

FACTORS THAT AFFECTING ADOPTION OF CASHLESS  
PAYMENT IN MALAYSIA NIGHT MARKET

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MARKET

BY

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A research project submitted in partial fulfilment of the  
requirement for the degree of

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## DECLARATION

We hereby declare that:

- (1) This undergraduate research project is the end result of our own work, and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) The word count of this research report is 18,202 .

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Date: 26 April 2022

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## DEDICATION

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## LIST OF ABBREVIATIONS

DOI	Diffusion of Innovation Theory
IDT	Innovation Diffusion Theory
IMMPA	Integrated Model on Mobile Payment Acceptance
LF RFID	Low Frequency Radio Frequency Communication
NFC	Near Field Communication
RFID	Radio Frequency Communication
TACT	Technology Affordances and Constraints Theory
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UTAUT	Unified Theory of Acceptance and Use of Technology

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## Preface

Recently, in this quick speed of technological progress, the goods and services in financial services business has been evolved with the technology to compete in the market. Contactless card today has garnered attention globally and grown more and more important. Contactless payment may be characterized as “wave & pay” payment technique. NFC and RFID are both technologies then implanted into cashless payment devices that enables customers quick, easy and simple as one of the payment methods. Although contactless payment has becoming common over the globe, which improve people lives and bring efficiency and ease in the financial sector. However, the implementation of cashless payments in Malaysia’ setting is still in the infant stage and the acceptance rate is regarded low as compared to other industrialized nations. Therefore, it is vital for us to conduct this study and identify the aspects such as perceived simplicity of use, perceived security, perceived utility, social influence, and compatibility that affect the adoption of contactless payment in Malaysia.

The objective of this study is to examine the factors that affecting adoption of cashless payment in Malaysia night market. The study focuses on the citizens who are using cashless payment in Malaysia night market. On the other hands, this research study how the relationship between independent variables and dependent variable. This study would be able to provide better understanding on the factors affecting adoption of cashless payment in Malaysia night market.

We had study through the past studies that have been conducted in order to have deeper understanding of the relationship between the selected independent variables towards the adoption of contactless payment in Malaysia. Other than study factors itself, we have also focus on the demographic profile whether there is a relationship towards the adoption of contactless payment in Malaysia’ context. In the other hands, we are sincerely thanks to Dr Ngoo Yee Ting that willing to become our supervisor who giving fully support and encourage us to complete this research project.



## **ABSTRACT**

The research aimed to investigate the factors that affecting adoption of cashless payment in Malaysia night market. The independent variables for this research are perceived usefulness, perceived ease of use, perceived security, relative advantage, and social influence. The dependent variables for this research were adoption of cashless payment. The focus of this research was Malaysia night market. UTAUT, TAM and ECT were adopted in this research. The targeted respondents for this research were the users of cashless payment in Malaysia night market. Cronbach Alpha, Spearman's Correlation Analysis and Multiple Regression Analysis were conducted in this research. The outcome of the research showed that perceived security and social influence were insignificant towards the adoption of cashless payment. Some limitations and suggestions are included in the study to provide a better idea for future researchers and the service provider to enhance the adoption of cashless payment in Malaysia.

# Chapter 1: Research Overview

## 1.0 Introduction

The main discussion for this chapter is the cashless payment in Malaysia. Then, through the research background, insight into cashless payment and the night market has been revealed. Therefore, this research will focus on the factors that affect the adoption of cashless payment in the Malaysia night market. The research question will be listed out for analysis purposes. Furthermore, the significance of the study will be included in this chapter. It shows how important the chapter layout then follows this research. Last but not least, the conclusion will be added in this chapter.

## 1.1 Overview of Cashless Payment

According to Cambridge Dictionary, cashless represents a system where users purchase things by utilizing bank cards and sending money over the internet. The purchaser desires to employ bank cards rather than actual cash (*CASHLESS | Meaning in the Cambridge English Dictionary*, 2022). At the end of the twentieth century, the quick spread of information and communication technology signalled the beginning of a new age in the retail sector with the emergence of electronic commerce. The start of the new century has witnessed industry 4.0, revolutionizing all facets of an online company by providing new opportunities. The establishment of a cashless society implies the situation of decentralized money. A cashless society is a revolution in financial technology associated with the Fourth Industrial Revolution (IR4.0), a companies started to adopt new technology for their business. Cashless systems are a system that enables the purchaser to make the payment digitally. According to David & Gantori, (2018), cashless may be described as eliminating all physical currency and transitioning to a system in which all transaction activities are conducted through digital. Cashless transactions involve digital modes of exchanging money, such as mobile payments or paying the bills with debit or credit cards. On the other hand, the cash

transactions make the payment using physical coins and banknotes. An incremental in smartphone usage has contributed to the development of a cashless system because the consumer can make the payments by using the smartphone. Paying by using a smartphone can increase the effectiveness and efficiency of the consumers. For example, the consumer can pay the exact amount and then do not need to wait for the seller to give back the change. According to John Cryan, CEO of Deutsche Bank, the cash will most likely no longer exist in ten years (Basul, 2017). The business will eliminate cash, cheques and manual process in the future. A survey found that eight out of ten young adults did not have any cash while they were outside (Basul, 2017). Research from Ishak. (2020) revealed that 1% reduction in cash in the economy would cause the GDP to increase by 40 basis points.

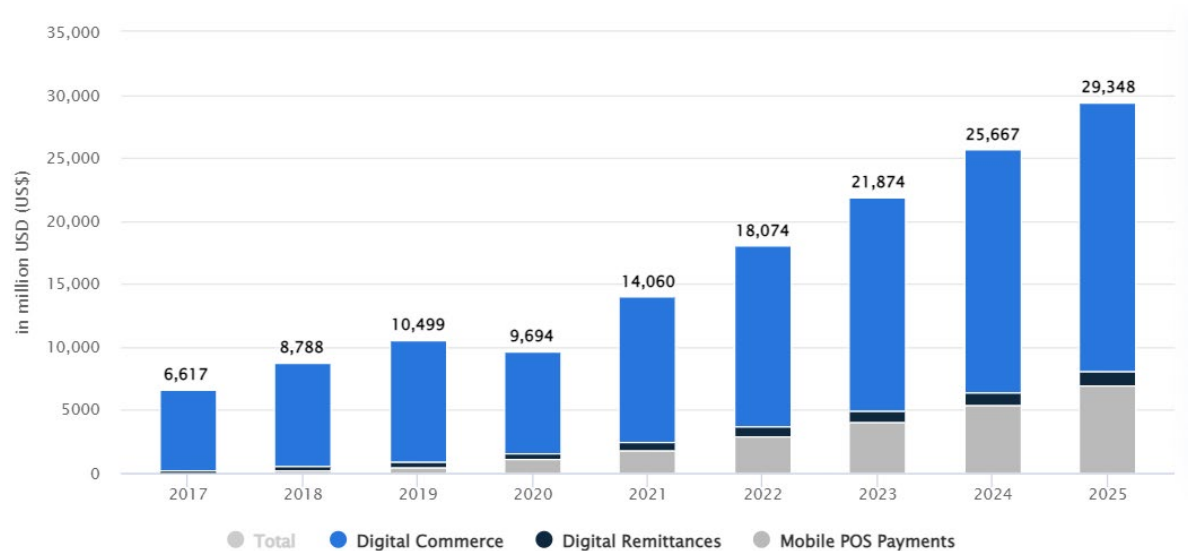
Recently, the trend of cash transactions has declined. The consumer has adopted a new way of making cashless payment payments. By using cashless payments, the crimes such as robbery can be reduced. Most companies practice cashless payment by crediting the employee's salary to their bank accounts directly or paying the bills through online transactions. According to World Payments Report 2020, from the global perspective, cashless transactions have increased 14% to 708.5 billion in 2019. It was the highest growth rate in the past decade (World Payments Report 2020, 2020). Europe and North America were the leaders of cashless payment because they contributed 243.6 billion in 2019.

Moreover, cashless payments can affect the world's economy. The impact of adopting cashless payment on a country is different because it depends on the acceptable level of society. The 2014 Lollapalooza company introduced Lolla Cashless, a wristband that can make payments. The wristband has a Radio-Frequency Identification (RFID) chip. The wristband allowed the customers to make purchases by tapping it on a pad equipped with the latest RFID technology. In addition, Apple introduced "Apple Pay" technology in 2014. In addition to Near-Field Communication (NFC) and Touch ID, Apple Pay is compatible with the iPhone 6 and iPhone 6 Plus (Tee & Ong, 2016).

Cashless payment has been implemented widely in every country. Based on Google's economy SouthEast Asia 2020 report, e-wallets transactions rose to an average of 25% during post-Covid 19 (Birruntha, 2021). It showed that the consumers are willing to adopt cashless payments in their life. Last but not least, the adoption of cashless payments can boost economic growth at the same time it can reduce the Corruption Perspective Index (CPI) and curb tax evasion. The transparency of the system can prevent corruption or tax evasion from happening. According to the World Economic Forum, there are many other than \$1.26 trillion has been effectively stolen from developing nations due to corruption, bribery, theft,

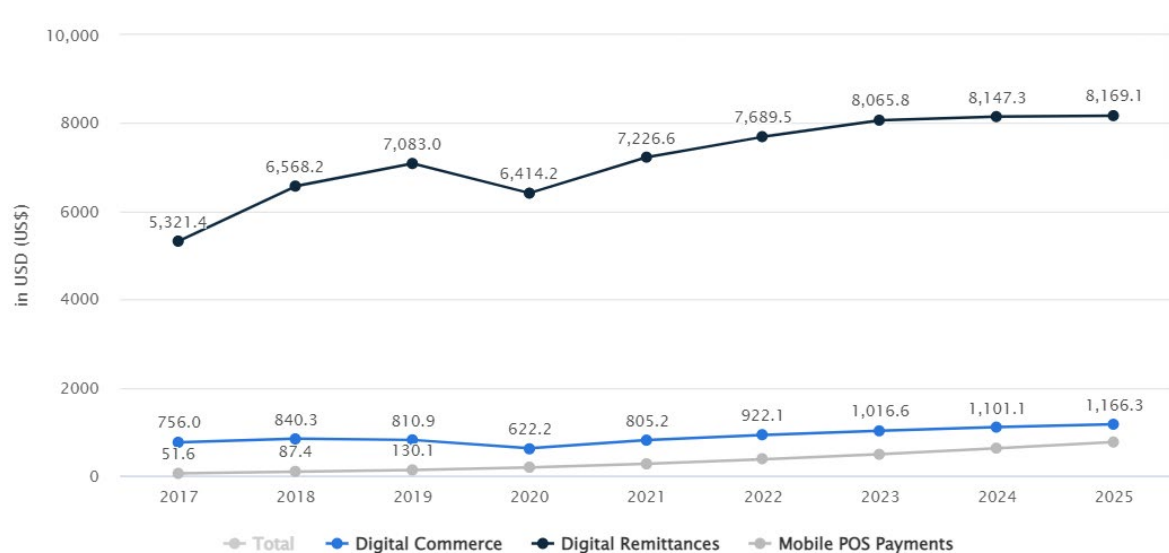
or tax evasion (*Why We Need to Shift toward a Cashless World* | *World Economic Forum*, 2020). Hence, the adoption of cashless payment can bring numerous advantages to society.

Figure 1.1: Transaction Value of Digital Payments by Segments in Malaysia from 2017 to 2025



Source: (*Digital Payments - Malaysia* | *Statista Market Forecast*, 2020)

Figure 1.2: Average Transaction Value Per User in Malaysia from 2017 to 2025



Source: (*Digital Payments - Malaysia* | *Statista Market Forecast*, 2020)

## **1.2 Research Background**

### **1.2.1 Development of Cashless Payment in Malaysia**

No physical banknotes or coins are exchanged in a cashless society; alternatively, digital currency is used between parties engaged in financial transactions (Ragaventhara, 2016). Society has widely accepted various cashless applications. Then, it has shown remarkable improvement in payment system performance brought due to the advancement of the technology. At the beginning of 2019, Malaysians preferred to use cashless payment due to the pandemic. Bank Negara Malaysia has issued over 42 E-Money licenses to banks and non-bank companies. As measured by the World Economic Forum's Networked Readiness Index (NRI), Malaysia ranked 34th ahead of India, Indonesia, and Brazil (Mokhtar, 2021). Bank Negara Malaysia revealed that RM1.72 billion electronic currency transactions with a value of RM13.9 billion were recorded between January and October 2019, versus RM11 billion in 2018. While in April 2020, the user of cashless payment has increased by 18% and credit and debit cards were the primary beneficiaries of Malaysia's cash-starved trend. Meanwhile, the usage of cash has declined by 64% (Baharuddin & Siti Noor Afera, 2020).

