS on the Relation Between Digital Marketing and Product Innovation on Business Performance” to conduct a deeper analysis of the relevance and impact of digital marketing and product innovation, and how these factors influence overall business performance through the use of QRIS. The method I will use in this research is quantitative, and to measure the mediating variable of QRIS that affects digital marketing and product innovation on business performance, using

questionnaires that are provided for the qualifying MSMEs.

1.2 Problem Formulation

The purpose of this research is to examine how the effect of QRIS and how it influences the digital marketing and product innovation on business performance.

In light of the problem description, the research problems are defined below:

1. How digital marketing affects the use of QRIS in batik MSMEs?
2. How product innovation affects the use of QRIS in batik MSMEs?
3. How QRIS affects the business performance in batik MSMEs?
4. How digital marketing affects business performance in batik MSMEs?
5. How product innovation affects business performance in batik MSMEs?
6. How QRIS mediates the effect of digital marketing towards business performance in batik MSMEs?
7. How QRIS mediates the effect of product innovation towards business performance in batik MSMEs?

1.3 Objectives of Research

During the course of this study, a key objective must be prioritized by the researcher to achieve the desired outcome. Therefore, the objectives of this research are outlined below:

1. To understand the impact of digital marketing to business performance
2. To find out if the product innovation has an impact on business performance
3. To find out if QRIS has an impact on business performance
4. To discover if QRIS mediates the relation between digital marketing and business performance.

5. To discover if QRIS mediates the relation between product innovation and business performance.

1.4 Benefits of the Research

The benefits of this research, covers the digital marketing and business performance is to analyze the moderating effect of QRIS availability in MSMEs.

This research is prospecting to be presented as:

1. For Academic

The findings of this study can serve as a reference for future research, enhancing knowledge, insight, and understanding of information related to business performance, digital payment systems, and marketing, particularly in relation to the latest technological advancements.

2. For Writers

This research aims to contribute to the growth of knowledge and insights for researchers in the field of information systems regarding e-payment, digital marketing, and business performance. In addition, researchers can be more skilled in seeing issues regarding the business world.

3. For Others

The outcomes of this study are expected to inspire further research and serve as a resource for individuals seeking relevant information.

1.5 Theoretical Framework

1.5.1. Grand Theory Marketing Management

According to Kotler & Keller, (2016) Marketing is a critical activity that every company, whether dealing in goods or services, must undertake to ensure the sustainability of its business. On the other hand, according to Tjiptono & Chandra

(2012) marketing means individual activities aimed at fulfilling desires and needs through exchange. Marketing involves identifying and addressing human and social needs with the goal of satisfying desires, making it a key driver of a company's success. From the definitions above, it can be concluded that marketing is a comprehensive system of business activities used to plan, set prices, distribute, and promote goods or services with the purpose of satisfying buyer needs.

Marketing management occurs when one party in a potential exchange considers the goals and means to obtain the desired response from the other party. Marketing management contains of two words: management and marketing. According to (Kotler & Keller, 2016) marketing is the analysis, planning, execution, and oversight of programs aimed at creating, building, and maintaining profitable exchanges with target buyers to achieve company objectives. On the other hand, management involves the processes of planning, organizing, directing, and controlling. Therefore, marketing management can be defined as the analysis, planning, execution, and control of programs designed to create, build, and sustain profitable exchanges with target markets, all with the goal of achieving organizational objectives..

1.5.2 Digital Marketing

Digital marketing refers to the strategic use of digital platforms, such as search engines, social media, email, and websites, to promote products and services, foster customer engagement, and stimulate business growth. This approach harnesses advanced technologies and data-driven insights to target audiences with

greater precision and efficiency compared to traditional marketing methods. The definitions of Digital Marketing according to experts includes:

a. According to Lane (2008)

Digital marketing involves promoting products and services through digital channels of distribution. It is often referred to as e-marketing, which encompasses online advertising and aims to convey marketing messages to customers.

b. According to Heidrick & Struggles (2009)

The growth of digital marketing through the web, mobile devices, and gaming platforms has provided unprecedented and highly influential advertising opportunities. The question arises as to why marketers across Asia are not reallocating their budgets from traditional marketing channels, such as TV, radio, and print media, to newer technological and more interactive media.

c. According to Sanchez-Franco (2014)

Evolutionary marketing is a cause of digital marketing. This evolution takes place while companies use channels digital media for most marketing. Digital media channels enable continuous, two-way, and private communication between marketers and consumers, allowing for more personalized interactions.

1.5.2.1 Benefits of Digital Marketing

Digital marketing serves as a platform for building a company's or product's digital marketing presence and supports sales functions directed at target

consumers. It simplifies the understanding of digital marketing communication goals. According to Morissan (2010) the benefits of digital marketing are categorized as follows:

1. Dissemination of Information

One specific objectives of digital marketing is to provide comprehensive and in-depth information about a company's product. Companies utilizing digital marketing have a greater opportunity to attract buyers. In brief, digital marketing is the most effective medium for disseminating information to a broad audience.

2. Creating Awareness

For small companies with limited promotional budgets, digital marketing serves as an alternative medium. It creates awareness more effectively than conventional media, making it highly beneficial for building organizational and company awareness, as well as for promoting the services or products they offer.

3. Research Purposes

Digital marketing is not only used as a marketing strategy but also as a means to conduct market research and gather information on competitors and target consumers

4. Building Perception

Companies use digital marketing as a medium designed to shape public perception of the company's image.

5. Product Trials

Companies utilize digital marketing to conduct product trials, often launching campaigns that offer electronic coupons to target consumers, encouraging them to try their products.

6. Improving Service

Many companies benefit from using digital marketing to provide comprehensive information and address customer questions and complaints. This role ultimately enhances the service provided to customers.

7. Enhancing Distribution

Digital marketing encompasses various tools for company marketing efforts. With these tools, companies can collaborate to promote and showcase their products. One such tool is the website, where affiliations are formed between various sites and the company's website to facilitate this collaboration.

