

## CHAPTER II

### LITERATURE REVIEW

#### 2.1 Electronic Payment

Traditional cash payment methods are being phased out in favor of digital payment methods, as online purchases become more common, examples of electronic payment systems for online services. An electronic payment system is one type of Inter-Organizational Information System (IOS) that facilitates financial transactions between clients and other establishments. Complex interactions between technology, the environment, and companions may be necessary to ensure EPS efficiency.

Mobile transactions and electronic payment technologies have led to an increase in cashless transactions globally over time. In 2012, the yearly growth rate decreased by 0.9% from 8.9% in 2011, to 7.7%. In 2014, there was an 8.9% increase in electronic payment transactions globally, totaling 387.3 billion transactions. This represents a significant increase since the World Payments Report's inception. The increase was primarily due to rapid growth in new finance-related markets. Global paperless exchange volume is forecast to reach 426,300,000,000 by 2015, with a projected 10.1% rise.

Electronic payment is a payment model that enhances convenience and simplifies payment transactions for users. Users can conduct transactions online, using the internet, without the necessity of physical meetings with sellers or extensive travel. Electronic payment encompasses all non-cash payment methods, defined as transactions between buyers and sellers conducted via internet-based or electronic network-connected savings accounts (Ming-Yen Teoh et al., 2013). Presently, electronic payments are predominantly employed for long-distance transactions, such as online shopping. As the internet's usage continues to expand and the e-commerce sector grows, electronic payments emerge as a contemporary

solution to supplant traditional forms of transaction. This category encompasses a range of payment methods, including ATMs, e-money, internet banking, credit cards, debit cards, mobile payments, and mobile banking (Ming-Yen Teoh et al., 2013).

Tecnocom (2015), reports that while electronic and internet payment systems have grown significantly, mobile payments have not matched initial expectations. The financial ecosystem faces competition from major technology companies, FinTech companies, startups, and banks. Consumers face challenges in adopting new FinTech systems due to limited knowledge of mobile payments (Liébana-Cabanillas et al., 2015).

Despite initial lack of success, advancements in mobile technology, lower technical barriers, financial service apps, and increased availability of mobile devices suggest that mobile payments will become more accessible in the future (LiébanaCabanillas et al., 2015; Qin et al., 2017) . TrendForce (Hsieh, 2016) predicts the worldwide mobile payment market would be worth US\$780 billion by 2017, representing a 25.8% annual growth rate. According to Accenture (2015), people expect to use digital payments more frequently in the coming years, replacing traditional payment methods.

Mobile payment use is increasing globally, but its growth is influenced by consumer access to new technology, lifestyle choices, and economic variables (Liébana-Cabanillas & Lara-Rubio, 2017). To better understand the impact of mobile payments on consumers' perceptions and daily lives, it is important to conduct in depth research on their adoption and the impact of various financial solutions.

## **2.1.1 Types of Electronic Payment**

### **2.1.1.1 Electronic - based transactions**

Four methods of payment systems that utilise the internet as a basis :

a) Cyber Cash

This online service requires customers to enter their credit card information, claim fees, and transfer funds to the dealer's account using electronic methods. Cyber cash serves as a conduit for payment to be routed. Digital signatures ensure secure payment methods.

While e-money encompasses all internet-based financial transactions, cyber cash concentrates solely on online money exchange. There is a clear distinction between e-money and cyber currency, despite the fact that e-money can also be converted into cash.

b) Secure Electronic Transaction (SET)

This e-money system provides secure payment options for online transactions. Master Card and VISA created a business-friendly technology platform. SET secures card-based money transfers over the internet. It uses digital certificates to confirm a provider or cardholder's authorization status.

c) First Virtual Holdings

This is one of the first internet-based payment services, relying on external validation to process transactions. This payment mechanism is not encrypted and is only used for selling information online, not for exchanging goods and services. The technology simply collects data on automated telephone payments made by users and is not affected by cryptography or digital signatures. To prevent fraud, sales and purchases must be meticulously tracked.