Alipay and WeChat Pay are the earliest cashless payment applications launched in Malaysia. Alipay has collaborated with the local banks in Malaysia, such as Public Bank Berhad, Malayan Banking Berhad, Commerce International Merchant Bankers and Genting, to expand their market (Sapian & Ismail, 2018). However, Alipay is only available for tourists from China, and the service of WeChat Pay is compatible with the WeChat application. A study from Visa Inc showed that 69% of the respondents in Malaysia plan to use a cashless payment instead of using cash while they are making the payment. In addition, the study revealed that 65% of Malaysians had used contactless payment, and 85% of respondents will use the cashless payment at least once a week (Yi, 2020). In short, the cashless payment has been accepted by Malaysians as a payment instrument.

The acceptance level of cashless payment in society is due to government initiatives. The development in digital payment has increased the awareness of the Malaysians regarding the advantages and the importance of being a cashless society. Therefore, the government has taken many initiatives to build a cashless society in Malaysia. The online banking instant transfer fee of 50 cents for the transaction above RM5,000 was waived by Bank Negara Malaysia on 1<sup>st</sup> July 2018. In addition, the processing fee for a cheque has been increased

from RM0.50 to RM1. The purpose of imposing charges is to encourage users to adopt online banking (Shah, 2018). On top of that, during the virtual launch of the Malaysia Digital Economy (MyDigital) plan on February 19, 2021, former Prime Minister Tan Sri Muhyiddin Yassin declared that the government intends to go cashless by 2022 (Yin, 2021). Moreover, incentives such as the eBelia program are distributed under Budget 2021. The government will credit RM150 to full-time students between 18 to 20 years old in Malaysia through the electronic wallet. This campaign intends to encourage cashless spending among Malaysians per the Malaysia Digital Economy plan. Ignatius Ong, CEO of TNG Digital Sdn Bhd, stated that online use cases increased by 86 per cent in the first half of 2021 compared to the post-eTunai and ePenjana in 2020 (Birruntha, 2021).

Furthermore, the Covid 19 pandemic has boosted the process of becoming a cashless society. Scientist from the Australian Centre for Disease Preparedness has established that the COVID-19 virus may stay infectious for weeks on banknotes (Mokhtar, 2021). Due to this reason, the adoption of cashless payments in Malaysia has increased significantly. According to Darshiniy Selvaratnam, a senior market analyst of financial insight at International Data Corporation (IDC), the implementation of Movement Control Orders has caused most of the all-cash term transactions to shift online (Gomes, 2020). QR code payment and internet banking were the most common payment methods, followed by debit or credit cards. The data from Bank Negara Malaysia showed that the E-wallet transactions in the first ten months of 2020 had reached RM23.5 billion. It has increased 30% compared to 2019.

Moreover, the market share of digital transactions has risen from 8% to 13% in 2020 (yStats, 2020). According to a Payments Network Malaysia study titled "Economic Benefits of Going Cashless," Kuala Lumpur was designated as a "Digital Maturing" city. Then, due to a rise in the digital economy, the economic modelling forecasts that Malaysia would get a net positive benefit of USD 4 billion by 2032, including a 2.6 percent contribution to GDP, 0.16 percent increase in productivity, 0.15 percent increase in pay growth, and the creation of 92,000 new jobs (Thoughtlab, 2017).

In conclusion, cashless payment has become a new norm in Malaysia, especially during this pandemic. Then, it will play an essential role in our daily lives because it will replace banknotes or coins in the future.

### **1.3 Malaysia Night Market**

Night markets are temporary outdoor booths maintained by the small business owners where things are on display and for sale. The business in the night market can also be considered the Small-Medium Enterprises (SMEs). The night market has enabled a wide range of economic and social informal activities such as street commerce. It has created an economic and social transaction base. Furthermore, a night market can benefit the residents because the residents can have a household shopping within their residential zones. The environment of the night market is friendly and relaxed. It has allowed the customer and the seller to engage directly. The customer or seller come from different background, through communication, community spirits and solidarity can be strengthened.

In Malaysia, most the night market is based on the open-air concept, and the hawkers have occupied the street by setting up their stalls. Many products sell in the night market, such as food or non-food items. The seller will occupy a designated part of a street to set up their stalls. A night market is a good place because it can stimulate the local economy. At the same time, it can also help an individual increase his confidence level and enhance his business and marketing skills. The night market has played an important role in society because it can help the seller increase their income level or it can be a place that attracts foreign tourism.

The Connaught Night Market was the first digital night market in Malaysia. MIG Mobile Tech Berhad launched WECONNECT's 020, a mobile payment platform at Connaught Pasar Malam in Cheras, on 31<sup>st</sup> May 2017 (Editor, 2017). By implementing this system, vendors and consumers can take advantage of it. This payment system can save their time because they do not need to use cash to perform the transactions. In addition to their positive effects on the economy and society, the night markets in Malaysia help to revitalize the country's traditional street culture and informal trade environment.

## 1.4 Problem Statement

The trend of going cashless has seemingly captured the attention of the Malaysian. Consumer behaviour will change due to digitization. It is because digitalization can lead to a new way of life. Furthermore, with the government's initiatives, the adoption of cashless payment among Malaysian will increase. As an example, the distribution of incentives of Bantuan Prihatin Rakyat payments has been done online. The government has credited the money into the applicant's bank account. Furthermore, the Pelan Jana Semula Ekonomi Negara (PENJANA) has significantly impacted the consumers' ability to adopt cashless payments. The government has given an incentive of RM50 under ePENJANA programs. The government will credit the money into the consumer's electronic wallet and encourage them to use it. At the same time, it can encourage the young generations to adopt cashless payment.

An incremental in electronic commerce has caused the financial blueprint proposed by the central bank to modernize the payment landscape by the year 2020. On the other hand, the online payment provider iPay 88 Sdn Bhd ED Chan Kok Long said that electronic wallets would replace cash transactions. It has covered consumers from a comprehensive spectrum, from corporate consumers to hawkers in the night market (Shah, 2018). He also stated that the mobile payment trend would drive Malaysia to become a cashless society. Then, Malaysia can become a cashless society before 2050 (Yunus, 2018). A report by Boku Inc has underscored that e-wallets are the most popular payment method for Malaysians (Birruntha, 2021). Hence, this study focuses on determining the factors affecting the adoption of cashless payment in the Malaysia night market.

In short, the development of cashless payment is still in progress. Therefore, this study helps to determine the factors that affect the adoption of cashless payment in the Malaysia night market. Furthermore, there are no existing findings on the factors that affect cashless payment in the Malaysia night market. Most of the research is focused on specific areas and online shopping platforms. Hence, this study will be interesting because it can examine the factors affecting cashless payment in the Malaysia night market. Research from Nor Khomar et al, (2012) proved that the night market could affect a country's economy by providing choices for the community to shop for their needs.



### **1.4.1 Research Question**

- 1) What factors affect cashless payment in the Malaysia night market?
- 2) How do the perceived usefulness, ease of use, security, relative advantage, and social influence affect the adoption of cash-free payments?

## **1.5 Significance of Study**

Cashless payment has become more reliable as electronic payment has become increasingly popular. During the opening ceremony of the Malaysian Banking and Finance Summit 2021, Finance Minister Tengku Datuk Seri Zafrul Tengku Abdul Aziz revealed that the transactions of e-wallets have risen 86% to 468 million from June 2020 to June 2021 (Birruntha, 2021). The introduction of digitization via the internet has accelerated the move from manual to online transactions in the context of globalization and payment systems. As a result, society will prefer to use cashless payments to make transactions. Furthermore, the government also encouraged cashless mode because they have introduced a series of incentives. As an example, the government distributed the incentives of Bantuan Prihatin Rakyat through online banking. The incentives will credit to the recipient's bank account. The UOB ASEAN Consumer Sentiment Study found that contactless payments have become Malaysia's preferred payment option in the face of the Covid 19 outbreak (The Star, 2021). Thus, this study has focused on the factor that affects the adoption of cashless payment in the night market.

Then, the night market has been chosen because it can stimulate a country's economy and boost economic growth. The economic activities in the night market can help alleviate poverty and promote tourism activities. In addition, night markets particularly benefit the young generation who needs to work for long hours and do not have time to visit supermarkets. For example, working mothers do not have time to buy fresh products during the daytime. Then, they can buy it from the night market. They prefer to buy fresh products from the night market instead of the supermarket because the selling price in the night market is lower compared to the supermarket, and they can bargain the price with the seller. However, they cannot negotiate the price in the supermarket. Moreover, some Malaysians would prefer to have their dinner in the night market because it offers various food choices

that cannot be seen in other places. The advancement of technology has caused night market traders to provide cashless payment because it can benefit both consumers and traders. Consumers can pay the exact amount, and the traders do not need to worry about losing money. Hence, the night market was chosen in this research to investigate the factors that affect the adoption of cashless payments.

Furthermore, this research will provide insightful information that will affect the broader e-payment acceptance and use. The potential user of cashless payment will be young adults because they are willing to learn new things and adopt it. Recently, according to the report from Financial Sector Blueprint 2011-2020, Malaysian preferred to use electronic payment (Wei, 2017). According to a comScore Inc 2017, the digital users for Malaysia were between 15 to 24 years old. This category spent much time with their smartphone. While the age category of 24 to 35 was the multi-platform users. They will use computers and mobile devices in their daily lives (Shah, 2018). Therefore, it is crucial to find out the elements because it can help the development of cashless payment in Malaysia. At the same time, it can also help the electronic wallet service provider increase their competitive advantage.

Lastly, the outcome of the result can aid financial institutions, service providers, and software development firms to have a clearer picture of the situation of cashless payment in Malaysia. Gen Z and Millennials account for 45 per cent of the total population in Malaysia and are avid users of e-wallets (Hoh, 2021). Thus, it is vital to have a clear picture regarding the adoption of cashless payments in Malaysia. In short, this research is significant because it can help governments, policymakers, and cashless payment service providers use communication technology to provide excellent service. Hence, they can make the decisions that can drive Malaysia towards greater economic efficiency.

## **1.6 Research Objective**

### **1.6.1 General Objective**

This study's general objective is to examine the factors affecting cashless payment in the Malaysia night market.

### **1.6.2 Specific Objective**

- 1) To determine the factors affecting the cashless payment in the Malaysia night market.
- 2) To analyze the relationship between the perceived usefulness, perceived ease of use, perceived security, relative advantage, social influence and adoption of cashless payment in Malaysia.

## **1.7 Chapter Layout**

A total of five chapters make up this research. The first chapter covers the introduction to the proposed study, the second chapter discusses the literature review, the third chapter covers the research technique, the fourth chapter discusses data analysis, and the fifth chapter includes discussions, implications, and conclusions.

First, an introduction to the study subject has been provided in chapter one. It includes information on the growth of cashless payment in Malaysia and an overview of the country's night market scene. The issue statement, research aims, research question, and importance of the study will all be discussed in detail in this chapter.

The second chapter will cover the subject of the research topic's review of the literature. Furthermore, this chapter will offer some theoretical models to help readers better comprehend the study and demonstrate the variables' consistency. In addition, hypotheses will be developed to determine the link between the dependent and independent variables in the study. At the end of the paper, a conclusion will be provided.

Furthermore, the third chapter will be devoted to the research approach used in the study. The use of primary data will be selected to begin data collection in Malaysia based on

the demographics of those who will be collected. In addition, the surveys will be distributed randomly. Finally, data collection will be completed and analyzed in accordance with the following conclusion.

The data analysis will be covered in chapter four. A descriptive study of the respondents' demographic information will be carried out to understand them better. After that, the information will be interpreted. The findings for each measurement scale will be collected and analyzed, as well as the mean point calculation and ranking arrangement performed on the data. The reliability test and the multi linear regression analysis will be carried out in this section. Without a doubt, the information will be understood as well. Then, at the end of this chapter, a conclusion will be included.

Finally, in the fifth chapter, the reader will discover summaries of the statistical analysis results and some discussion of the statistically significant findings themselves. Furthermore, the study on implications will be addressed to tell other specialists about the purpose of this research attempt. Finally, the study's limits will be discussed, as well as suggestions for additional enhancement and exploration, which a conclusion will follow.

## **1.8 Conclusion**

Introduction to the research context, problem statement, research aims, research question, and importance of the study were all covered in this chapter. Through a summary of the first chapter, the researchers presented an overview of their findings. Then, in chapter two, the facts presented in this chapter will be further evaluated.

## **Chapter 2: Literature Review**

### **2.0 Introduction**

A survey of the literature revealed that the development of cashless payment and the effect of dependent and independent variables have all been identified. This chapter will cover the theoretical model, the theoretical framework, and the hypothesis creation and formulation process.

### **2.1 Definition& Empirical Review of Study**

#### **2.1.1 Cashless Payment**

Cashless payments are digital methods for making financial transactions between two parties. Cashless payment is a consumer behavioural change in which customers can eliminate the use of physical money to buy goods or services, but they prefer to use digital currency or electronic wallets (Ishak, 2020). The growth of information and communication technology (ICT) has revolutionized traditional system payment. Users of cashless payment can enjoy the benefit of using cashless payment, and the user should not be excluded because the main advantage of cashless payment is ubiquity. The initial purpose of cashless payment is to bring convenience to buying things for society. According to Ya'Acob et al. (2019), cashless transactions are methods of conducting payments without the need for actual currency, and they represent a doorway to technological growth in the international economy. With the innovation of technology, RFID and NFC have brought cashless payment to an advanced level. By using cashless payment, each transaction is transparent and accountable. Then, it can help reduce crimes such as robbery, fraud, or corruption in Malaysia.