1.5.2.2 Indicators of Digital Marketing

According to Kim (Rauf et al., 2024) digital marketing has 4 indicators, such as:

- a. **Cost or Transaction:** The efficiency level of the promotion techniques is very high, which effectively reduces transaction expenses and duration.
- b. **Variety of rewards:** With digital marketing, the company can offer promotional programs that attract consumer interest.
- c. **Site Design:** An engaging appearance on digital marketing platforms can add significant value to the company. The company must deliver visually appealing designs on its website, application, and social media channels.

- d. Interactive: Making a connection between company and consumers as a way to provide a useful information.

1.5.3 Product Innovation

According to Lena (2009), product innovation must be able to create sustainable competitive advantages in rapid environmental changes and towards the global market. The success of product innovation requires a match between the process and the supporting environment. In addition, the success of the innovation implemented not only had to be carried out incidentally, but also must be continuous throughout the time. To face competitive competition, MSMEs are required to find new solutions or strategy in order to keep surviving, especially in terms of product development, which innovation strategies need to be developed and implemented. Thus, according to Kalil and Aenurohman (2020), there are several indicators in product innovations, such as :

- 1) Advantages of new products
- 2) Products are easily recognized
- 3) Products are accepted by consumers
- 4) Development of new products

1.5.4 QRIS (Quick Response Indonesian Standard)

1.5.4.1 Electronic Payments Definition

Electronic payments according to Trihasta & Julia Fajaryanti (2014) are where we can receive, store, and process our money in one digital form. Electronic payments make the buying and selling process easier, because we always have to carry this medium of exchange to get the things we want to buy already in the

electronic devices that we always carry. The payment system can be done online by involving computer networks usage, internet, and virtual financial services. In addition to providing convenience in payment transactions, the e-payment system should provide high guarantees for the security system, and its secure aspect can be guaranteed, consumers will increase trust by using the e-payment system.

1.5.4.2 Electronic Payments Classifications

The classification of electronic payments is distinguished by its type. In general, the classification of electronic payments is divided as follows;

1. Bank Transfer, as the oldest method, but is still the most widely used today, because it is practical, safe, and easy to do. However, some parties often avoid this method because of the additional administrative fees for transfers to other banks.
2. E-Wallet, which is being widely used recently with a branding as digital wallet. By using E-Wallet, the payment process is much faster and the facility is equipped using high technology with lower administrative costs than bank transfers.
3. Credit Cards, is a non-cash payment using a card released by a bank. It can help you make transactions that are paid by the bank in the beginning, but later, you have to pay the nominal that has been determined by the bank, according to their concern.
4. QRIS, or The Indonesian Standard QR Code. It is a standardized QR code developed by Bank Indonesia and the Indonesian Payment System Association with the purpose to unify every cashless payment methods

in Indonesia through one door which can be used for all smartphones with QR code scanner.

1.5.4.3 Quick Response Indonesian Standard (QRIS)

As one of the types of electronic payment, Quick Response Code Indonesian Standard or is the integration of different types of QR codes from various Payment System Service Providers (PJSP) that use QR Code. It was designed by Bank Indonesia (BI) along with an installment framework, which aims to ensure that exchange interactions with QR Codes can be simpler, faster and safer. All Installment Framework Specialist cooperatives that will use QR Code Installments must implement QRIS. The meaning of QRIS according to BI, is:

- a. Universal, this system is designed for inclusive users, for all levels of society and in a wide range of places since it can be used for payment transactions both domestically and abroad.
- b. Easy to use, people can make payments easily and safely from a smartphone.
- c. Beneficial, QRIS based transactions are bringing many benefits for both buyers and sellers due to the efficiency through one QR code that can be used for every payment application on smartphones.
- d. Direct. The process of transactions with QRIS immediately occurs, with a fast, instantaneous, and automatic operation that supports the smooth running of the payment system.

1.5.5 Business Performance

Business performance pertains to how effectively a company achieves its goals, encompassing financial metrics like revenue growth and profitability, along with value-based indicators such as satisfaction of customers and operational efficiency. It involves evaluating both short-term achievements and long-term sustainability by analyzing internal processes, employee productivity, market conditions, and competitive dynamics. This assessment helps businesses recognize strengths, resolve weaknesses, and apply strategies for ongoing improvement and growth. The definitions of Digital Marketing according to experts includes:

- a. According to Nuvriasari (2012)

Business performance is a result of activities within a company, influenced by both internal and external factors, in achieving established goals over a specific period.

- b. According to Rivai (2013)

Business performance is a broad term that refers to the actions or activities of an organization over a specific period, measured against various standards such as past costs, efficiency, management accountability, and similar criteria.

1.5.5.1 Business Performance Aspects

Aspects of business performance encompass various metrics and indicators that evaluate a company's effectiveness in achieving its objectives, which according to Morgan (2011) there are a couple varied elements of business performance product-market performance and financial performance.

1) Product-market performance

Product-market performance relates to the purchasing behavior of customers and potential buyers in the target market in response to the firm's established competitive advantage (Morgan, 2011).

2) Financial performance

From a financial performance perspective, organizational success is commonly defined and evaluated using accounting metrics such as cash flow and profitability, as well as financial market measures of investor value (Srivasta & John, 1999).