The open system protects critical client financial data by restricting its availability online. The system uses the first virtual PIN issued by the virtual company to facilitate

exchange transactions without the need for credit card numbers. PIN codes serve as identification and can be transmitted over the internet without incurring charges to the client's account. A validation email from the customer is required to authorize the payment form.

d) Net Bill

Our secure online bill payment method works independently of internet usage. Micropayments use servers storing consumer and seller accounts, allowing clients to pay for things through the system. Searching for information, such as a database query, text from a website, or software application, can be done in any external architecture by exchanging bits with clients.

Clients pay based on usage, with the option for limitless access. The financial tools software will check the products receipts. This allows information to be transmitted between financial tools software and dealer-owned servers.

### **2.1.1.2 Internet Based Payment System**

There are four essential techniques in payment systems that utilise the Internet.

a) Debit Card

Debit cards are the most commonly used electronic payment method on the platform, allowing users to make immediate payments for products purchased through the bank. The money is secured in banks and can only be withdrawn when the card is used to make a purchase. Debit cards are available both online and offline.

b) Smart Card

A smart card, sometimes known as a chip card, is a plastic card integrated with a microchip that stores personal information and allows for fast payments. It can be pre-loaded. The service provider provides the user with a validated PIN. To safeguard data, these cards store encoded information and have high processing speed. Examples of this type of card are VISA and Mondex cash cards.

c) Credit Card

Financial institutions issue credit cards for internet payments. It is the most widely used electronic payment mechanism. However, it is not suitable for tiny payments.

d) E-cash

It was introduced as a credit card alternative for online purchases. This type of EPS allows customers to execute transactions online using a gadget and store the monies in a repository. E-cash is a digital payment method that uses software on customers' computers to facilitate transactions. Customers prefer this option since it allows for small-scale transactions at low costs.

## 2.2 Finance Technology

Digital transformation in finance involves various technologies such as cloud computing, artificial intelligence, machine learning, and the Internet of Things (IoT). It is essential for businesses in today's fast-paced and ever-evolving digital landscape. CFOs need to realize that transformation is not just about implementing new technologies for the sake of the idea, but it is about rethinking how they do business to gain greater efficiency, effectiveness, and improved operability.

Fintech is swiftly becoming a global phenomena, pushed by entrepreneurs and closely monitored by academics, and it is now garnering regulators' attention. Fintech is an umbrella term for new technology enabled financial services and the corporate structures that support them. Fintech, in a nutshell, refers to any innovation that aims to improve the process, delivery, and use of financial services. While the majority of its influence has been felt in emerging markets such as China and India (Ernst & Young, 2017), it has the potential to compel legacy financial institutions in developed nations to rethink their priorities, learn new skills, and restructure their cultures.

As a result of what (Gobble, 2018) refers to as digitalization and digitization, fintech is becoming more integrated into everyday economic processes. According to Ernst & Young's (2017) fintech adoption index, almost one-third of consumers in the 20 markets studied use at least two fintech services, and 84% are aware of them. The financial innovation sector has already realized its potential, with a surge in the number, diversity, and reach of fintech businesses over the last decade (KPMG, 2018). Investment is also on the rise: Five years ago, the fintech industry attracted \$12.2 billion in investment (Accenture, 2016); in 2018, the top 250 fintech firms raised more than \$31.85 billion (CBInsights, 2018). According to KPMG's (2018) Fintech Pulse report, global fintech investment more than doubled from \$50.8 billion in 2017 to \$111.8 billion in 2018, with a record number of transactions performed across a variety of channels.

### **2.2.1 Finance Technology as an Effective Financial Transactions Method**

Effective financial transactions methods are essential for businesses to maintain accurate financial records, prevent fraud, and make informed decisions. effective financial transactions methods

involve consistent handling of transactions, timely processing, proper justification, sufficient documentation, and certification. Digital finance is an effective financial transactions method that involves the use of technology to facilitate transactions without the need for cash. Digital financial services, powered by fintech, have the potential to lower costs, increase the speed, security, and transparency of transactions, and allow for more tailored financial services that serve the poor.