RFID is a wireless system that includes two components such as tags and readers (Rajaraman, 2017). In RFID, a reader is an antenna device that generates radio

waves and receives signals from the RFID tags. Furthermore, the tags will employ radio waves to send their own identity and other information to readers near their tags. (Rajaraman, 2017). RFID applications include school attendance systems, automated toll collection and building access management (Saa'id & Handani, 2014). Recently, the technology of RFID has been added to the system of cashless payment.

The cashless payment transaction (CPaT) is based on Low Frequency (LF) RFID Technology because cashless payment needs to be within a close range of transactions. It is to prevent the scammer take advantage of it. A LF RFID was operated at 125 kHz (Ya'Acob et al., 2019). Cashless payment has included RFID technology because it can provide a system that fully utilizes the benefit of virtual money. The RFID can be used as a mediator to replace the cash payment system with a cashless payment system for every transaction.

On the other hand, NFC is a non-contact communication between devices such as smartphones and tablets (Square, 2017). Contactless communication allows the user to wiggle the smartphone on an NFC-enabled device to send information without touching the devices together or completing several steps to create a connection. Mobile payments originated with NFC technology. NFC technology's wireless data transfer enables cashless payment using a mobile wallet such as Apple Pay, Google Pay, or Samsung Pay (Square, 2017). In the United States, the value of NFC-based mobile payment transactions climbed by 137 percent in 2015 compared to the previous year, reaching \$8.7 billion (eMarketer, 2015). NFC also enabled devices to interact with the existing contactless RFID system.

The data transmission between the NFC devices was within the 13.56 MHz range of radio frequency signals, and the distance between the NFC devices must have been less than 20 cm (Lacmanović, D., & Lacmanović, 2011), (Xuan et al., 2018). It means that NFC is anchored in RFID technology. When the NFC interface is close to the RFID reader, the reader can exchange data with an electronic device with an NFC interface like the NFC mobile phone. NFC systems have several advantages, including low power consumption, ease of use, and easy communication setup (Khalilzadeh et al., 2017). Hence, NFC-enabled devices in the cashless payment system have been widely promoted.

### **2.1.2 Adoption of Cashless Payment**

The payments of the cashless transaction are conducted by using digital currency. In other words, payments are made or accepted without physical banknotes or coins. According to the DOI by Everett M. Roger in 1962, the adoption of a new idea or innovation is caused by the interaction between individuals through interpersonal networks (Tee & Ong, 2016). Customers seek a better and easier transactions, while businesses seek new profit possibilities, as seen by the skyrocketing cashless payments phenomenon known as dissemination.

A survey from Rahman et al. (2020) examined the factors affecting Malaysia's adoption of cashless payment. This study aims to develop a conceptual model that explains the adoption of electronic payment from a consumer perspective. The theoretical framework for this research was the Unified Theory of Acceptance and Use of Technology (UTAUT). The dependent variable for this research is the adoption of cashless payment. The independent factors are performance expectancy, enabling circumstance, social influence, innovative, perceived technological security, and hedonic motivation. The result showed that all the dependent variables positively correlate with the independent variable. The performance expectancy and facilitating condition were the most significant variables affecting the adoption of cashless payment. On the other hand, perceived technology security is strongly related to the adoption of cashless payment. The higher the security level, the more the consumer adopts the cashless payment.

A study from Balakrishnan & Shuib, (2021) was centred on Malaysia's readiness for a cashless payment and Malaysians' adoption of cashless applications. The UTAUT 2 and Technology Readiness Index 2.0 was adopted by researchers. The independent variables for this research were perceived ease of use, perceived usefulness, innovativeness, optimism, lack of awareness, perceived risk, and intrinsic motivation. On the other hand, the dependent variables were perceived readiness and intention to adopt. The authors researched by using primary data. The findings demonstrated that perceived ease of use, optimism, innovativeness, perceived usefulness, and lack of awareness have significant direct effects on perceived willingness to adopt the cashless but not on the intention to adopt the cashless payment. The perceived risk and intrinsic motivation played essential roles in adopting cashless payment. Next, one of the limitations of this research was the

respondents in this survey. The majority of those who responded were educated in the cities. As a result, future writers can include more respondents from the B40 group in the research so that the outcome will be more apparent. Furthermore, it may help the policy maker make a good decision by providing financial aid or incentives. The outcome of the survey was another constraint. As a result, the issues such as social desirability and false reporting may arise. These issues may affect the outcome of the result. Consequently, the researchers advised future writers to conduct face-to-face interviews while collecting the data.

The intention of adopting future mobile payment services, as measured by Abraho et al. (2016), was assessed in accordance with the UTAUT. This research was focused on Brazil, and it was primary data research. The independent variables in this research were performance expectation, effort expectation, social influence, perceived risk and perceived cost. Moreover, the dependent variable was the behavioural intention to adopt mobile payment. The result indicates that perceived cost needed to be removed from the research because the relationship between perceived cost and intention to adopt mobile payment was insignificant. After adjusting the model, the remaining independent variables such as performance expectation, effort expectation, social influence and perceived risk were significant relationships between dependent variables. These independent variables have a significant positive relationship with the intention to adopt mobile payment except for perceived risk. It is because the perceived risk showed a negative relationship with behavioural intention. Thus, the higher the risk perceived, the lower the intention of adopting a new product and vice versa.

Di Pietro et al. (2015) researched the adoption and use of mobile payment in the public transportation market. This study aimed to identify the characteristics influencing people's attitudes toward mobile ticketing in public transportation. Therefore, it was primary data research. The theory for this research was TAM, DOI and UTAUT. Besides, the researchers have built a new model known as Integrated Model on Mobile Payment Acceptance (IMMPA). Perceived usefulness, ease of use, attitude towards mobile service, security, and compatibility were the independent variables. On the other hand, the dependent variable for this research was mobile payment in public transport. The study's findings indicate that the suggested model is widely endorsed and accepted. Thus, all the independent variables have a significant relationship between mobile payment and public transport. The main predictors for



mobile payment were perceived usefulness, perceived ease of use, and security. In short, the intention to use the mobile payment system was determined by its usefulness, ease of use, attitude, compatibility, and security system.

### **2.1.3 Perceived usefulness**

The Cambridge Dictionary defines perceived usefulness as the characteristic or state of being useful (PRESS, 2021). Perceived usefulness is defined as an individual's belief that using a specific system would enhance their work performance. (Davis, 1989). The contribution of digital infrastructure was on the information dissemination system; it has affected the influence of the perceived usefulness. Then, it will affect the consumer's intention to adopt the cashless payment system. In short, perceived usefulness is how an individual believes that mobile payment would improve their performance in regular activities.

Yang et al. (2021) investigated the impact of perceived utility, perceived ease of use, social influence, enabling factors, lifestyle compatibility, and perceived trust on the intention and adoption of electronic wallets. In addition, the researchers examined the impact of independent variables in terms of age, gender and educational attainment. This research adopted the UTAUT theory. It is primary data research. The survey's findings indicated that perceived utility, ease of use, social influence, enabling circumstances, lifestyle compatibility, and perceived trust influenced the desire to use an electronic wallet. These variables have positive impacts on the dependent variables. Lastly, the researchers also found that young generations prefer cashless payment when purchasing any products.

A study from Tiwari & Singh. (2019) focused on consumer satisfaction towards cashless payment in India. This research focused on two leading companies such as Paytm and Bharat Interface for Money (BHIM). Paytm is an e-commerce platform, while BHIM is a mobile application. The researchers adopted primary data and TAM. The independent variables in this research were product or service quality, mode of service delivery, price change, applicability, perceived usefulness, awareness and risk. On the other hand, the dependent variable was customer satisfaction. The result showed that all the independent variables were positively correlated with

dependent variables. From a customer satisfaction perspective, perceived usefulness can be considered significant in affecting the intention to use the customers. The researchers also advised future writers to concentrate on additional elements such as intention to use, innovation, discount offers, and characteristics that might entice consumers to utilize the cashless payment network.

Liébana-Cabanillas et al. (2020) research examined consumers' intentions to adopt mobile payment services in developing markets. This research was centered in India, and it was primary data research. This study's objective was to investigate the factors affecting the consumers; intention to use mobile payment services in India. Theories adopted by the researchers in this study were the TAM, UTAUT, TPB and IDT. The independent variables in this research were innovativeness, stress, perceived ease of use, perceived satisfaction, perceived usefulness, perceived risk and trust. On the other hand, the dependent variable for this research was the intention to use mobile payment services. The findings revealed that perceived simplicity of use and considered innovativeness both positively affect perceived usefulness, however, felt stress had a negative effect on perceived usefulness. Furthermore, customers' perceptions of the utility, satisfaction, and confidence in mobile payment services influenced their desire to use them. Perceived risk has a negative relationship with the dependent variable. Then, this study can provide empirical evidence to the designers and merchants of mobile payment services from a practical perspective. For example, the perceived risk and trust, usefulness, and ease of use were the critical determinants that can affect the intention to use of the users. Among these variables, perceived usefulness was crucial in determining India's intention to use mobile payment services.

Research from Mun et al. (2017) investigated the factors affecting consumers' intention to use mobile payment services in Malaysia. The targeted respondents in this study were millennials in Malaysia. This study is designed to help mobile payment service providers develop competitive strategies that effectively target future mobile payment consumers. The researchers adapted the Extended version of TAM and this research is primary data research. In this research, the independent variables were perceived utility, ease of use, credibility, and social influence, all of which were evaluated. On the other hand, the dependent variable for this study was the intention to use mobile payment services. The result revealed that all the independent variables have a significant relationship between intention to use mobile payment services. In short, perceived usefulness is relatively high compared with other independent

variables. It means that perceived usefulness is the most significant indicator in affecting the intention of millennials to adopt mobile payment services. Then, it is followed by perceived credibility, perceived ease of use and social influence.

#### **2.1.4 Perceived ease of use**

It is the degree to which a person feels that there will be no effort necessary to utilize a given technology that is measured in perceived ease of use (IGI GLOBAL, 2021). Perceived ease of use is constructed as people evaluate the intellectual effort needed to use new technologies. It refers to simple, easy to do and free from stress using the system. For instance, from the perspective of cashless payment, the perceived ease of use means that the consumer will not feel stressed when using the system. A technology-savvy person will enjoy the tremendous advantage of technology. It is because the online user is familiar with the technology and the function of the application. As a result, they will be able to acquire a new system promptly. Consumers' propensity to become cashless will grow as technology becomes more accessible. Cashless payment systems that are easy to use are more likely to be accepted by consumers. If an application is more user-friendly, it will be adopted more frequently.

Research conducted by Chan et al. (2020) looked at the variables that influence the adoption of the cashless transaction system among students in Malaysian universities. The researchers used the TAM to investigate the motivating elements of adopting a cashless transaction system. The dependent variable for this research was the adoption of the cashless transaction system among undergraduates, while the independent variables were perceived usefulness, perceived ease of use, credibility, and self-efficacy. According to the findings, the perceived usefulness and perceived ease of use are positively linked to the adoption of cashless transaction systems among undergraduates. Furthermore, there is no significant positive relationship between students' perceived credibility, self-efficacy, and the cashless transaction system adoption. One of the limitations of this study was the study sample size. This study only consists of 150 undergraduates; therefore, future researchers can enlarge the sample size and evenly distribute the questionnaire regarding gender and

race. Next, the researchers only focus on the southern region of Malaysia. As a result, the researcher advised the prospective researcher to look into Malaysia as a whole. Future researchers should utilize a new theory to conduct future research since the independent variables such as perceived credibility and perceived self-efficacy were not significant in this study.

The findings of Daragmeh et al. (2021) investigated the elements that impacted the behavioural intentions of Hungarian Generation X to utilize mobile payment services during the COVID-19 outbreak. The researchers used primary data such as a survey for data collecting purposes. Researchers adopted TRA, TAM, TPB and IDT. The independent variables for this study were perceived usefulness, behavioural intention, perceived COVID-19 risk, perceived ease of use and subjective norms, whereas the dependent variable was mobile payments. The result revealed that all the independent variables significantly impacted behavioural intention except perceived ease of use. In this research, the perceived ease of use did not directly impact the behavioural intention of Hungarian Gen X mobile payment usage. It is because Hungarian Gen X are tech-savvy. Therefore, there are no significant difficulties or barriers to adopting a mobile payment system. In other words, the perceived ease of use has an indirect impact on mobile payments. The researchers in this study did not examine the demographic information of generation X, which was a flaw in the research. The demographic information should be evaluated to determine the degree to which it influences Gen X behaviour patterns. Moreover, the researchers advised future writers to incorporate other risks in their study, such as privacy, financial, and security risks. Finally, the researchers recommended that longitudinal studies, such as those examining digital payment usage before, during, and after Covid 19, be included.