(Munizu, 2010) explains that the success rate of MSME performance is reflected in several performance indicators of business success, which are:

a. Sales or Revenue Growth Rate

Sales growth represents the outcome of successful previous investments and serves as an indicator of future growth potential. It reflects market acceptance of a company's products or services, influencing its capacity to maintain business operations. Elevated sales growth boosts revenue, thereby enhancing business performance. It is calculated as the percentage change in sales between the current period and the past one.

b. Capital or Financial Growth Rate

Capital growth refers to the rate of increase in capital utilized for business activities compared to the capital used in the previous period. Business capital comprises both self-funded and external sources. Capital is crucial for generating profits; therefore, significant capital growth contributes to

improved company performance. It is measured as the percentage change in capital, whether self-owned or externally sourced, between the current and prior periods used for business operations.

c. Employment Growth Rate

Labor refers to individuals employed by business owners to initiate various activities within the company. Larger companies tend to engage in a greater number of activities, which affects the number of workers. Thus, significant labor growth indicates improved business performance. It is assessed by calculating the percentage change in the workforce employed during the current period relative to the previous period.

d. Market Growth Rate

Market growth shows the proportion of change reflects in market acceptance of the products or services provided by the company. Higher market growth will enhance the return on investment, thus improving the company's performance. Market share growth can be understood through both demand and supply perspectives. The demand approach is analyzed based on target consumers, their number, the quantity of needs, and the total annual demand. On the other hand, the supply approach is viewed through the entrepreneur's capability to produce a product or goods.

e. Profit Growth Rate

Profit is the excess of revenue over an expenses sustained by the company. Every business activity aims to maximize profit to ensure its sustainability. Profit is frequently used as an indicator of business performance. As a result,

significant profit growth signifies better company performance. Profit growth is measured by the percentage change in profit between the current period and the previous period..

1.6 Research Matrix

Previous studies are compiled and used as the reference of this research. The studies that are used for writer’s reference are among others:

Table 1. 3 Previous Research Matrix

No.	Title/Author	Variables	Result
1.	a) Digital Marketing: An Influence towards Business Performance among Entrepreneurs of Small and Medium Enterprises (Omar et al., 2020)	1) Independent Variable: Digital Marketing 2) Dependent Variable: Purpose of Usage, Benefit, Reputation	1) Significant for marketing power and business performance. 2) The power of digital marketing has a significant influence on business performance. 3) Products that marketed through digital medium can positively influence the business performance.
	b) Effect of Digital Marketing on the Performance of MSMES in Kenya (Kawira et al., 2019)	1) Independent Variable: Digital Marketing 2) Dependent Variable: Performance’s of MSMES	1) Digital marketing accounted for 38.8% of the variation in performance of MSMES. 2) Strong positive correlation between digital marketing and performance of MSMES. 3) Digital marketing had a significant and positive effect on the performance of MSMES.
	c) The Effect of Digital Marketing, And E-Commence on SMEs performance of Baghdad (Mechman et al., 2022)	1) Independent Variable: Digital Marketing, E-Commerce 2) Dependent Variable: SMEs Performance	1) SME's performance is influenced by digital marketing. 2) Digital marketing has a positive influence on SME's performance.

No.	Title/Author	Variables	Result
	<p>d) Pengaruh Digital Marketing dan Network Dalam Meningkatkan Kinerja UMKM di Masa Pandemi COVID-19 (Huda et al., 2021)</p> <p>e) Analyzing Digital Marketing, Green Marketing, Networking and Product Innovation on Sustainability Business Performance, Silk Cluster in Polewali Mandar, West Sulawesi (Erwin et al., 2021)</p>	<p>1) Independent Variable: Digital Marketing, Network</p> <p>2) Dependent Variable: SMEs Performance</p> <p>1) Independent Variable: Digital Marketing, Green Marketing, Networking, Product Innovation</p> <p>2) Dependent Variable: Business Performance</p>	<p>1) Digital marketing influences the performance of MSMEs</p> <p>2) Digital marketing that is pursued optimally can create an added value and competitive advantage which will lead to increased performance of MSME</p> <p>1) Digital marketing has a positive influence towards business performance</p> <p>2) Digital marketing is a concern to be developed to provide significant result for a few aspects in business performance</p>
2.	<p>a) Penguatan Kompetensi Kewirausahaan dan Inovasi Produk Sebagai Penentu Kinerja UKM. (Noerchoidah et al., 2022)</p> <p>b) Dampak Kreativitas dan Inovasi Produk Terhadap Kinerja UKM di Kota Semarang (Kalil et al., 2020)</p> <p>c) Pengaruh Orientasi Kewirausahaan dan Inovasi Produk Terhadap Kinerja</p>	<p>1) Independent Variable: Entrepreneurial Competence, Product Innovation</p> <p>2) Dependent Variable: Business Performance</p> <p>1) Independent Variable: Creativity, Product Innovation</p> <p>2) Dependent Variable: Business Performance</p> <p>1) Independent Variable: Entrepreneurship</p>	<p>1) Positive influence and significant relationship between Entrepreneurial Competence and Business Performance</p> <p>2) Negative influence and not significant relationship between Product Innovation and Business Performance</p> <p>1) SMEs that improve their creativity and product innovation will get a positive influence on their business performance.</p> <p>2) Product innovation has positively influence the business performance</p> <p>3) Simultaneously, creativity and product innovation are able to provide a positive and significant influence in efforts to improve SME's performance.</p> <p>1) Entrepreneurial Orientation does not directly affect the Performance of Small and</p>