Digital innovation has resulted in significant advances in system connectivity, processing power and cost, and newly created and useable data, culminating in massive volumes of newly created and usable data. Digital finance is an efficient financial transaction method that provides various advantages, including cheaper prices, enhanced transaction speed, security, and transparency, and more personalized financial services for the poor. Digital transformation in finance involves the use of technology to recreate efficient operating systems and processes without replacing traditional systems. Digital transactions entail the completion of many transactions by multiple organizations in a matter of seconds. Digital innovation has resulted in significant advances in system connectivity, processing power and cost, and newly created and useable data, culminating in massive volumes of newly created and usable data.

According to (Merton, 1992, p. 12), the primary function of a financial system is to aid in the allocation and deployment of economic resources in an unpredictable environment, both spatially and over time. This function entails a payment system with an exchange medium, the movement of resources from savers to borrowers, the accumulation of savings for pure time transformation, and risk management through insurance and diversification.



To operate a financial system, financial intermediaries use actual resources, and a major portion of these resources are spent on data collecting and analysis to address asymmetric information concerns. There is also uncertainty about future global administrations, which presents hazards to risk-averse individuals.

Financial innovation refers to the development and spread of new financial instruments, technologies, institutions, and markets within the financial system to address its shortcomings. It can be categorized into product and process innovation, although distinguishing between the two can be challenging. New financial products, such as derivatives and securities, are considered product innovations, while new organizational structures, like payment banks and payment systems like India's UPI, are regarded as process innovations. However, defining what constitutes innovation, especially for patent providers, is complex, as it involves differentiating genuinely novel ideas from replicas.

According to a World Economic Forum research, financial innovation has a considerable impact on economic growth and global economic order. While there is substantial literature on the topic, it is still less explored compared to other areas in finance. The research community tends to focus more on financial inclusion, aiming to bring more people into the formal financial sector, with financial innovation seen as a tool to accelerate this process. It is considered an enhancer of economic activities.

However, there is a downside to financial innovation, as evidenced by its association with the 2007 financial crisis, which originated with the housing bubble. Critics like John Paul argue that there is no concrete evidence to support the positive effects of financial innovation, and it has faced significant scrutiny and criticism due to its role in financial crises.



Financial innovation seen as a potential driver of economic growth and inclusion, it has also been criticized for contributing to financial crises. The assessment of its overall effects remains a topic of ongoing research and discussion.

### **2.3 Customer Intention**

Intentions, according to Ajzen (1991, p. 181), are signs of how much work people are ready to put forth in their preparation. Customer intention refers to the willingness of customers to engage in a particular behavior or activity. In the context of digital transformation in finance, customer intention can refer to the willingness of customers to adopt new digital financial services or technologies. Customer intention is an important factor to consider in digital transformation in finance. Financial services companies need to prioritize customer convenience and provide better digital services to meet customers' expectations. Understanding the determinants of users' acceptance of emerging technologies and information can help companies develop effective behavioral intention models to predict and explain customer behavior.

Intention to use refers to an individual's habit of using technology on a regular basis. According to Venkatesh et al. (2012), technology utilization can be measured by a user's attitude towards it, including motivation to utilize it and intention to recommend it to others. Research on the intention to utilize electronic payment technology has been undertaken for many years, including research by (Cabanillas et al., 2016; Li, 2018; Liébana-Cabanillas et al., 2018). Various studies identify characteristics that influence technology adoption. Various conceptual frameworks and models exist, including Technology Acceptance Model (TAM), Innovation Diffusion Theory (DOI), Planned Behaviour Theory (TRA), Integrated Admission and Use of Technology Theory (UTAUT2), and social cognitive

theory. The conceptual model includes parameters to measure behavioral outcomes in mobile payment systems. Dahlberg et al. (2015) examined published studies on UTAUT and TAM - based payment schemes. Several research found that perceived ease of use, followed by perceived trust and risk, has the greatest impact on compatibility perceptions. Previous research have emphasized the importance of TAM, UTUAT2, and other technological models in encouraging businesses and customers to employ mobile payment technology. (Abhishek & Hemchand, 2016; N. Singh, 2016; S. Singh & Srivastava, 2018).