### **2.1.5 Perceived security**

Perceived security is a psychologically based concept. When the consumer is willing to believe that the product is safe, the person is ready to use or adapt the product. A variety of different viewpoints may characterize security perceptions. These metric measures how confident mobile payment clients are that their

transactions on mobile payment systems are secure in terms of financial and personal information. For instance, the customer will use the cashless payment method if the system has a high-security level. Perceived security on the internet has been characterized as how sensitive information may be transmitted securely on the website (Salisbury et al., 2001). The security of NFC-based mobile payment systems in restaurants, according to Bast (2011), is still a significant concern and the main obstacle to their widespread deployment. Thus, perceived security has played an essential role in user behaviour associated with technology.

Researchers Jiaxin Zhang et al. (2019) looked at how perceived security affects a customer's willingness to try a new product or service. They focused on mobile payment services and perceived security vulnerabilities. The independent variables in this research were interface design, perceived control, and perceived security. On the other hand, the dependent variable was continuous use. Research results have shown that perceived security has a strong and direct impact on ongoing service. It means that customers' perceptions of security have substantially affected their choices about whether or not to utilize mobile payment services in the long run. For this reason, mobile payment service providers should consider security factors pertaining to financial and personal information to attract more consumers to embrace cashless payment methods. Many research has been undertaken to study the impacts of feeling security. Therefore, perceived security was included to study the elements that might affect cashless payment acceptance in the Malaysia night market.

Ting et al. (2016) conducted a study in Malaysia to determine the variables influencing the desire to utilize mobile payment systems among Malays and Chinese citizens. This research was focused on Malays and Chinese because these two ethnic groups were the most dominant ethnic group in Malaysia. Then, it was primary data research. In this research, TPB was utilized by the researchers. The independent variables are attitude, subjective norm, and perceived behavioural control. The variables under attitude were perceived usefulness, perceived ease of use, trust and perceived safety. Next, the variables under subjective norm and perceived behavioural control were interpersonal and external influences. On the other hand, the dependent variable was intention toward mobile payment systems. The result showed that all the independent variables were positively related to dependent variables. Furthermore, there are differences in perceived risk, interpersonal and external influences, subjective norms and intention between Malay and Chinese. To summarise, both interpersonal and

exterior influences had a substantial role in differentiating Malay and Chinese intentions. Compared to other ethnic groups in Malaysia, Malays are more concerned with social ties and earning approval from others. In contrast, the Chinese have distinct views because they abhor uncertainty. They are willing to adopt a mobile payment system provided safety is maintained or increased. Consequently, perceived safety was considered in this investigation.

A study from Pal et al. (2021) analyzed the factors that affect the actual usage and future intention of mobile payment in India. The researchers wanted to examine India's citizen usage behaviour. The researchers in this study utilized TACT in the research. It was primary data research. The independent factors in this study were felt security, constraint-based negative valence, perceived risk, design restrictions, lack of assistance, and expertise. Knowledge is an independent factor affecting the valence and intention to use. The dependent variables were actual usage and future use intention. The result revealed that information access, perceived security, perceived risk and knowledge have a significant positive relationship between both dependent variables. However, the independent variables such as design constraints and lack of support have a significant negative relationship between both dependent variables. Negative impacts of design constraints because the consumers might be affected by the features of the payment system. The simpler the payment mechanism, the more the customer will embrace the system. Moreover, the negative impacts of lack of support were expected because there are no supporting conditions to overcome the obstructs usage, and users will not be able to complete the transaction. Furthermore, the independent variables such as convenience and reflection opportunity had a significant positive relationship with India's future use of mobile payment. In short, perceived security was one of the essential factors affecting mobile payment system used.

According to Khalilzadeh et al. (2017), NFC based mobile payment technology acceptance in the restaurant industry was evaluated. This study focused on restaurants in North America and was primary data research. In this study, the researchers applied the combination of UTAUT and TAM. The independent variables for this research were facilitating conditions, performance expectancy, social influence, hedonic, attitude, self-efficacy, attitude, perceived security, perceived trust, perceived risk, gender, age and experience. The dependent variable was the intention to use mobile payment. The result revealed that perceived security has strong direct

and indirect effects on the dependent variable. It means that the perceived security positively affects the intention to use mobile payment directly and indirectly. Next, social influence was higher than the performance expectancy and hedonic performance. Gender is also one of the investigated factors. The study indicated that the influence of security on trust for men is more significant than for females. It implies that security directly influences their desire to employ NFC technology. Last but not least, based on the outcome of the questionnaire, this research can be concluded that the young generations are immune to social distrust. Briefly stated, perceived security has a statistically significant positive link with the desire to utilize the Near Field Communication (NFC) mobile payment technology.

### **2.1.6 Relative advantage**

A new product or service's perceived superiority over an existing product or service is known as relative advantage, according to E. M. Rogers (Bhasin, 2019). Consumer sentiment towards the product and service is the foundation for this concept. It does not necessarily represent the product or service's genuine features. The relative advantage of new technology, such as cashless payment, is that it outperforms competing options. Customers are likely to consider cashless payment methods as better than traditional payment methods due to their ease of use and attractive features, which may eventually assist the spread of these payment methods across borders.

The research was conducted by Mombeuil. (2020) was focused on the variables influencing and best forecasting the resurgence of mobile wallet users in the United States. It was primary data research, and the investigation was focused on China. The independent variables in this research were relative convenience, relative advantage, perceived privacy and perceived security. Then, the dependent variable was renewed adoption of mobile wallets. The result showed that all the independent variables have a positive relationship. Furthermore, according to the findings of this study, the relative advantage and security against theft of unlawful financial activities have provided genuine value for mobile wallet customers. As a result, to grow their market or attract new consumers, service providers might concentrate on these two

perspectives. For example, the organization may give users frequent advice or reminders on configuring the privacy and security settings of their mobile wallets. In conclusion, this study demonstrated that the benefit of utilizing mobile payments and the security mechanism of mobile payments affected the intention to use mobile payments.

A research study conducted by Park et al. (2019) investigated the effect of anxiety and social influence on the many advantages of mobile payment services in the United States. This study aimed to develop multiple based models of factors that can determine the consumer adoption of mobile payment services. The researchers utilized mental accounting theory. The multiple benefits included in this study were economic, convenience, information security, enjoyment, experimental and social benefits. Moreover, attitude is also included in this research. The independent variables in this research were technology anxiety, social influence and advantages of mobile payment services. The benefits included in this research were convenience, economic, information security, enjoyment, experiential and social. On the other hand, the dependent variables were attitude towards mobile payment services and intention to use mobile payment services. The study demonstrated that all the benefits favourably affected mobile payment services' views. The independent variable, such as technological phobia, adversely affects mobile payment advantages. Both characteristics will affect the mindset and the inclination to adopt mobile payments. In conclusion, this research recommends that retail organizations take advantage of the technical system and optimize the advantages of mobile payment solutions.

Research from Jung et al. (2020) was focused on the motivations and obstacles to accepting mobile payment services. This research was concentrated in the United States and explored consumer acceptance and the status of mobile payment services. The researchers in this research used the UTAUT. The independent variables in this research were performance expectancy, effort expectancy, social influence, compatibility, facilitating condition, knowledge, trust and risk, and relative advantage. The dependent variable was the intention to use the mobile payment service. This research revealed that performance expectancy was the most significant variable that influenced the intention to use the mobile payment service. It means the consumer is concerned about the usefulness of the mobile payment service rather than other variables. Moreover, the independent variables such as social influence, compatibility knowledge and trust have a significant positive relationship with the dependent



variable. Lastly, in this research, the relative advantage of the mobile payment service is also not determinative of the factors that affect the intention to use mobile payment. On the other hand, performance expectancy has the most robust prediction of intention to use mobile payment services, followed by knowledge, trust, compatibility, and social influence. The remaining independent variables were not significant predictors of the consumer's intention to use. In conclusion, the relative advantage constituted a non-factor that influenced the propensity to utilize the mobile payment service.

### **2.1.7 Social Influence**

The Oxford Reference defines a social influence process as a process in which an individual's attitude and ideas, beliefs and behaviour are influenced or controlled by some sort of social communication (Oxford, 2021). As per Venkatesh et al. (2003), social influence may be defined as the amount of effect that other people's views can have on the decision to adopt a given system or policy. Social influence includes intentional and inadvertent efforts to modify another person's values, perceptions, or behaviours. Social influence is one of the main factors that affect the adoption of cashless payments. Consumers' inclination to use is influenced by their family, friends, and siblings. When they disseminate the benefit of using certain products or applications, they advertise the benefits of products to their peers. Then, a person might be attracted and willing to try a new product or adopt a new behaviour in their daily life. Under the effect of age, gender, and experience as moderating variables, this trait emerged as a significant predictor of behavioural intentions in UTAUT and UTAUT 2.

A study from Sopian & Ismail. (2018) focused on the impact of cashless transactions on the payment return system occurring among Malaysian consumers. This research adopted the TAM and UTAUT in this research. This research was concentrated in Sungai Buloh. The researchers used primary data for data gathering purposes. The independent variables in this research are perceived risk, perceived trust, social influence, behavioural intention and facilitating condition. On the other hand, the dependent variable is payment system performance. It was confirmed by the

results of the study findings that all of the independent factors had a statistically significant link with the dependent variable.

Patil et al. (2020) conducted a study to determine the factors influencing customer acceptance of mobile payment services in India. India has the second-largest number of mobile customers globally, behind the United States. The researchers in this study adapted the Meta-UTAUT model, which was the primary data research. The independent variables in this research were performance expectancy, effort expectancy, social influence, facilitating conditions, personal innovativeness, anxiety, trust, grievance redressal and attitude. On the other hand, the dependent variable was the intention to use mobile payment systems. The result showed that all the independent variables positively correlate with the intent to use mobile payment systems in India. It implies that social influence was a significant predictor of behavioural intention to use mobile payment. This study found that attitudes, social influence, and facilitating conditions influenced people's preferences to utilize mobile payment systems in India. The remaining independent factors are substantial positive predictors of consumer behaviour toward mobile payment. The researchers have suggested that future authors use probability sampling in the research. By adding probability sampling, the researchers can compare non-probability sampling research. Lastly, the researchers also recommended that future writers include other languages in the questionnaire since India is a multiple language and culture country. The existing questionnaire was focused on the students who are computer and internet literate.

A study conducted by Singh et al. (2020) looked at what variables influence people's willingness to use and feel satisfied with mobile wallet services. This study concentrated on India. This study aimed to create a conceptual model to identify the essential aspects impacting users' intention, perceived satisfaction, and recommendation to use a mobile wallet. It was a primary data study. The researchers utilized the TAM and UTAUT 2 in this research. The independent variables for this research were perceived ease of use, perceived usefulness, perceived risk, attitude, customer intention, perceived satisfaction, innovativeness, stress to use and social influence. The dependent variable was the mobile wallet. The result showed that perceived satisfaction has a significant and positive relationship with users' recommendations. The perceived ease of use and utility influenced mobile wallet adoption. Furthermore, independent variables such as innovativeness, usage stress,

and social influence were detrimental to users' reported happiness with mobile wallet services. Users' adoption and endorsement of mobile wallet services were influenced by social influence. Users with minimal stress, for example, are happier with the usage of new mobile wallet services. As a result, the researchers advised organizations to redesign their marketing strategy and alter their services or offerings to improve usability and exposure, influencing consumer satisfaction.