No.	Title/Author	Variables	Result
	<p>Usaha Kecil Menengah dengan Variabel Intervening Keunggulan Bersaing (Studi pada UKM di Banjarmasin) (Huda et al., 2020)</p> <p>d) Pengaruh Orientasi Kewirausahaan dan Inovasi Produk Terhadap Kinerja UMKM Batik Gedog Khas Tuban (Jannah et al., 2019)</p>	<p>Orientation, Product Innovation</p> <p>2) Dependent Variable: Business Performance</p> <p>1) Independent Variable: Entrepreneurship Orientation, Product Innovation</p> <p>2) Dependent Variable: Business Performance</p>	<p>Medium Enterprises in SMEs in Banjarmasin.</p> <p>2) Product Innovation does not directly affect the Performance of Small and Medium Enterprises in SMEs in Banjarmasin.</p> <p>1) Entrepreneurial orientation has a positive and significant effect on the performance of Batik UMKM in Tuban</p> <p>2) Product Innovation has a positive and significant effect on the performance of Batik UMKM in Tuban</p>
3.	<p>a) An Analysis on the Influence of Digital Marketing, Entrepreneurial Networking, on Msme Business Performance with the Use of Payment Sistem Quick Response Indonesia Standard (QRIS) As Moderating Variable In Medan (Gaol & Sigalingging, 2022)</p> <p>b) Pengaruh Digital Marketing dan Digital Payment Terhadap Kinerja Penjualan UMKM (Rahmadani, 2023)</p> <p>c) The effect of digital marketing, digital finance and digital payment on finance performance of Indonesian SMEs (Daud et al., 2022)</p>	<p>1) Independent Variable: Digital Marketing, Entrepreneurial Networking</p> <p>2) Moderating Variable: QRIS</p> <p>3) Dependent Variable: Business Performance</p> <p>1) Independent Variable: Digital Marketing, Digital Payment</p> <p>2) Dependent Variable: Business Performance</p> <p>1) Independent Variable: Digital Marketing, Digital Payment</p> <p>2) Dependent Variable: Digital Finance, Finance Performance</p>	<p>1) Digital Marketing has a significant positive effect on the Business Performance of MSMEs in Medan City</p> <p>2) QRIS can moderate the relationship between Digital Marketing and Entrepreneurial Networking on MSME Business Performance in Medan City</p> <p>1) Digital marketing has a positive effect and significant impact on MSME sales performance</p> <p>2) Digital payments have a positive effect and significant impact on MSME sales performance.</p> <p>1) Significant influence between digital payment variables on MSME Financial Performance.</p> <p>2) It stated that to increase the business exposure of MSMEs, digital marketing attracts</p>

No.	Title/Author	Variables	Result
			consumers' attention in finding their needs easily. 3) Significant influence between Digital Finance variables on MSME Financial Performance

1.7 Relation Between Variables

1.7.1 Relation between Digital Marketing and QRIS

Digital marketing has emerged as a crucial tool for small and medium-sized enterprises to enhance their productivity. According to Safitri et al., (2023) digital marketing by SMEs is often of high quality and significantly contributes to improving their overall performance. This assertion underscores the importance of digital marketing strategies in reaching broader audiences, engaging customers, and driving sales. The effective use of digital platforms allows businesses to optimize their marketing efforts, making them more cost-efficient and impactful compared to traditional marketing methods. As a result, they can achieve higher visibility and stronger market presence, ultimately leading to increased revenue and growth.

In the context of digital payments, the integration of Quick Response Code Indonesian Standard (QRIS) with digital marketing strategies presents a promising avenue for enterprises. QRIS simplifies transactions by enabling quick and secure payments through mobile devices, thereby enhancing the customer experience. When combined with digital marketing, QRIS can further improve the performance of MSMEs by streamlining the purchasing process and fostering greater customer satisfaction. The synergy between digital marketing and QRIS could result in better conversion rates, as customers prefer to complete purchases when the payment

process is effortless. Therefore, the adoption of both digital marketing and QRIS is essential for SMEs aiming to thrive in the increasingly digitalized marketplace.

H1. There is an influence of digital marketing on the use of QRIS

1.7.2 Relation between Product Innovation and QRIS

The integration of digital payment systems, particularly the Quick Response Code Indonesian Standard (QRIS), with innovation in products represent a significant area of study within digital transformation. According to (Zare & Persaud, 2024) in their bibliometric analysis "Digital Transformation and Business Model Innovation: A Bibliometric Analysis of Existing Research and Future Perspectives", digital transformation drives innovations by leveraging advanced technologies. The adoption of digital payments like QRIS can facilitate these innovations by providing seamless and secure transaction processes, which in turn enhance customer satisfaction and operational efficiency. This alignment of digital payment systems with innovative products enables firms to create, deliver, and capture value more effectively, thereby achieving competitive advantages in the market.

QRIS, as a form of standardized and simplified payment methods, not only streamlines financial transactions but also opens up new possibilities for more innovations in products. This integration of QRIS into product innovation exemplifies how digital payments are pivotal in driving innovations, ultimately leading to more agile, scalable, and customer-centric business practices.

H2. There is an influence of Product Innovation on the use of QRIS

1.7.3 Relation between Digital Marketing and Business Performance

According to Nursiah & Radhi (2009) developed the benchmarks to measure success of the company's performance to achieve competitive success can be seen from four characteristics, and one of them is growth and learning perspective. Based on her statement, if the goals are set in a financial perspective, customers and internal business highlight the areas where the organization must excel to achieve breakthrough output. Meanwhile, the learning and growth perspective focuses on providing the infrastructure necessary to support ambitious goals across all other perspectives, ensuring their achievement.

Thus, digital marketing is one of the way to achieve the business performance since it is counted as one of advancements in tech which give the business owner another perspective of how they could achieve a desirable performance in their business with keep learning and walking together along the growth of 4.0 era; using technology advances to benefits themselves too.

Research conducted by Elim et al.,(2024) shows that digital marketing results have an effect on business performance.

H3. There is an effect of Digital Marketing on Business Performance

1.7.4 Relation between Product Innovation and Business Performance

Product innovation significantly influences business performance, since it is pivotal for growth and competitive edge. Through the rethinking of conventional methods in value creation, distribution channels, and revenue generation, businesses can better align with evolving market trends and customer needs.

Successful product innovation often results in heightened revenue, improved operational effectiveness, and greater customer satisfaction.

An innovation is a necessity and a vital resource for the sustainability and growth of companies (Varis & Littunen, 2010) It serves as a strategic tool for organizations to adapt to a dynamic environment by generating new ideas essential for producing innovative products. According to (Saunila, 2014) the benefits of innovation often outweigh the resources invested in its implementation.

The statement above is supported by (Aini et al., 2021) who stated that innovations in business also have a role that is essential for growth, gain competitive advantage, and improve long-term performance. Thus reveal that the product innovation is a necessary driving factor for SME's performance.

Research conducted by (Jannah et al., 2019) shows that product innovation has an effect on business performance.

H4. There is an influence of product innovation on business performance.