#### **2.4 Perceived Usefulness**

According to Davis et al. (1989), perceived usefulness is the amount to which technology can aid improve performance. This trait is critical for assuring technology's continuing adoption (Yan et al., 2021). In this study, perceived usefulness is assessed to assess how financial technology adoption may meet user needs such as time savings and benefits. Several previous studies have discovered a relationship between PU and technology adoption (Do & Do, 2020; Nugraha et al., 2022; Rahi et al., 2020; S. Singh et al., 2020; Talwar et al., 2020). Mufarih et al. (2020) discovered, however, that PU has minimal effect on digital banking adoption.

#### **2.5 Perceived Ease of Use**

According to Davis (1989), perceived ease of use refers to potential users' expectation that the target system will require minimal effort for computer usage. According to Hamid et al. (2016), perceived ease of use refers to people's impression of utilizing technology without mental stress and with minimal time and energy allocation. According to Hamid et al. (2016), perceived ease of use refers to a person's expectation that utilizing

technology will be effortless. Potential users may believe that an invention will improve their job performance. However, others may doubt its ease of use. According to Indarsin and Ali (2017), perceived ease of use refers to a person's idea that using technology will need less effort. Perceived ease of use influences an individual's view of technology (Raza et al., 2017). Research by Indarsin and Ali (2017) and Raza et al. (2017) indicates that perceived ease of use has a favorable and significant impact on attitudes. Perkasa & Rustam (2016), Hamid et al. (2016), Indarsin and Ali (2017), and Raza et al. (2017) discovered that perceived ease of use significantly influenced ongoing usage intention. (Muchran & Ahmar, 2019) found that perceived ease of use did not significantly impact continuing use intention.

Ease of use has been linked to consumers' attitudes regarding e-payment and is highly significant (Ming-Yen Teoh et al., 2013). Digital finance is designed to be fast, easy to use, and customizable to the way customers want to bank. Customer surely expect a digital, smooth experience by default, and their interactions should be effortless and at their convenience. Some features of ease of use can be described by customization means that digital finance apps should be customizable to the way customers want to bank, fast and easy to use with user-friendly interface, has a real-time data to keep a check on their recent transactions, and also reliable as a bank that facilitating services and flexible as per the customer's usage.

## **2.6 User's Role in Using Innovative Technologies**

According to (Bedregal-Alpaca et al., 2019) propose a model that links user beliefs, attitudes, intentions, and behavior to predict technological acceptance. TAM is one of the most commonly used models in research that seek to explain and forecast individual acceptance of technologies based on user perceptions (Al-Azawei et al., 2017). TAM is a useful tool for analyzing consumer attitudes towards technologies like chatbots, e-commerce

platforms, and online shopping tools, which enable online trading (Araújo & Casais, 2020). For example, TAM was used to evaluate customers' perceptions of online shopping tools, which underpins their intention to buy using e-commerce platforms. It has been demonstrated that, along with trust, TAM dimensions account for a significant percentage of the diversity in attitudes toward IS tools and subsequent consumer behavior. Araujo & Casais (2020) found that TAM was effective in explaining the adoption of e-commerce chatbots, which led to increased purchasing intentions. Scholars tested Technology Acceptance Models in various contexts and investigated the acceptance of various technologies, including mobile banking, telecommunications technology, virtual reality, and e-learning systems (Al-Gahtani, 2016; Venkatesh & Davis, 1996). While the influence of perceived usefulness was almost always significant across all types of technology, the results on the effect of simplicity of use were inconsistent. For example, in order to adopt text-mining techniques, users must believe that the program is both beneficial and simple to use (Demoulin & Coussement, 2020). When examining the acceptability of the internet, Mathieson (1991) found that TAM components had a considerable impact on behavioral intentions. When TAM was used to assess virtual reality acceptability, perceived usefulness predicted intention, but perceived ease of use was not significant for potential users (N. Singh et al., 2020).

Davis (1989) stated that a user's motivation is determined by three factors: perceived usefulness, perceived ease of use, and attitude toward the system. The relationship between perceived ease of use and perceived usefulness, as well as their impact on a user's decision to accept and continue using technology, has been studied in IT/IS literature (Davis, 1989; Venkatesh & Davis, 1996). While the preceding research employed TAM solely as a theoretical model, others expanded on it by incorporating additional constructs. In addition to perceived usefulness and simplicity of

use, they discovered support for measures indicating efficacy and personal innovativeness.