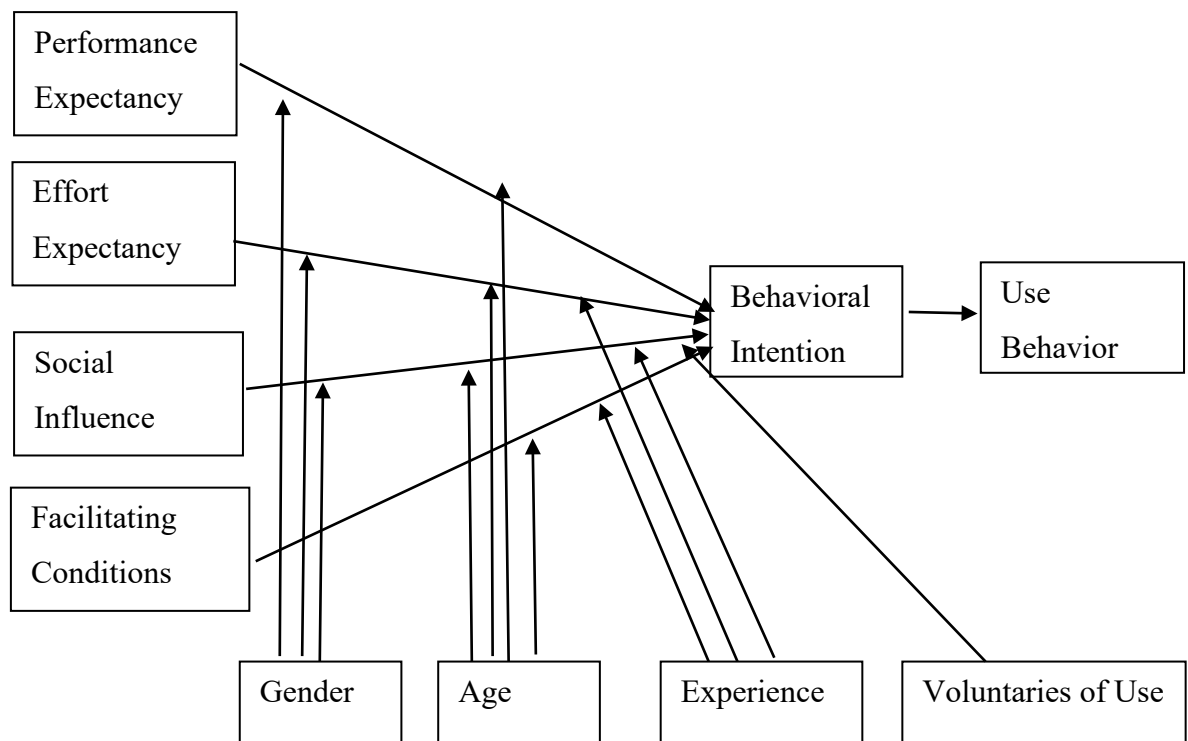
According to Al-Saedi et al. (2020), research was conducted to determine the variables that influence mobile payment uptake in Oman, a nation in the Middle East. This study was primary data and secondary data research. The researchers have referred to 25 studies from other researchers and collected the data through a survey. The researchers utilized an extended version of the UTAUT. The independent variables in this study were perceived risk, perceived trust, perceived cost, self-efficacy, performance expectancy, effort expectancy and social influence. On the other hand, the dependent variable was the behavioural intention to use mobile payment services. The result revealed that perceived risk has an insignificant negative influence on Oman's behavioural intention to use mobile payment services. However, the perceived cost has a significant negative effect on mobile payment services. The higher the cost of using the payment, the lower the intention to use the system. Furthermore, the independent variables such as perceived trust, self-efficacy, performance expectancy, effort expectancy, and social influence significantly affect the dependent variable. According to the results of this study, social pressure and prominent peer perspectives have a beneficial impact on the behavioural intent of using mobile payment systems in Oman. In a nutshell, the findings of this study revealed that performance expectation was the most accurate predictor of mobile payment system adoption, followed by social influence, effort expectancy, perceived trust, perceived cost, and self-efficacy, among other factors.

## 2.2 Theoretical Background

### 2.2.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

The UTAUT can analyze the factors that affect cashless payment (Xuan et al., 2018) (Yong et al., 2018). UTAUT was developed by Venkatesh and his research group in 2003 (Momani, 2020). Eight technology acceptance theories formed from the UTAUT. Several theories are addressed, including the TRA, T, the combined form of TAM and TPB, Model of PC Utilization (MPCU), IDT, Motivational Model (MM), and the Social Cognitive Theory (SCT) (Momani, 2020) (Chang, 2012). According to Venkatesh and his group, UTAUT has proposed four main factors: performance expectancy, effort expectancy, facilitating conditions, and social influence (Chang, 2012). These are the main factors that can affect the intention and usage of information technology. The chart below shows the research model of UTAUT.

Figure 2.1: The Unified Theory of Acceptance and Use of Technology



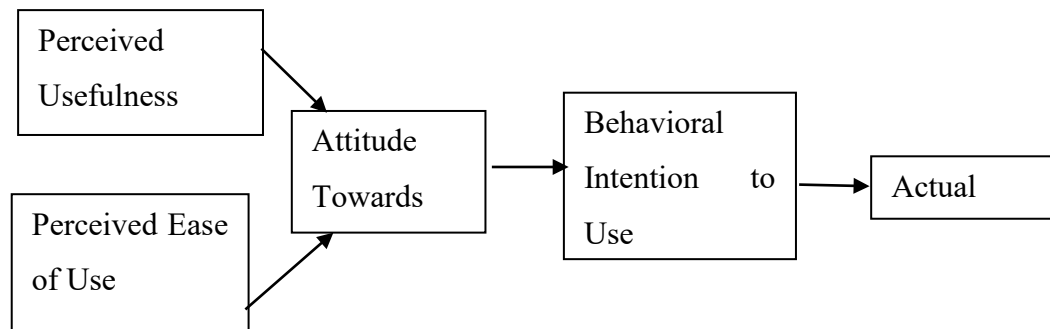
Source: (Venkatesh et al., 2003)

Performance expectation relates to the degree to which a person feels that employing the system would allow him or her to accomplish benefits in a job (Chang, 2012). For this research, the variables included in performance expectancy were perceived usefulness and relative advantage. Next, the research (Chang, 2012) showed that effort expectancy is the degree of ease associated with using the system. Perceived ease of use is the variable included in the category of effort expectancy. Furthermore, social influence was one of the independent variables in this research. Social influence is defined as the degree to which an individual believes that it is vital for others to believe they should utilize the new system. In short, perceived usefulness, relative advantage, perceived ease of use and social influence are the independent variables under the Unified Theory Acceptance and Use of Technology (UTAUT).

### **2.2.2 Technology Acceptance Model**

Davis developed the Technology Acceptance Model in 1989 (Charness & Boot, 2015). Technology Acceptance Model was one of the most influential models of technology acceptance. This model is grounded in social psychology theory and the Theory of Reasoned Action (TRA) (Ma & Liu, 2011). Based on the theory of reasoned action, beliefs influence the attitudes that lead to intentions and, ultimately, behaviour. Davis has found that perceived ease of use, perceived usefulness, behaviour, and intention to use are the variables that can affect the Technology Acceptance Model (Ma & Liu, 2011). Only perceived ease of use and perceived usefulness of technology may influence end-users behaviour or intent to adopt. Then, these may help predict consumer behaviour concerning technology. Both self-reported current and self-predicted future stages were significantly correlated with perceived usefulness. On the other hand, perceived ease of use was strongly correlated with current and future use. As a result, Davis concluded that perceived ease of use indirectly influences the acceptance of the technology due to its perceived usefulness (Ma & Liu, 2011). In other words, perceived ease of use indirectly impacts users' behavioural attitudes and intent to use the technology. The chart below showed the framework of Technology Acceptance Model (TAM).

Figure 2.2: Technology Acceptance Model (TAM)

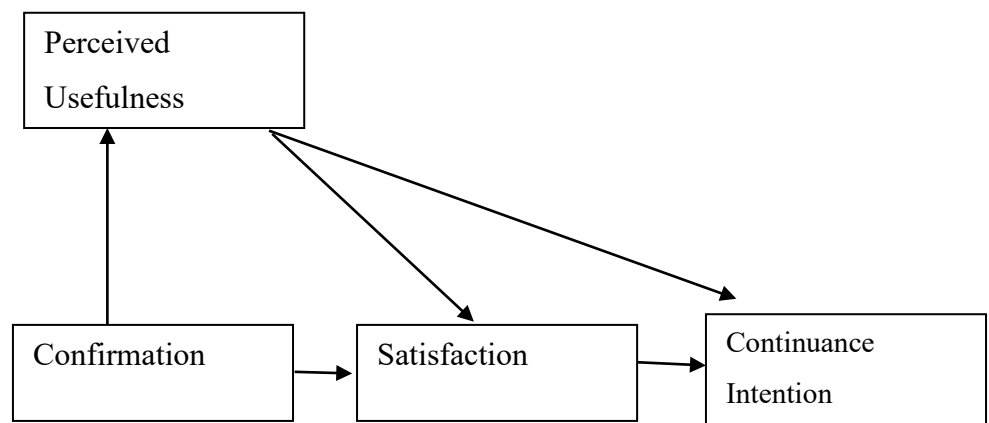


Source: (Tella & Olasina, 2014)

### 2.2.3 Expectation Confirmation Theory

The Expectation Confirmation Theory (ECT) has been extensively amended to examine technology's adoption and continued use. From the perspective of Information systems, this theory was developed by Bhattacharjee in 2001 (Mohammad Alamgir Hossain and Mohammed Quaddus, 2012). The Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB) are also integrated with Expectation Confirmation Theory to better understand consumer behaviour (Hossain & Quaddus, 2012). According to the framework of ECT, consumers will have an initial expectation about the product or service before purchasing any items. Based on their use experience, they will form an opinion on performance. By evaluating perceived performance against original expectations, consumers form their confirmation level. Consumers get satisfaction from the level of confirmation and the expectation upon which confirmation is based, which determines the intention to buy back. The Expectation Confirmation Model (ECM) framework under Expectation Confirmation Theory (ECT). The goal of the ECM is to focus solely on post-acceptance variables rather than looking at pre-and post-use variables. The pre-acceptance variables had been incorporated into the concepts of confirmation and satisfaction. Hence, the perceived security can be supported by Expectation Confirmation Model. The chart below shows the framework of the Expectation Confirmation Model.

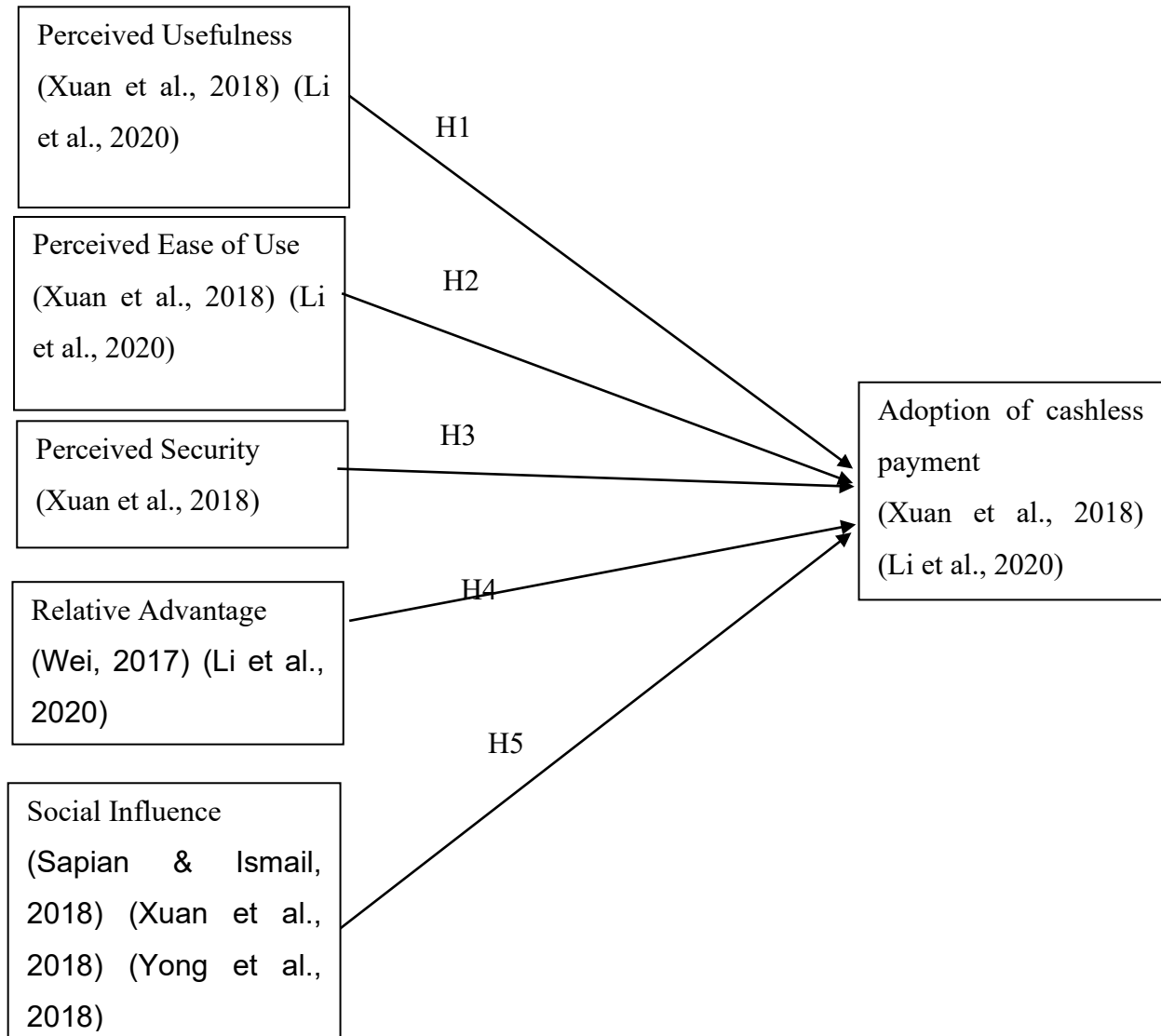
Figure 2.3: Expectation Confirmation Theory



Source: (Franque et al., 2021)

## 2.3 Proposed Theoretical Framework

Figure 2.4: Proposed Theoretical Framework



The figure depicts the suggested model of the elements impacting the adoption of cashless payment in the Malaysia night market. According to earlier studies, the assessment of researchers gone through indicated a substantial association between perceived usefulness, perceived ease of use, perceived security, relative advantage and social influence towards the adoption of cashless payment. Thus, the theoretical framework is to analyze the significant link between the independent and dependent variables.