1.7.5 Relation between QRIS and Business Performance

The integration of the Quick Response Code Indonesian Standard (QRIS) into business operations has demonstrated a significant positive influence on the performance of micro, small, and medium enterprises (MSMEs). According Sholikhah and Susilo (2023), the adoption of QRIS facilitates smoother and faster transaction processes, which in turn enhances customer satisfaction and drives repeat business. This streamlined payment method reduces transaction times and errors, leading to increased efficiency and higher turnover rates for businesses that implement it. The study highlights that MSMEs using QRIS experience a notable

improvement in their financial performance across various sectors, underscoring the system's versatility and effectiveness.

Furthermore, the study indicates that QRIS adoption not only boosts sales performance but also expands market reach for MSMEs. By offering a standardized and secure payment method, QRIS helps businesses attract more customers, including those who prefer digital payments for their convenience and security. This wider customer base translates into higher sales volumes and improved profitability. The positive correlation between QRIS usage and business performance, as evidenced by increased turnover, suggests that digital payment systems are integral to modern business strategies, especially for MSMEs aiming to thrive in a competitive market. This integration of QRIS into product innovation demonstrates the critical role of digital payment technologies in driving business growth and operational efficiency.

Research conducted by Valentino (2024) shows that the results of QRIS usage have an effect on business performance.

H5. There is an effect of QRIS on the use of business performance

1.7.6 The Influence of Digital Marketing on Business Performance with QRIS as a mediating variable

QRIS acts as a mediator between digital marketing efforts and business performance, playing a crucial role in enhancing the connection between the two. Digital marketing strategies like online advertising, social media campaigns, and email marketing are essential for attracting customers and boosting sales. However, the effectiveness of these efforts can be significantly amplified when integrated with QRIS technology. QRIS facilitates seamless transactions, making it easier for

customers to make purchases directly from digital marketing channels. This streamlined process not only increases sales but also improves customer satisfaction and loyalty. Ultimately, QRIS bridges the gap between digital marketing initiatives and business performance, leading to greater success for businesses in today's digital landscape.

Studies conducted by Kwabena et al., (2021) have also demonstrated that the adoption of a digital payment system significantly impacts SME performance in developing countries. The implementation of such systems allows SMEs to compete on a global scale, meet customer needs, and enhance their relationships with partners and government entities..

H6. Digital marketing affects business performance through QRIS.

1.7.7 The Influence of Product Innovation on Business Performance with QRIS as a mediating variable

Ar and Baki (2011) found that product innovation and process innovation have a strong, positive relationship in determining business success for SMEs. Abdul Mohsin et al. (2017) highlight that innovation positively influences business success and increases customer satisfaction, urging entrepreneurs to prioritize innovation. Additionally, Kam Sing Wong (2013) emphasizes that competition drives success, as companies that adapt, change, and foster a culture of innovation are better positioned for growth.

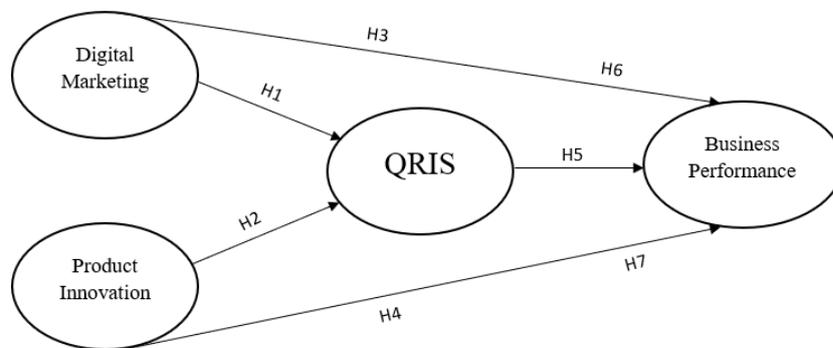
With the implementation of QRIS, product innovation can significantly enhance business performance. QRIS, as an innovative tool, allows customers to make efficient smartphone-based payments while providing sellers with effective service capabilities and faster financial management. Research by Saraswati et al.,

(2022) supports this, demonstrating a strong positive relationship between innovation and MSME performance, with statistical findings of ($p=0.285$, $p<0.05$) and $t = 3.406$ ($t>1.96$). This highlights how integrating product innovation with QRIS can lead to improved business outcomes, particularly for MSMEs.

H7. Product innovation affects business performance through QRIS.

1.8 Hypothesis

Figure 1.2 Research Hypothesis Model



H1. Digital marketing has an influence on the use of QRIS.

H2. Product innovation has an influence on the use of QRIS.

H3. Digital marketing has an influence on Business Performance.

H4. Product innovation has an influence on Business Performance.

H5. QRIS has an influence on Business Performance.

H6. Digital Marketing has an influence on Business Performance through QRIS.

H7. Product Innovation has an influence on Business Performance through QRIS.

1.9 Concept Definition

Concept definition is the step of explaining the limit of understanding about the things that are being observed. The concept definition of each variable in this study is as follows :

1.9.1 Digital Marketing

According (Kotler et al., 2017) digital marketing involves utilizing digital technology to connect, engage, and communicate with customers to meet their needs and desires. On the other hand, according to Tande (2018), digital marketing is a product or service marketing technique which use digital media. Including the internet, mobile devices, and software; aiming to achieve the expected target. So, in order to increase sales in MSMEs, one of the most important things is to influence buyers to buy their wants or needs from our business.

1.9.2 Product Innovation

According to Nelly et al (2001) that, product innovation shows the development and introduction of new or developed products that are successful in marketing. Product innovation can be in the form of changes in design, components or products. Crawford and De Benedetto (2000:9) state that product innovation is an innovation used in the entire operation of a company where a new product is created and marketed, including innovation in all functional processes or uses.

1.9.3 Concept of QRIS

QRIS or Quick Response Code Indonesia Standard is a standardized QR Code by Bank Indonesia and the Indonesian Payment System Association. It integrates all cashless payment methods in Indonesia and can be used for all smartphones with QR code scanner with easy, fast, and safe steps.