## 2.7 Previous Research

**Table 2.1**  
**Previous Research**

No	Topic, Researcher, Year of Publicity	Research Variable	Research Method	Research Result	Similarities	Differences
1	Electronic Payment Behaviors of Consumers under Digital Transformation in Finance—A Case Study of Third-Party Payments (Lin et al., 2023)	<ol style="list-style-type: none"> <li>The user's role in using innovative technologies positively impacts perceived usefulness.</li> <li>The user's role in using innovative technologies positively impacts perceived ease of use.</li> </ol>	Quantitative method	<ol style="list-style-type: none"> <li>Both perceived utility and reported ease of use were strongly and favorably correlated with users' external environment.</li> <li>There was a strong and positive correlation between internal user traits and perceived usefulness. In other words, individuals feel more comfortable using third-party electronic payment when they have stronger self-efficacy.</li> </ol>	Both studies investigate e-payment systems and their adoption among consumers.	Previous study focuses on consumer behaviors related to third-party payment systems under the broader scope of digital transformation in finance. This study examines how perceived usefulness and ease of use influence the adoption of e-payment systems in Yogyakarta Region.
2	The Effect of Cashback Customer Satisfaction and Customer Loyalty Towards Customer	<ol style="list-style-type: none"> <li>Customer satisfaction for consumer intention for using Gopay.</li> </ol>	Quantitative method	<ol style="list-style-type: none"> <li>Cashback influences students' tendency to choose Gopay as a viable financial</li> </ol>	Both studies focus on e-payment systems and their adoption among users.	Previous study focuses on the effects of cashback, customer satisfaction, and loyalty on the intention to use

	Intention For Using E-payment Gopay In Universitas Atma Jaya Yogyakarta (Pratama, 2021)	<ol style="list-style-type: none"> <li>2. Customer loyalty for consumer intention for using Gopay.</li> <li>3. Cashback for consumer intention for using Gopay.</li> </ol>		<ol style="list-style-type: none"> <li>option in order to receive cashback.</li> <li>2. Customer loyalty does not affect the customer intention to use Gopay in Universitas Atma Jaya Yogyakarta.</li> <li>3. This study's customer satisfaction variable simultaneously has a substantial impact on customer.</li> </ol>		GoPay. This study focuses on how perceived usefulness and ease of use influence the adoption of e-payment systems in general.
3	The Future of Fintech (Mention, 2019)	Concern the circumstances and perceived benefits and risks that drive decision-making, usage intention and expectations.	Quantitative method	<ol style="list-style-type: none"> <li>1. These findings are not confined to FinTechs or Digital Finance Solutions, but cover numerous elements of use behavior and future plans.</li> <li>2. This analysis considers the potential opportunities and challenges that banks may face based on client attitudes toward the use of FinTechs and Digital Finance Solutions.</li> </ol>	Both studies focus on the impact and future development of financial technology.	Previous study provides a broad overview of the future trends, innovations, and challenges in the Fintech industry globally. This study focuses on the adoption of e-payment systems in a specific region, considering user perceptions.



4	Measuring China's Urban Digital Finance (Liao et al., 2022)	<ol style="list-style-type: none"> <li>1. Urban digital finance index.</li> <li>2. Digital finance operating environment.</li> <li>3. Convergence coefficient.</li> </ol>	Dynamic evaluation method based on grey target	<ol style="list-style-type: none"> <li>1. According to the report, the digital finance operating environment was critical in fueling the expansion of the urban digital finance index. A major driver of this growth has been highlighted as the availability of digital finance services and technologies.</li> <li>2. The study identified a diminishing convergence in China's urban digital finance, indicating that the development gap between cities is growing.</li> </ol>	Both studies examine the aspects of digital finance, assessing its impact and user interactions.	Previous study examines the development and impact of digital finance in urban areas of China, potentially covering a wide range of digital finance services. This study focuses on the adoption of e-payment systems in Yogyakarta, considering user perceptions.
5	Does Financial Inclusion Moderate The Effect of Digital Transformation on Banks' Performance in China? (Yang & Masron, 2023)	<ol style="list-style-type: none"> <li>1. Digital transformation has a negative impact on bank profitability to a certain extent</li> <li>2. Digital inclusive finance plays a moderation role in mitigating the</li> </ol>	Generalized Moment Estimation (GMM) regression model.	<ol style="list-style-type: none"> <li>1. Some commercial banks experience reduced profitability due to digital transformation.</li> <li>2. The relationship between digital transformation and digital financial</li> </ol>	Both studies examine the impact of digital transformation within the financial sector, specifically related to banks and e-payment systems.	Previous study examines the broader impact of digital transformation on banks' performance, with a specific focus on the role of financial inclusion. This study focuses on