## **2.4 Hypothesis Development**

The hypothesis statements aimed to test the statistical significance between each independent variable and the adoption of cashless payment in Malaysia night market.  $H_0$  denotes as null hypothesis while  $H_1$  denotes as the alternative hypothesis.

### **2.4.1 Perceived Usefulness**

$H_{10}$ : There is no significant relationship between perceived usefulness and adoption of cashless payment.

$H_{11}$ : There is a significant relationship between perceived usefulness and the adoption of cashless payment.

### **2.4.2 Perceived Ease of Use**

$H_{20}$ : There is no significant relationship between perceived ease of use and adoption of cashless payment.

$H_{21}$ : There is a significant relationship between perceived ease of use and adoption of cashless payment.

### **2.4.3 Perceived Security**

$H_{30}$ : There is no significant relationship between perceived security and the adoption of cashless payment.

$H_{31}$ : There is a significant relationship between perceived security and the adoption of cashless payment.

#### **2.4.4 Relative Advantage**

H<sub>40</sub>: There is no significant relationship between relative advantage and adoption of cashless payment.

H<sub>41</sub>: There is a significant relationship between relative advantage and adoption of cashless payment.

#### **2.4.5 Social Influence**

H<sub>50</sub>: There is no significant relationship between social influence and the adoption of cashless payment.

H<sub>51</sub>: There is a significant relationship between social influence and the adoption of cashless payment.

### **2.5 Conclusion**

Throughout this second chapter, this study described cashless payment and detailed the technology that is used by cashless payment. It is explained in detail in this chapter how the model was used theoretically and how historical journal articles were used to develop a conceptual framework and hypotheses for the inquiry. Aside from that, this chapter provides an explanation of the dependent and independent variables. It provides a better understanding for the reader by making them aware of the relationship between the dependent and independent variables of the research. The research approach will be explained in further detail in the next chapter. This chapter will discuss the step of planning that must be completed in order to collect survey data for use in the survey.

## **Chapter 3: Research Methodology**

### **3.0 Introduction**

This chapter will evaluate the significance of the hypothesis and address the research questions. It will focus on the study design, the methods of methodological data gathering, and sample design. The pilot test and research instrument will be presented in this portion. In addition, construct measurement, the scale of measurement, and analytic approaches will be taught in this chapter.

### **3.1 Research Design**

The research design refers to the overall method that the researcher adopts to combine the study's many components coherently and logically, so assuring the researchers can answer the research topic successfully. It comprises the framework for gathering, measuring, and interpreting data (DeVaus, 2014). In other words, a research design is a technique for obtaining answers to specific study questions or issues. Consider these three factors when choosing a research design for the project: the study's purpose, the researcher's personal experiences, and the reader. There are many types of research designs, including descriptive, exploratory and experimental (also known as longitudinal and cross-sectional) (Pawar, 2020).

This research group has investigated the elements that influence the adoption of cashless payment in Malaysia's night market. It was decided to utilize the descriptive research methodology to investigate consumer knowledge of cashless payment options at the night market. Before engaging in experimental functional analysis, it is usual to undertake a full functional evaluation of issue behavior using descriptive analysis (Sloman, 2010).

Qualitative and quantitative methodologies make up the majority of the research strategy. The researcher has used a quantitative approach to conduct this study and analyze the data. Data obtained via polls, surveys, and questionnaires or by modifying pre-existing statistical data using computing tools focuses on the quantitative approach, which stresses

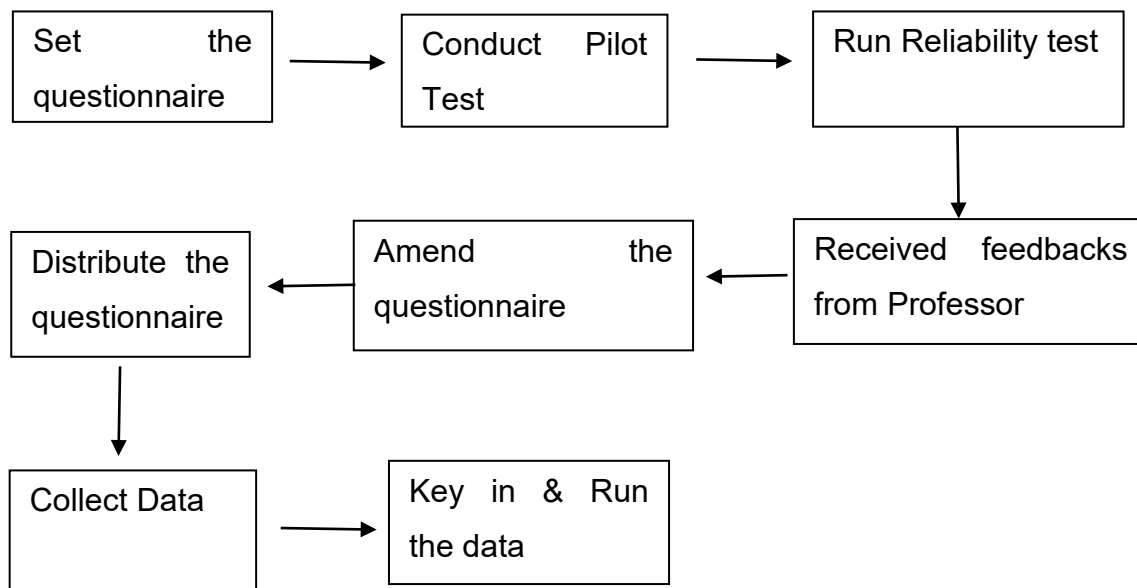
objective measures and statistical, mathematical, or numerical analysis. As the name suggests, quantitative research focuses on collecting statistical information, which may be used to generalise or explain a specific phenomenon (Babbie, 2010). Survey research is performed using online questionnaires for respondents to fill out in order to explore the connection between variables.

In addition, a pilot test was carried out prior to the distribution of the survey. Prior to conducting a full-scale experiment, a pilot study is used to examine the project's feasibility. In most cases, the smaller research follows the same techniques and methodologies as the larger one (Workplace Testing, 2017). A convenient sampling approach was utilized during the pilot test to collect the data. It consists of nonprobability sampling in which persons are sampled only because they are "convenient" sources of data for researchers rather than because they are statistically significant (Salkind, 2010). Using this methodology is advantageous since it simplifies the sample, is suitable for pilot research and hypothesis building, allows for collecting more data in a shorter period, and is the most cost-effective sampling method. In this way, people who participate in the pilot test will have a better desire, availability, and accessibility to accept benefits based on data and trends than the general population. Lastly, the targeted respondents are individuals who dwell in Malaysia. The respondents may additionally need to supply their demographic information established in the first portion of the questionnaire. However, the most important demographic information is that the respondents need to say whether they are using cashless payment or not the user of cashless payment. The objective is to investigate the consumer's view of cashless payment and the elements that impact their desire to embrace cashless payment in the night market.

## **3.2 Data Collection Method**

The quantitative approach is being employed for the data collecting purpose of this study. The questionnaire is provided over the internet. There are 330 sets of questionnaires dispersed among targeted respondents from various states in Malaysia. However, only 199 sets of questions may be utilized to run the data.

Figure 3.1: Data Collection Flow Chart



### 3.2.1 Primary data

Primary data is information that researchers have collected directly from essential sources. Primary data is obtained from a source without using an authentic source of information. Interviews, surveys, observation, and experimentation are all methods of gathering information. The primary data sources are commonly chosen and specially adjusted to meet the needs of specific research objectives. Because primary data is explicitly acquired for research purposes, it is more reliable, accurate, and impartial. Primary data is more appropriate for getting information from consumers to measure their degree of satisfaction with using contactless payment in Malaysia since this research is looking into the consumer's perspective on using contactless payment in Malaysia. However, using the most up-to-date technology available, such as the internet, the cost of delivering the questionnaire will be significantly lowered. Apart from that, it also aids us in keeping track of the data collection procedure.

This research used the internet to distribute 330 sets of questionnaires to participants. It was total of 199 sets of questionnaires were returned, yielding a response rate of 60%. As a result, there is no missing information since online respondents are required to answer all of the mandatory questions, and only the

complete response may be submitted. However, about 131 sets of questionnaires were discarded because they did not identify themselves as customers of cashless payment.

### **3.3 Sampling design**

Sampling design covers the targeted population, sampling frames and location, sampling components, sample methodologies, and sampling size.

#### **3.3.1 Target Population**

A target population is a specified demographic group with comparable characteristics and is defined as the targeted audience for a product, advertisement or study (Course, 2020). The targeted audience in this study is the individual who utilized cashless payment while visiting the night market. The night market was focused on in this study because the night market can be regarded as part of the sector that might affect Malaysia's economy. Therefore, this study focused on the respondents that utilized cashless payment when visiting the night market.

#### **3.3.2 Sampling Frame and Sampling Location**

A sampling frame is a list or database from which to draw a sample. A sample frame is a database of potential respondents that may be drawn from to ask people to participate in a market research study ("Sampling Frame," 2014). The sampling frame in this study would be the Malaysians 18 years old and above. They need to adopt cashless payment while visiting the night market. The sampling location in this research is the night market located in Malaysia. The survey is spread 100 sheets to West Malaysia and 230 sheets to East Malaysia. Most of the forms are spread to East Malaysia because East Malaysia has more cashless payment availability.

### **3.3.3 Sampling Elements**

In the research, various criteria need to be followed. For instance,

- Researcher will disseminate the questionnaire over the internet or on social media sites.
- Only responders that adopt the cashless payments will be sent the questionnaire.
- Respondents should have an account and device from any commercial banks that allow respondents to utilize contactless payment in the Malaysia night market.

### **3.3.4 Sampling technique**

The questionnaire was changed and adjusted following the pilot test. The convenience sampling approach was utilized to disseminate the actual survey. This type of sampling is also known as non-probability sampling. The researcher picks the questionnaire responder depending on their accessibility and closeness to the researcher. Besides that, convenience sampling is used since it may benefit and provide the researcher with a more accessible approach to recruiting the respondents. Convenience sampling is collecting samples by obtaining conveniently available samples around a site or online service (Edgar & Manz, 2017). This is the sampling approach generally selected and often utilized by the researchers. Researchers employ convenience sampling since this sample approach is inexpensive, efficient and quick to apply (Jager, 2017). The researcher will only choose the respondents who match their criteria and convenience to them. This strategy will take a shorter duration for the researcher to satisfy the survey checkpoint.

### **3.3.5 Sample Size**

The number of people or observations included in a study is the sample size. The size of sample affects two statistical properties: the precision of our estimate and the research's ability to conclude ("Sample Size and Power," 2013). The larger the sample size, the better the estimation of the genuine population mean. The poll was

designed to reach 200 people for this study. However, only 199 responses were received from respondents. A large enough sample must yield a 95 percent confidence interval that forecasts the fraction of respondents who are not polled again within 1.5 percent to compute the sample size. The sample size table below reveals that the total number of responders is reduced to 177.

Table 1: Sample Size Table

<b>Required Sample Size<sup>†</sup></b>								
Population Size	Confidence = 95%				Confidence = 99%			
	Margin of Error				Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295

Source: (Krejcie & Morgan, 1970)

## 3.4 Research Instrument

### 3.4.1 Questionnaire design

The closed-ended question was utilized in the questionnaire. The questionnaire contains three parts of this study and consists of thirty-one questions. Part A is about respondents' personal information like gender, age, education level, average income per month, average using cashless payment, and average visiting Pasar Malam. Multiple-choice questions are the structure of part A. The respondents should choose one out of four or five options. Part B consists of five questions related to dependent variables, adoption of cashless payment. Part B consists of 27 questions relating to independent variables of research. The independent variables are perceived usefulness,



perceived ease of use, perceived security, relative advantage and social influence. For part B and part C, Five Point Likert Scale is adapted to investigate the factors that affect the adoption of cashless payment in Malaysia night market. The Likert Scale ranges from 1 to 5, with one representing strongly disagree, two representing disagree, three representing neutral, four representing agree, and five representing strongly agree. The origin of the questionnaire is shown below.