1.9.4 Business Performance

A statement by Nuvriasari (2012) said that business performance is a measure of outcomes derived from a company's activities, influenced by internal and external factors, in the pursuit of achieving defined goals within a specific

timeframe. Meanwhile, according to Moehleriono (2012) business performance refers to the degree of success achieved through program activities or policies in fulfilling a company's goals, objectives, vision, and mission as outlined in its strategic plan.

1.10 Operational Definition

Operational definition is an indicator of variables that are measured. The operational definition of variables from this research are:

1.10.1 Digital Marketing

Digital marketing is how MSMEs promote their business with an advancements of technology. It can be measured with the indicators of how internet influences the marketing process. Those indicators are listed as:

- 1) Cost or Transaction (Kim, 2002)
- 2) Incentive Program (Kim, 2002)
- 3) Site Design (Kim, 2002)
- 4) Interactive (Kim, 2002)

1.10.2 Product Innovation

Product innovation is a combination of various processes that influence each other. It might be not a new aspect, but it could be a combination of all processes that have been done before (Myers and Marquis, 1969). The indicators that will determine it are listed as:

- 1) Advantages of new products (Kalil and Aenurohman, 2020)
- 2) Products are easily recognized (Kalil and Aenurohman, 2020)
- 3) Products are accepted by consumers (Kalil and Aenurohman, 2020)
- 4) Development of new products (Kalil and Aenurohman, 2020)

1.10.3 QRIS

In the QRIS variable, there are four indicators called UNGGUL that will be measured in BI's claim regarding their system. Those indicators are listed as:

- 1) Universal
- 2) Easy
- 3) Beneficial
- 4) Direct use

1.10.4 Business Performance

Business performance is an build-up of how the operations turned out in the MSMEs. The indicators that will determine it are listed as:

- 1) Sales Growth (Munizu, 2010)
- 2) Capital Growth (Munizu, 2010)
- 3) Labor Growth (Munizu, 2010)
- 4) Market Growth (Munizu, 2010)
- 5) Revenue Growth (Munizu, 2010)

Table 1. 4 Concept Matrix

No	Variable	Concept	Indicator	Item
1	Digital Marketing (X1)	(Saputra & Ardani, 2020) stated that digital marketing is one type of marketing activity used to promote or market a product or service and to reach potential consumers using digital media.	1. Cost or Transaction (Kim, 2002) 2. Incentive Program (Kim, 2002) 3. Site Design (Kim, 2002) 4. Interactive (Kim, 2002)	Ratio Scale

No	Variable	Concept	Indicator	Item
2	Product Innovation (X2)	Product innovation is an innovation used in the entire operation of a company where a new product is created and marketed, including innovation in all functional processes or uses. (Crawfors and De Benedetto, 2000)	<ol style="list-style-type: none"> 1. Advantages of new products (Kalil and Aenurohman, 2020) 2. Products are easily recognized (Kalil and Aenurohman, 2020) 3. Products are accepted by consumers (Kalil and Aenurohman, 2020) 4. Development of new products (Kalil and Aenurohman, 2020) 	Ratio Scale
2	QRIS	QRIS or Quick Response Code Indonesia Standard is a QR code standard developed by Bank Indonesia and the Indonesian Payment System Association. It integrates all cashless payment methods in Indonesia and can be used for all smartphones with QR code scanner with easy, fast, and safe steps (Wulandari, 2022)	<ol style="list-style-type: none"> 1) Universal 2) Easy 3) Beneficial 4) Direct Use 	Ratio Scale
2	Business Performance (Y)	According Moeheriono (2012) business performance is a description of the level of achievement of the implementation of a program activities or policies in realizing goals, objectives, vision and mission in a certain company outlined as their strategic planning.	<ol style="list-style-type: none"> 1. Sales Growth (Munizu, 2010) 2. Capital Growth (Munizu, 2010) 3. Labor Growth (Munizu, 2010) 4. Market Growth (Munizu, 2010) 5. Revenue Growth (Munizu, 2010) 	Ratio Scale

1.11 Research Methods

1.11.1 Research Types.

This study uses an explanatory research type with a quantitative approach. Explanative research is used when you want to know why certain situations or conditions occur or what influences the occurrence of something and not only describe the phenomenon that occurs, but also offer an explanation of the causes behind the phenomenon and its impacts. In other words, researchers aim to clarify the connection between two or more variables. They must formulate a hypothesis as an initial assumption to explain the relationship between the variables being examined.

This research focuses on the influence of Digital Marketing (X1) and Product Innovation (X2) and its mediating effect of QRIS on Business Performance (Y). Digital Marketing and Product Innovation are the independent variable, QRIS is an mediating variable and Business Performance is a dependent variable.

1.11.2 Sample and Population

1.11.2.1 Population

Population refers to a defined group of objects or subjects that share specific characteristics, determined by researchers, and are the focus of a study, from which conclusions are drawn, according to Sugiyono (2019) The reason for understanding the population is so that researchers have limitations in determining the research subject area. In this study, the population is all Batik MSMEs in Yogyakarta that provide a payment system via QRIS. The reason for choosing the research subject is because business actors, especially the craft industry in Yogyakarta, often

innovate their product and actively market their products through online portals and social media. The number of MSMEs in DI.Yogyakarta is 128 Batik MSMEs.

1.11.2.2 Sample

A sample is a subset of the characteristics present in a population (Sugiyono, 2019). For this study, the sample consisted of 86 MSMEs that completed the questionnaire, all of which use QRIS. Therefore, the sample for this study comprised 86 respondents.

1.11.3 Sampling Technique

This study employs a non-probability sampling technique, specifically purposive sampling. According to (Sugiyono (2019) "purposive sampling is a technique for selecting data sources based on specific considerations." The purposive sampling technique was chosen because not all potential samples meet the criteria relevant to the phenomenon under investigation. Therefore, the author selected purposive sampling to establish specific criteria that must be met by the samples included in this study.