		negative impact of digital transformation on bank profitability		inclusion is beneficial. 3. The fixed effects model reveals that banks with high digital transformation indexes have a greater impact on financial inclusion.		user adoption of e-payment systems in Yogyakarta Region and the influence of perceived usefulness and ease of use.
6	Digital Finance Development and the Digital Transformation of Enterprises : Based on the Perspective of Financing Constraint and Innovation Drive (Luo, 2022)	<ol style="list-style-type: none"> <li>1. Digital transformation.</li> <li>2. Digital finance development.</li> <li>3. Financing constraints and enterprises innovation.</li> </ol>	Baseline regression.	<ol style="list-style-type: none"> <li>1. Digital finance development can significantly affect the digital transformation of enterprises.</li> <li>2. The driving effect of digital finance development on the digital transformation of enterprises can be largely different due to the nature of enterprises.</li> <li>3. Digital finance development help enterprises to innovate, thus driving the digital</li> </ol>	Both studies explore aspects of digital finance and its impact on financial activities and user behavior.	Previous study focuses the broader impact of digital finance on enterprise transformation, specifically addressing financing constraints and innovation. This study focuses on the adoption of e-payment systems and user perceptions in Yogyakarta Region.

				transformation of enterprises.		
7	An Empirical Analysis of the Impact of Digital Finance on the Efficiency of Commercial Banks (Zuo et al., 2023)	<ol style="list-style-type: none"> <li>1. The impact of digital finance on commercial banks' asset liability structures and production efficiency is enormous.</li> <li>2. Increased competition has prompted businesses to invest in technology to boost profits.</li> <li>3. Digital finance has significantly impacted traditional commercial banking and improved overall productivity.</li> </ol>	Text mining method.	<ol style="list-style-type: none"> <li>1. Few studies have examined the efficiency of digital finance in China's commercial banks.</li> <li>2. Academics typically use case study or empirical research on commercial banks to examine the impact of digital finance.</li> </ol>	Both consider user perceptions and experiences as important factors influencing the adoption and success of digital financial services.	Previous study examines overall impact of digital finance on the operational efficiency of commercial banks. While this study focuses specifically on the adoption of e-payment system and user perceptions in Yogyakarta Region.
8	Role of Digital Transformation on Digital Business Model Banks (Riris et al., 2023)	<ol style="list-style-type: none"> <li>1. Proxy for bank profitability</li> <li>2. Digital transformation</li> </ol>	Statistical methods	<ol style="list-style-type: none"> <li>1. Digital transformation significantly supports bank profitability.</li> <li>2. Macroeconomic variables like GDP growth positively impact profitability.</li> </ol>	Both consider user-centric factors such as perceived usefulness and ease of use as critical to the success of digital transformations and	The previous study examines the broader impact of digital transformation on the business models of banks. While this study focuses specifically on the adoption of e-payment