Table 2: Origin of questionnaire

No	Original Content	Questionnaire	Authors
Adoption of Cashless Payment			
ACP1	Now I pay for purchase with a contactless payment.	I use of cashless payments to purchase.	Xuan et al. (2018)
ACP2	Using E-wallet is beneficial.	There are lots of advantages in using cashless payment.	Li et al. (2020)
ACP3	I intend to use e-payment services when the opportunity arises.	I prefer to use cashless payment if the merchant accepts cashless payment.	Li et al. (2020)
ACP4	E-wallet can substitute the cash-based payment method.	Cashless payment can replace the payment in cash.	Li et al. (2020)
ACP5	I will use contactless payment.	I am willing to use cashless payment in my daily life.	Xuan et al. (2018)
Perceived Usefulness			
PU1	Using contactless payment makes me save time.	Cashless payment helps to save time and cost.	Xuan et al. (2018)
PU2	Mobile payment services bring one more choice for customers in a payment process.	Cashless payment provides more payment alternative for customers.	Li et al. (2020)
PU3	Using E-wallet would enhance my payment effectiveness.	Cashless payment is more effective for conducting the payment.	Li et al. (2020)

PU4	Using contactless payment makes it easier for me to conduct transactions.	Cashless payment makes the transaction easier.	Xuan et al. (2018)
PU5	I would find contactless payment a useful possibility for paying.	Cashless payment is a useful payment option.	Xuan et al. (2018)
PU6	There are a high number of a available contactless payment service.	There are a high number of cashless payment services available in the night market.	Xuan et al. (2018)
Perceived Ease of Use			
PEOU1	It is easy for me to learn how to utilize the E-wallet.	Cashless payment is easy to use.	Li et al. (2020)
PEOU2	Learning to use contactless payment services would be easy for me.	Cashless payment is easy to learn.	Xuan et al. (2018)
PEOU3	I find digital wallet useful for my payment activities.	I found that the cashless payment is helpful in making payments.	Li et al. (2020)
PEOU4	Using contactless payment services is straight forward.	Using cashless payment services is straight forward.	Xuan et al. (2018)
PEOU5	I generally find contactless payment services to be complicated to use.	I found that it is challenging to utilize cashless payment services.	Xuan et al. (2018)
PEOU6	I believe that contactless payment services would be easy to use.	I agreed that the services of cashless payment in night market would be easy to use.	Xuan et al. (2018)
Perceived Security			
PS1	I think that privacy is not guaranteed when using contactless payment.	My private information is protected when adopting cashless payment system.	Xuan et al. (2018)
PS2	I am worried that information transferred by using contactless	By using cashless payment, my payment	Xuan et al. (2018)

	payment may be intercepted by other people.	credentials are secured.	
PS3	Wallets ensure protection against risk of fraud and financial loss.	I think the cashless payment can minimize the risk of fraud.	Yong et al. (2018)
PS4	Most e-payment provides adequate payment security.	Cashless payments have adequate payment security.	(Wei, 2017)
PS5	Satisfied with the security system.	I believe that the security system of cashless payment is high.	Yong et al. (2018)
PS6	I consider that using a contactless payment method is not secure.	I think that using cashless payment in night market was unsecured.	Xuan et al. (2018)
Relative advantage			
RA1	E-wallet helps me to keep track of my transaction history.	Cashless payment allows me to track my purchase history.	Li et al. (2020)
RA2	E-wallet allows to offer several benefit to consumer (rewards/cashback/discount etc).	Cashless payment provides benefits to its user such as discounts or cash back.	Li et al. (2020)
RA3	Using E-wallet can get quick response.	By using cashless payment, it can enhance my payment process.	Yong et al. (2018)
RA4	Ensures access of account when abroad.	There was no restriction on the use of cashless payments.	Yong et al. (2018)
RA5	E-wallet helps me to control my spending habits.	I can monitor my spending behavior by adopting cashless payment.	Li et al. (2020)
Social Influence			
SI1	It is current trend to use cashless payment system modes.	I believe that cashless payment is the current	Sapian & Ismail.

		trend.	(2018)
SI2	People who use cashless payment system have a high profile.	Cashless payment enhanced social status.	Sapian & Ismail. (2018)
SI3	My friends think that I should use mobile payment.	My family, friends and colleagues think that I should adopt cashless payment.	Sapian & Ismail. (2018)
SI4	I will use contactless payment if the service is widely used by people in my community.	I will adopt the cashless payment if my community embraces it.	Xuan et al. (2018)

### 3.4.2 Pilot Test

A pilot study is a critical initial step in examining a novel intervention or an innovative application of an existing intervention. A pilot test is aimed to determine the feasibility of a technique that will be applied in larger-scale research (Leon et al., 2011). A pilot test was done before disseminating the research questionnaire to the expected respondents. Respondents were provided 50 sets of questionnaires as part of a pilot test. The targeted respondents were individuals who utilized cashless payment at Malaysia's night market. According to the remarks, the questionnaire is rigid for respondents to comprehend. As a consequence, the questionnaire has been changed. Furthermore, a few grammatical faults were pointed up in the comments. To minimize confusion among the intended respondents, the inaccuracies should be rectified.

Table 3: Pilot Test

Variables	Cronbach's Alpha
Adoption of cashless payment	0.873
Perceived Usefulness	0.884
Perceived Ease of Use	0.780
Perceived Security	0.893
Relative Advantage	0.809
Social Influence	0.762

Source: Developed for the research

All variables are reliable based on the table above since their Cronbach's Alpha value is greater than 0.7. Cronbach's Alpha value for perceived security is 0.893, followed by perceived usefulness, cashless payment adoption, and relative advantage. These three variables have a Cronbach's Alpha value greater than 0.8. However, the other two variables, perceived ease of use and social influence, had Cronbach's Alpha values less than 0.8. Social influence has the lowest Cronbach's Alpha rating of 0.762, while perceived ease of use has the second lowest at 0.780.

### 3.5 Construct Measurement

The measuring scale is a tool that aids in distinguishing how people respond differently to the factors in the research. The researchers will gather and analyze data to assist define the statistical inference test to investigate each scale variable. Measurement scales are classified into four types: nominal, ordinal, interval, and ratio. This survey questionnaire employs nominal, interval, and ratio measurement scales. The surveys were separated into two sections: section A contains the demographic profile for the target respondents, and section B has the item for each variable. In part A, nominal and ratio scales were used, whereas interval scales were used in section B. Section B used 5-point Likert scales. Because 5-point Likert scales are more appropriate than 7-point Likert scales, they were employed in this study. The measurement scales for all of the variables discussed in section B are shown below.

Table 4: Measurement Scale for Section B of the Questionnaire

Section B: Factors Affect the Adoption of Cashless Payment in Malaysia Night Market	A	Adoption of Cashless Payment	Interval	5-Point
	B	Perceived Usefulness	Interval	5-Point
	C	Perceived Ease of Use	Interval	5-Point
	D	Perceived Security	Interval	5-Point
	E	Relative Advantage	Interval	5-Point
	F	Social Influence	Interval	5-Point

### 3.5.1 Nominal Scale

The numbers provided to respondents to chose in the variable on a nominal scale do not indicate any order and are solely used for data classification. The nominal scale was employed in section A, the respondents' demographic information. Respondents' quantity of replies is not specified in the questions, but it carries its connotations.

Table 5 : Measurement Scale for Section A of the Questionnaire

Section A:	No	Objects/ Variables	Scale of Measurement
Demographic Information	1	Using cashless payment in the night market	Nominal
	2	Age	Ratio
	3	Gender	Nominal
	4	Ethnicity	Nominal
	5	Average Income per month	Ratio
	6	Marital Status	Nominal
	7	Education Level	Nominal
	8	Occupation	Nominal
	9	Type of Cashless Payment	Nominal
	10	Frequency of using cashless payment	Ratio
	11	Frequency of visiting pasar malam	Ratio

### **3.5.2 Interval Scale**

All computations involving interval data are permitted in an interval scale. There are huge differences between the different units of measurement that exist. There is no such thing as a meaningful zero. In other words, an interval scale has order and the difference between two values is essential (Stevens, 2021). Section B was evaluated using the interval scale, the 5-point Likert Scale. The amount of agreement is represented by the digits from 1 to 5. Those replies are equally far from one another. For example, one denotes severely disagree, two denotes disagree, three denotes neutral, four denotes agree, and five denotes highly agree.

### **3.5.3 Ratio Scale**

A ratio scale is an ordered scale with real zero points in the difference between measures. The ratio scale was utilized for the following questions: respondents' age, average income, frequency of utilizing cashless payment, and frequency of visiting Pasar Malam.

## **3.6 Data Processing**

Data processing happens when data is acquired and transformed into useful information (Pearlman, 2020). Statistical Package for Social Science (SPSS) version 26.0 is selected to execute the data processing for this study subject. Data verification, editing, coding, and cleaning were included in the data processing.

### **3.6.1 Data Checking**

Data checking is an activity through which the correctness of the data is verified ("OECD Gloss. Stat. Terms," 2008). Data checking is essential to guarantee

that the data is reliable and precise. Any errors that occur in the data entering procedure will be impacted. Thus, the study must verify that the incomplete, unsatisfactory and irrelevant questionnaire should be excluded to generate a trustworthy and accurate result.

### **3.6.2 Data Editing**

Data editing is analyzing the data for consistency, discovering mistakes and outliers, and rectifying inaccuracies. The objective of data editing is to enhance the quality, correctness and appropriateness of the data and make it fit for the purpose for which it was obtained. Data editing may assist the researcher in enhancing the utility of data and make sure the data is cohesive and consistent (Guides, n.d.).

### **3.6.3 Data Coding**

Data coding refers to translating acquired information or observations into a collection of meaningful, coherent categories. It is a technique of summarizing and describing facts to produce a systematic description of the recorded or observed phenomena (SAGE Research Methods, 2017). Coding qualitative data makes it simpler to comprehend the information gathered. Assigning codes to words and phrases in each answer aids in capturing what the response is about, allowing the researcher to assess better and summarize the survey's overall findings (Medelyan, 2022). The questionnaire is broken into two sections: A and B. For section A, responders must choose one of the options. The obtained data for section B was interpreted using a 5-point Likert Scale. The scale will be scored from 1 to 5, with 1 denoting severely disagree, 2 denoting disagree, 3 denoting neutral, 4 denoting agree, and 5 denoting highly agree.



### **3.6.4 Data Cleaning**

Data cleaning is known as fixing or deleting inaccurate, corrupted, improperly formatted, duplicate, or missing data from a dataset. The errors might have happened when compiling the data. If the data is wrong, the data result is untrustworthy (Tableau, 2019). Data cleansing is necessary since it might improve the quality of the final product. Data cleaning will be performed by removing questionnaires that do not meet the requirements of this study, such as respondents who did not offer a scale while responding to the survey. Out of 330 surveys, 131 were invalid owing to inadequate information supplied, and they could not be modified for further information.

## **3.7 Data Analysis**

Data analysis is the systematic use of statistical or logical procedures to explain, illustrate, compress, and evaluate data (Govaert, 2010). Data analysis will be undertaken after gathering the data. The data will be put into Statistical Package Social Science and Microsoft Excel for analysis.

### **3.7.1 Descriptive Analysis**

Descriptive analysis is utilizing statistical tools to describe or summarize a collection of data. Descriptive analysis is useful for obtaining accessible insights from otherwise uninterpreted data (Bush, 2020). The facts from the questionnaire will be interpreted simply for a more comprehensible explanation. There will be a full discussion of the outcomes utilizing the table in Chapter 4.

### 3.7.2 Reliability Test

The reliability analysis approach computes many frequently used scale reliability measures and provides information on the link between the specific items within the scale. Cronbach's Alpha will be used to assess dependability. As indicated in the table, the coefficient alpha range shows the degree of dependability. It is considered unreliable when the alpha coefficient value is less than 0.60. A number between 0.60 and 0.70 is considered medium dependable, while a value between 0.70 and 0.80 is highly reliable. Compared to prior levels, 0.80 to 0.95 was achieved with more exceptional dependability.

Table 6 : Rule of Thumb for Cronbach's Alpha

Cronbach's alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Source: (Stephanie Glen, 2020)

### 3.7.3 Spearman Correlation Analysis

The strength of a monotonic connection is measured using Spearman's correlation analysis. Spearman correlation analysis will be performed when the data is not normally distributed. Spearman's correlation coefficient ranges from -1 to +1, with +1 indicating a perfect positive correlation between rankings and -1 indicating a perfect negative correlation between ranks. Finally, a value of 0 indicates no association between rankings.

### 3.7.4 Multiple Linear Regression Analysis

A study's dependent and independent variables are examined using multiple linear regression analysis. Using a high number of independent variables required that researchers assess all independent factors independently of the dependent variable while leaving all other variables constant. In the newest study, the dependent variable will be an intention to use contactless payment in the Malaysia night market, and the independent variables will be grouped into five categories: perceived ease of use, perceived ease of use, perceived usefulness, and relative advantage and social influence. The significance thresholds of 1 percent, 5 percent, and 10 percent will be studied to offer depth to this study.

This result demonstrates that the null hypothesis will not be rejected as the p-value is larger than 0.05. In other words, at a 5 percent level of significance, the independent variable assessed is not significant. If the p-value is less than 0.05, there is no significant association between the independent and dependent variables at the 5 percent significance level. As a consequence, reject the null hypothesis. The beta value of each independent variable, on the other hand, has a bigger effect on the dependent variable. The larger the value of beta, the stronger the independent variable's leaning toward the dependent variable. When the independent variables are connected, however, a multicollinearity problem occurs. The coefficient of the model will become quite sensitive to every tweak made. This conclusion reduces the regression model's strength and does not represent the genuine effect of each independent variable in the study.

### 3.8 Residual Diagnostic Test

Furthermore, the residual diagnosis tests were also conducted in this study, namely the normality test, heteroscedasticity test and multicollinearity test.