One of the considerations is batik sellers operating in Yogyakarta and using QRIS. The researcher determined the sample by asking each seller whether they met the sample criteria or not. The characteristics of respondents who can be used as samples are as follows:

- 1) Batik MSMEs in D.I.Yogyakarta
- 2) QRIS users
- 3) Willing to fill out a questionnaire related to this study

1.11.4 Data Types and Sources

1.11.4.1 Data Type

The data used in this study is quantitative, meaning it consists of data that can be measured or calculated directly. This data is presented as information or explanations expressed in numerical form.

1.11.4.2 Data source

Primary data and secondary data are both used as a source. Primary data is data obtained directly from owner of Batik MSMEs in Yogyakarta, and secondary data is received through other sources such as from various writings from books, journals, the internet, and Undip FISIP's documents related to this research.

1.11.5 Measurement Scale

The research will utilize a questionnaire as the tool, with respondents' answers measured using a Likert scale. Through the Likert scale, the variables to be assessed are described as variable indicators. These indicators serve as the foundation for developing instrument items, which can take the form of questions or statements. The responses to each item on the Likert scale range from very supportive to very unsupportive, expressed through words. For the purposes of quantitative analysis, these responses will be assigned numerical scores. The scoring given to measure consumer statements uses the Likert Scale, as follows Sugiyono (2019):

1. For strongly agree (SS) answers, a score of = 5 is given
2. For agree (S) answers, a score of = 4
3. For neutral (N) answers, a score of = 3
4. For disagree (TS) answers, a score of = 2
5. For strongly disagree (STS) answers, a score of = 1

1.11.6 Data Collection Technique

The data collection techniques used by researchers are as follows:

a. Questionnaire Distribution

The data collection method used in this study is a questionnaire. According to Sugiyono (2019) a questionnaire is a technique for collecting data by providing a set of written questions or statements for respondents to answer.

A questionnaire is an efficient data collection method that allows researchers to clearly define the variables to be measured and understand what to expect from respondents. The researcher distributes the questionnaire to the respondents, who then complete it.

b. Literature Study

Literature study is a data collection method that involves reviewing books, magazines, literature, journals, and other references relevant to the research topic, as well as previous studies related to the research being conducted. In this case, the focus is on digital marketing, product innovation, QRIS, and MSME performance.

1.11.7 Data Processing Techniques

After the data is obtained, it is processed and after that it is presented in the form of tables for analysis purposes. The data processing includes:

1. Editing is an activity to re-check the respondent's answers from the questionnaire results whether the answers on the questionnaire have been filled in completely or not.

2. Coding is providing or changing the answers that have been collected through the questionnaire so that they can be easily grouped.
3. Scoring is giving a value in the form of a number to the answers that have been collected, this aims to facilitate data analysis and processing.
4. Tabulating is collecting data from questionnaire answers, which are then calculated and added up in table form which then defines the relationship between the variables that have been determined.

1.11.8 Research Instruments

According to Sugiyono (2019) a research instrument is a tool used to measure observed natural and social phenomena. In this study, the instrument used was a questionnaire, which contains questions to be answered by the research subjects. The questionnaire was designed based on the theoretical constructs previously developed. These constructs were then transformed into indicators, which were further expanded into question items, with responses scored using a Likert scale:

1.11.9 Analysis Techniques

The analysis technique used in this study is a quantitative analysis technique. Quantitative analysis is a method that involves numbers, which can be counted or measured. Its purpose is to estimate the magnitude of the effect caused by changes in one or more other factors, utilizing statistical analysis tools.

Quantitative analysis is data analysis using a quantitative data approach in which measurements state the numbers that have been arranged in tables and the calculations use statistical tests (SPSS).

1.11.9.1 Validity and Reliability Test

1. Validity Test

Sugiyono (2019) explains that Validity refers to the extent to which a measuring instrument accurately measures the data it is intended to measure. To determine the validity of an instrument (in this case, a questionnaire), the scores of each variable are correlated with their total score. A variable (or question) is considered valid if its score significantly correlates with the total score. The correlation technique used is Pearson Product Moment correlation. According to Ghozali (2018) an instrument can be said to be valid when the significance value of the results (Sig.) > 0.05 . To test validity, you can use product moment or Pearson (Pearson's Product Moment Coefficient Correlation). Validity testing is carried out with the help of SPSS version 25 for Windows.

An instrument is said to have good and bad construction validity if:

- a. The calculated r value $> r$ table, then the items on the questionnaire are declared valid.
- b. The calculated r value $< r$ table, then the items on the questionnaire are declared invalid.

2. Reliability Test

A reliable instrument is an instrument that when used several times to measure the same object will produce the same data (Sugiyono, 2019)

The reliability test is used to measure a questionnaire which is an indicator of a variable or construct, where the respondent's answers to the questions asked are said to be reliable if each question is answered consistently or the answers should

not be random because each question is intended to measure the same thing, namely the variable to be studied. To facilitate the above testing, it was carried out using SPSS (Statistical Product Service Solution) software with the Cronbach alpha (α) statistical test. A variable should have the Cronbach Alpha value of > 0.70 (Umar, 2015).

1.11.9.2 Correlation Coefficient

According to Sugiyono (2019) the Correlation Coefficient is a value that indicates the strength and direction of the linear relationship between several variables. In this context, the correlation coefficient is used to determine the degree of association between the independent variable and the dependent variable. The correlation coefficient can be measured using SPSS for Windows. Once the data is obtained, the interpretation of the correlation coefficient value can follow these guidelines:

1. 0.000 - 0.199 means very low correlation
2. 0.200 - 0.399 means low correlation
3. 0.400 - 0.599 means moderate correlation
4. 0.600 - 0.799 means strong correlation
5. 0.800 - 1.000 means very strong correlation

1.11.9.3 Determination Coefficient

The Determination Coefficient is used to measure the extent to which the model can explain the variation in the dependent variable (Ghozali, 2018). The determination coefficient represents the percentage of the influence of all

independent variables on the dependent variable, both individually and collectively.