					digital payment systems.	systems and user perceptions in Yogyakarta Region.
9	The Effect of Satisfaction and Loyalty Towards Digital Payment System Users Among Generation Z in Yogyakarta Special Region (Diah et al., 2020)	<ol style="list-style-type: none"> <li>1. User satisfaction</li> <li>2. Loyalty</li> <li>3. Digital payment usage</li> </ol>	Descriptive research	Satisfaction and loyalty impact the use of digital payment services.	Both focus on the Special Region of Yogyakarta, examining the use of digital payment systems in this region.	The previous study explores the effects of satisfaction and loyalty on the usage of digital payment systems among Gen Z.
10	Financial Technology as an Innovation Strategy for Digital Payment Services in the Millennial Generation (Jacob et al., 2018)	<ol style="list-style-type: none"> <li>1. Digital payment perception</li> <li>2. Benefit</li> <li>3. Trust</li> <li>4. Self-efficacy</li> <li>5. Ease of use</li> <li>6. Security</li> </ol>	Quantitative method	<ol style="list-style-type: none"> <li>1. Exponential growth driven by evolutionary forces among users, especially Millennials.</li> <li>2. Successful financial technology companies establish new business models supporting various industries across Indonesia.</li> </ol>	Both investigate the digital payment service within the financial technology sector.	The previous study provides a resource-based analysis of key value drivers and the exponential growth of Fintech companies, targeting Millennials' unique characteristics and lifestyle.

Source : tested primary data, 2024

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## **2.8 Hypothesis Development**

The study's hypothesis proposes two distinct roles for variables. The first study examines the impact of perceived usefulness of using e-payment on customers' behavioral intention. As well as the role of user acceptance of innovative technology as a moderator between the independent and dependent variables.

The first and second hypotheses emphasize the impact of the independent variable on the dependent variable. The third and fourth hypotheses emphasize the moderating variable's impact on the independent variable and customers' behavioral intention of using e-payment. In this case, the researcher would like to determine if the moderating variable will increase or decrease the influence of the dependent variable. The researcher aims to determine whether user acceptance of innovative technology effectively moderates the relationship between usage of e-payment and customers' behavioral intention.

### **2.8.1 The Perceived Usefulness of Using E-payment Towards Consumers' Behavioral Intentions in Yogyakarta**

(Puriwat & Tripopsakul, 2021; Purwanto et al., 2021; Unal & Uzun, 2021) apply the TAM model to describe how perceived ease of use and usefulness can influence behavior intentions towards technology. The effectiveness of e-payment for financial transactions nowadays is positively associated with improved convenience, security, and efficiency in comparison to traditional payment methods. E-payment methods such as mobile payments and online banking offer users the convenience of making transactions from the comfort of their homes or on the go, without the need to visit physical bank branches or carry cash. E-payment systems can process transactions quickly and accurately, reducing the time and effort required for financial transactions. E-payment methods may also be cost-

effective for both consumers and businesses, as they can eliminate the need for paper-based transactions and associated administrative costs.

*H1(a) : Perceived usefulness has a positive impact towards consumers' behavioral intentions to use e-payment in Yogyakarta.*

### **2.8.2 The User Acceptance of Innovative Technologies as Moderator Variables for the Perceived Usefulness of E-payment and Consumers' Behavioral Intentions to use e-payment in Yogyakarta.**

(Rogers, 1983) created the IDT to study how consumers gradually accept and understand new products or technologies. The diffusion of innovation refers to how an innovation spreads over time across social system participants. To achieve consensus, everyone must share and participate in innovations, which require bidirectional communication. The IDT suggests that social systems embrace innovations gradually over time, rather than all at once.

User acceptance of innovative technology is one of the importance factors to drive one individual to enhance perceived usefulness of using e-payment. User acceptance of innovative technology also becomes an important ability to use among people whose using e-payment in Yogyakarta.

*H1(b) : User acceptance of innovative technology will moderate the influence between the perceived usefulness of e-payment and consumers' behavioral intentions to use e-payment in Yogyakarta.*

### **2.8.3 The Perceived Ease of Use of Using E-payment Towards Consumers' Behavioral Intentions in Yogyakarta**

(Rouibah et al., 2021; Sharma et al., 2022) found that perceived ease of use correlates positively with behavior intention. The ease of use of e-payment systems has a positive and significant impact on consumer intentions to use e-payment services in Yogyakarta. This variable represents the perceived simplicity and user-friendliness of e-payment systems in Yogyakarta. It includes factors such as the ease of setting up an account, making transactions, navigating the interface, and understanding the features. Consumer intention refers to the likelihood and willingness of consumers in Yogyakarta to use e-payment services for their financial transactions. The hypothesis contends that if customers perceive e-payment systems in Yogyakarta to be straightforward to use, they are more likely to use them for financial transactions.