The testing is conducted using the SPSS 25 application.

1.11.9.4 Multiple Linear Regression Analysis

Multiple regression analysis is used when researchers aim to predict how changes (increases or decreases) in the dependent variable will occur, given the manipulation of more than one independent variable as predictors. In this case, multiple linear regression is employed to determine whether digital marketing (X1) and product innovation (X2) affect business performance (Y). This analysis is performed using the SPSS for Windows application

1.11.9.5 T-test

The t-statistical test is used to determine whether there is an individual effect of an independent variable in explaining the dependent variable. The decision rule is based on comparing the significance value (probability) with the calculated t-value or comparing the calculated t-value to the critical t-table value. Ghozali, (2018). The testing criteria are as follows:

The hypothesis is accepted if

$$t > t(\alpha/2 ; n - k) \text{ or sig - prob} < \alpha (0,05)$$

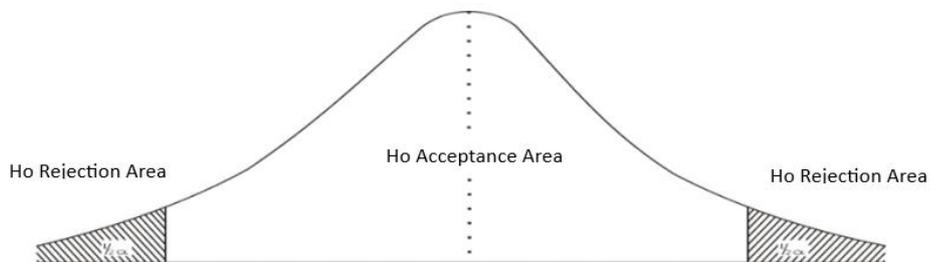
$$t < - t(\alpha/2 ; n - k) \text{ or sig - prob} < \alpha (0,05)$$

The hypothesis is refused if

$$t < t(\alpha / 2 ; n - k) \text{ or sig - prob} > \alpha (0,05)$$

$$t > - t(\alpha / 2 ; n - k) \text{ or sig - prob} > \alpha (0,05)$$

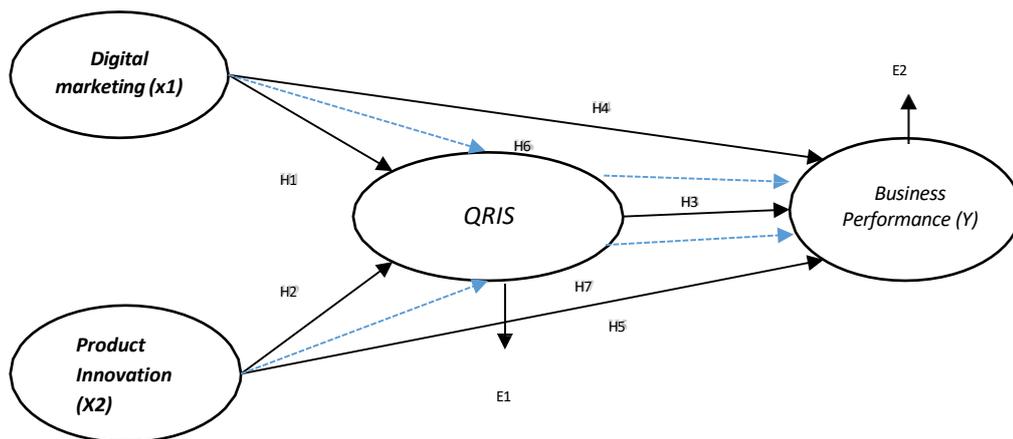
Figure 1.3 T-Test Curve



1.11.9.6 Path Analysis

The method used in this study is the path analysis method or Path Analysis. According to Sugiyono (2022) path analysis is an analysis carried out with correlation and regression so that it's acknowledge to what extent the last dependent have go by the direct path or the intervening variable first. If the direct influence > indirect influence, it shows that variable X through Z on Y does not have a significant effect and vice versa.

Figure 1.4 Path Analysis Research Model



Description:

X1: Independent Variable (Digital Marketing)

X2: Independent Variable (Product Innovation)

Z: Intervening Variable (QRIS)

Y: Dependent Variable (Business Performance)

In path analysis, there are exogenous variables which are causal variables and endogenous variables which are effect variables. Direct and indirect effects can be seen as follows:

1. Direct Effect

The results of X1 and X2 on Y, Z and the results of Y on Z or more simply can be seen as follows:

- a. $X1 \rightarrow Z$ Digital marketing on QRIS.
- b. $X2 \rightarrow Z$ Product innovation variable on QRIS.
- c. $Z \rightarrow Y$ QRIS on business performance.
- d. $X1 \rightarrow Y$ Digital marketing on business performance.
- e. $X2 \rightarrow Y$ Product innovation on business performance.

2. Indirect Effect

The indirect effect is the result of multiplying the beta value of X on Z by the beta value of Y on Z, or more clearly it can be seen as follows:

a. $X1 \rightarrow Z \rightarrow Y = (X1 \rightarrow Z \times Z \rightarrow Y)$

The effect of digital marketing variables on business performance through QRIS.

b. $X2 \rightarrow Z \rightarrow Y = (X2 \rightarrow Z \times Z \rightarrow Y)$

The influence of product innovation variables on business performance through QRIS

3. Total Influence

Is the total of direct influence with indirect influence.

1.11.9.7. Sobel Test

The Sobel Test is for testing if an influence of intervening variables existed on the indirect relationship between the dependent variable and the independent variable. With implementing the Sobel Test, researchers use the Sobel Test calculator software via the quantpsy.org website.

1. If the Z value > 1.96 , or p-value < 0.05 , then the Customer Value (Z) variable is able to mediate

2. If the Z value < 1.96 , or p-value > 0.05 , then the Customer Value (Z) variable is not able to mediate.