*H2(a) : Perceived ease of use has a positive impact towards consumers' behavioral intentions to use e-payment in Yogyakarta.*

#### **2.8.4 The User Acceptance of Innovative Technologies as Moderator Variables for the Perceived Ease of Use of E-payment and Consumers' Behavioral Intentions to use e-payment in Yogyakarta.**

According to IDT, the perception of innovation has a substantial impact on its diffusion. Several research on e-commerce have lately surfaced. Citrin et al. (2000) found that innovative consumers are more likely to accept internet buying. Users with higher levels of innovation prioritize the practicality of online buying, leading to a favorable association between behavioral intention and acceptance. According to Lowe et al., (2014) technological innovativeness is defined as the perceived degree of newness and improvement over existing alternatives. To accept an innovation, individuals must regard the concept, behavior, or product as

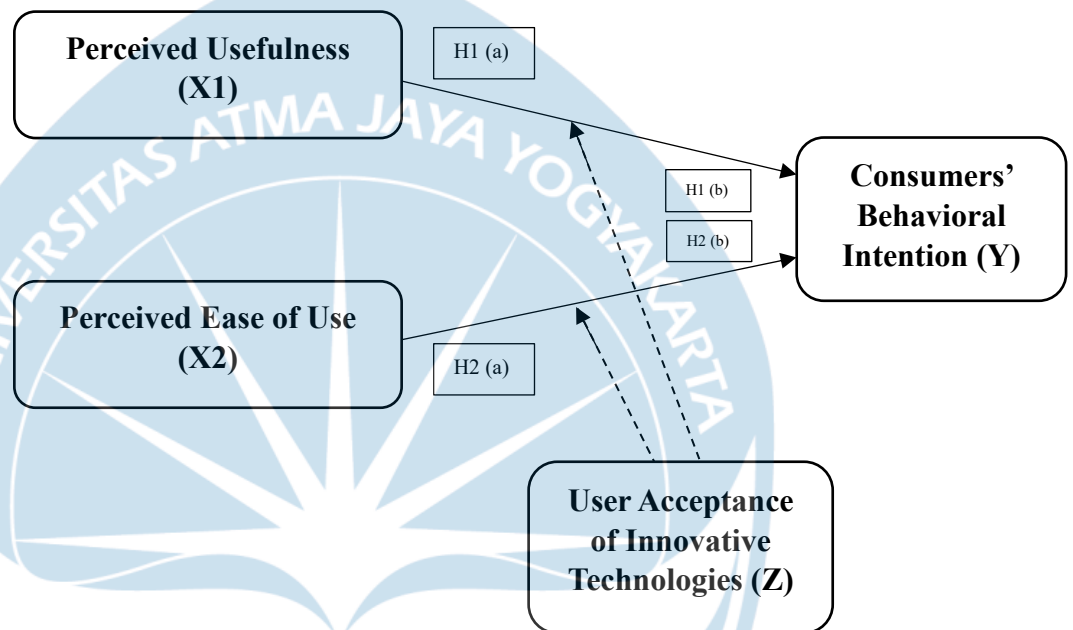


innovative. The motivation for an invention, including social prestige and cost, is considered a relative advantage. E-wallets offer a cost-effective and socially acceptable alternative to traditional payment methods (Schmidhuber et al., 2020). Companies that publicize their technological superiority tend to attract more clients, resulting in a higher return on their innovation driven initiatives (Ramos de Luna et al., 2016). Research also indicates that customers who use superior market technology have higher online engagement and are more likely to recommend the service provider's technology and benefit (Oliveira et al., 2016). Customers' acquaintance with technology contributes to their opinion of a beneficial platform's innovativeness (Setiawan et al., 2021).

*H2(b) : User acceptance of innovative technology will moderate the influence between the perceived ease of use of e-payment and consumers' behavioral intentions to use e-payment in Yogyakarta.*

## **2.9 Theoretical Framework**

This theoretical framework will show the hypothesis that the researcher has established based on the hypothesis that the researcher has developed for this research.



**Figure 2.1**

**Research Model (Nicholson, 2012)**