Table 7: Summary of the Residual Diagnostic Test

Diagnostic	Hypothesis	Decision
Normality Test	H <sub>0</sub> : Residuals are normally distributed H <sub>1</sub> : Residuals are not normally distributed	JB equal to zero, then do not reject H <sub>0</sub> . Residuals are normally distributed.
Heteroscedasticity Test (Breusch-Pagan)	H <sub>0</sub> : Residuals are homoscedasticity H <sub>1</sub> : Residuals are heteroscedasticity	p-value >0.05. Do not reject H <sub>0</sub> . Residuals are homoscedasticity.
Multicollinearity test (Variance Inflation Factor)	H <sub>0</sub> : There is no multicollinearity among variables H <sub>1</sub> : There is multicollinearity among variables	VIF <10. Do not reject H <sub>0</sub> . There is no multicollinearity among variables.

#### 3.8.1 Normality Test

Normality refers to a specific statistical distribution named a normal distribution or the Gaussian or bell-shaped curve. The normal distribution is asymmetrical continuous distribution defined by the mean and standard deviation of the data (ISixSigma, 2022). To assess the distribution of the data, the Jarque Bera test will be performed. Do not reject H<sub>0</sub> if the JB value is zero. As a result, residuals are normally distributed.

### **3.8.2 Heteroscedasticity Test**

Heteroskedasticity happens when the variance of the residuals is unequal throughout a range of measured values. Heteroskedasticity generates an unequal distribution of residuals in a regression analysis (also known as the error term) (Corporate Finance Institute, 2021).

Breusch-Pagan is employed to identify the existence of heteroscedasticity in this investigation. When the p-value of the Breusch-Pagan test is higher than 0.05, it implies that the residuals have equal variance, commonly known as homoscedasticity (Gujarati & Porter, 2013). Hence, do not reject H<sub>0</sub>.

### **3.8.3 Multicollinearity Test**

Multicollinearity is a concept used in data analytics that denotes the existence of two exploratory variables in a linear regression model that is shown to be connected by proper investigation and a predefined degree of accuracy (Corporate Finance Institute, 2022)

The variance inflation factors (VIF) were computed to determine how much multicollinearity existed in the equation to identify it (Gujarati & Porter, 2013). If the VIF score is less than 10, it suggests that there is insufficient evidence to establish collinearity among the variables. As a result, do not reject H<sub>0</sub> owing to the lack of a multicollinearity issue.

## **3.9 Conclusion**

This chapter has clearly outlined how to research, obtain resources, target a population, create a sample design, collect data, process data, and analyze data. To get an accurate outcome, researchers will conduct a comprehensive investigation. In chapter 4, the study's findings will be evaluated and discussed further.

## **Chapter 4: Data Analysis**

### **4.0 Introduction**

The interpretations of the descriptive analysis, regression analysis, and residual diagnostic tests are presented in this chapter. The reliability test, Spearman's Correlation Analysis, and Multiple Regression Analysis are among the tests that will be performed. The assessment is described in full below.

### **4.1 Descriptive Analysis**

Descriptive analysis is a study of respondents to determine whether or not they use contactless payment, how frequently they use cashless payments in a month, how much money they spend by using contactless payment in a month, what sector respondents usually use for contactless payment, what type of contactless payment device respondents usually use, race, gender, age, marriage status, income levels, and education levels, how many times they use cashless payment in a month, and how much money they spend by using contactless payment in a month. A total of 326 questionnaires were issued to the public. Then there are 199 valid sets of questionnaires.

### 4.1.1 Demographic Profile of Respondents

Table 8 : Demographic Profile of the Respondents

Variables	Categories	Percentage (%)
Age	<b><u>20-24</u></b>	<b><u>70.35</u></b>
	25-30	10.05
	31-39	10.55
	40-49	8.04
	Above 50	1.01
Total		100.00
Gender	<b><u>Female</u></b>	<b><u>65.83</u></b>
	Male	34.17
Total		100.00
Ethnicity	<b><u>Chinese</u></b>	<b><u>91.96</u></b>
	India	2.51
	Malay	4.52
	Others	1.01
Total		100.00
Average Income per month	<b><u>&lt;1000</u></b>	<b><u>61.31</u></b>
	1001-2000	9.55
	2001-3000	10.55
	3001-4000	8.54
	4001-5000	6.53
	>5000	3.52
Total		100.00
Marital Status	<b><u>Single</u></b>	<b><u>86.43</u></b>
	Married	13.57
Total		100.00
Education Level	Secondary School	12.06
	<b><u>Higher Education</u></b>	<b><u>87.94</u></b>
Total		100.00
Occupation	<b><u>Student</u></b>	<b><u>66.83</u></b>
	Working in the government sector	3.02
	Working in the private sector	30.15
Total		100.00
Type of Cashless Payment	Contactless Payment	19.10
	<b><u>Mobile Payment</u></b>	<b><u>80.90</u></b>
Total		100.00
How often do you use cashless payments in one month?	1	3.52
	2	8.54
	3	12.56
	4	6.03
	<b><u>&gt;5</u></b>	<b><u>69.35</u></b>
Total		100.00
How frequently do you visit Pasar Malam in a	<b><u>1-2</u></b>	<b><u>68.84</u></b>
	3-4	26.13

month?	5-6	4.02
	>7	1.01
Total		100.00
N=199		

Source: Developed for the research

Table 4.1.1 shows the respondents' demographic profile regarding age, gender, ethnicity, average income level, marital status, education level, occupation, type of cashless payment, frequency of using cashless payment, and frequency of visiting Malaysia's night market. The percentage (%) denotes the proportion ratio of each category out of 199 respondents.

In terms of age, there are five categories of age components which are 20-24, 25-30, 31-39, 40-49, and above 50. It showed that most of the respondents are between 20 to 24 years old, which consists 70.35% out of 100%. Then, the respondents between 31 to 39 have the second-highest frequency of 10.55%. 10.1% of the respondents are between 25 to 30 years old. Lastly, this survey only consists of 1% of the respondents who are 50 years old and above.

Next, from the perspective of gender, most of the respondents in this survey were female. It is because it has occupied 65.8% of total respondents. Of the male respondents, only consists of 34.2% in this survey. Malaysia is a country that consists of different ethnics. There are three main ethnicities in Malaysia: Malay, Chinese, and India. The researcher found that 1% of the respondents are from other ethnics. The respondents are Iban, an ethnic from Sarawak. On the other hand, most of the respondents in this research are Chinese because they showed 92% out of 100%. There are Malay respondents and Indian respondents who took part in this survey. It showed 4.5% and 2.5% respectively.

Furthermore, income level has been included in demographic information. The average income level for the respondents can consider as low. It is because only 3.5% of the respondents received more than >RM5000 per month, and there are 61.3% of the respondents have an income of less than RM1000. 10.6% of the respondents received an income between RM2001 to RM3000. Lastly, 8.5% and 6.5% of the respondents received an income between RM3001-RM4000 and RM4001-RM5000 respectively.

Moreover, most of the respondents are single because it has occupied 86.43% out of 100%. The remaining 13.57% are married. Most of the respondents are educated. The result showed that 87.9% of the respondents are from higher education.



Only 12.1% of the respondents did not enter university. Then, most of the respondents are still students. The outcome showed that 66.8% of the total respondents are a student. Only 33.2% of the respondents are from the government or private sectors. The government and private sectors' workers are 3.0% and 30.2%, respectively.

On top of that, the researcher found that most of the respondents preferred to use mobile payments such as electronic wallets, Touch N Go, Grab Pay, and Boost when making the payment. The outcome showed that 80.90% of the respondents preferred mobile payment, and only 19.10% preferred contactless payments such as debit cards or credit cards. The frequency of using cashless payments was high. The result showed that 69.3% of the respondents used cashless payments more than five times a month. Only 3.5% of the respondents used cashless payments once a month. Then, 12.6% of the respondents used cashless payments three times in one month. Only 8.5% and 6.0% of the respondents used twice a month or a fourth month.

Lastly, the researcher can conclude that the participated respondents seldom visit the night market. 68.3% of the respondents visit 1-2 times per month. On the other hand, only 1% of the respondents visited the night market more than seven times in one month. 26.1% and 4.5% of the respondents visit the night market 3-4 times per month and 5-6 times per month respectively.

#### **4.1.2 Central Tendencies of Frequency Analysis**

A central tendency is a single number that aims to represent a data set by locating the center point within that data collection (Lund Research, 2013). The center tendency is also known as the central location. The measurements of central tendency help researchers find the precise numerical point in collecting data. The data points of any sample are dispersed from the lowest value to the greatest value

Table 9: Result for Central Tendenies

Variables	Mean	Standard Deviation
Adoption of Cashless Payment	4.366	0.657
Perceived Usefulness	4.256	0.675
Perceived Ease of Use	4.131	0.587
Perceived Security	3.712	0.713
Relative Advantage	4.247	0.668
Social Influence	4.080	0.714
N=199		

Source: Developed for the research

The adoption of cashless payment, a dependent variable in this research, showed the highest mean among the variables. It showed 4.366 with a standard deviation of 0.657. Furthermore, the independent variable with the highest mean is perceived usefulness which is 4.256 with a standard deviation of 0.675. On the other hand, the independent variable with the highest standard deviation was the social influence, 0.714, and the mean of 4.247. Next, perceived ease of use has the lowest standard deviation, 0.587 and the mean is 4.131. Relative advantage has the second-highest mean of 4.256 with a standard deviation of 0.675. Lastly, perceived security has a standard deviation of 0.713 and the lowest mean of 3.712.

## 4.2 Reliability Test

Table 10: Result for Cronbach's Alpha

Variables	Cronbach's Alpha	Internal Consistency
Adoption of Cashless Payment	0.916	Excellent
Perceived Usefulness	0.904	Excellent
Perceived Ease of Use	0.732	Acceptable
Perceived Security	0.815	Good
Relative Advantage	0.867	Good
Social Influence	0.813	Good

Source: Developed from the research

Cronbach's alpha values for all variables are shown in the table above. Among the variables, cashless payment adoption has the highest value (0.916), which is regarded as great dependability, followed by perceived usefulness of 0.904, which is also considered excellent reliability. Following that, three independent variables with strong interval consistency are present: relative advantage, felt security, and social influence. Finally, perceived ease of use has the lowest Cronbach's alpha score of 0.732. In brief, all variables are regarded as very trustworthy and consistent since their Cronbach's alpha values vary from 0.70 to 0.95.

## 4.3 Regression Analysis

### 4.3.1 Spearman's Analysis Correlation

A nonparametric measure of the degree and direction of the relationship between two variables is the Spearman rank-order correlation coefficient. The variables should be on an ordinal scale (Laerd Statistics, 2013). Since the data distribution is not normal, Spearman's analysis correlation was performed. The correlation coefficient ranges from -1 to +1. A score of 0 indicates no relationship between the dependent and independent variables. A number close to 0 indicates a poor relationship between the variables.

Table 11: Result for Spearman's Analysis Correlation

Variables	Spearman's Correlation
Adoption of cashless payment vs Perceived Usefulness	0.724**
Adoption of cashless payment vs Perceived Ease of Use	0.702**
Adoption of cashless payment vs Perceived Security	0.449**
Adoption of cashless payment vs Relative Advantage	0.683**
Adoption of cashless payment vs Social Influence	0.522**

Source: Developed fro the research

The Spearman Correlation Analysis between dependent and independent variables is shown above. According to the findings, perceived usefulness has the most robust connection between dependent variables. The higher the correlation

coefficient, the more accurate and robust the association between correlated variables. With 0.819, 0.771, and 0.774, respectively, perceived utility, perceived simplicity of use, and relative benefit show a strong positive link with cashless payment acceptance. The values for social influence and felt security, on the other hand, are 0.648 and 0.558, respectively. The findings revealed that all independent factors had a substantial positive link with cashless payment acceptance in Malaysia's night market. It is because of p-value is greater than 0.05.

### 4.3.2 Multiple Regression

Table 12: Result for Multiple Regression

Explanatory Variables	Regression			
	Standardized Coefficient Beta	Coefficients Standard Error	Significance level	t
Constant		0.178	0.045	2.021**
Perceived Usefulness	0.401	0.069	0.000	5.641***
Perceived Ease of Use	0.226	0.071	0.000	3.570**
Perceived Security	-0.040	0.049	0.458	-0.744
Relative advantage	0.296	0.062	0.000	4.691**
Social Influence	0.054	0.054	0.355	0.928
DV: Adoption of cashless payment				
R:0.863				
R square: 0.745				
Value (less than) <1.5 Not significant				
(1.5-2) * Alpha value is 0.10 level				
(2-5) ** Alpha value is 0.05 level				
>5 *** Alpha value 0.01				

Source: Developed for the research

Multiple regression analysis is used to analyse independent variables such as perceived usefulness, ease of use, security, relative advantage, and social influence. This research helps explain the adoption of cashless payment in Malaysia night market. The R<sup>2</sup> for this study was 0.863, showing the degree to of both dependent variables and independent factors are connected. The coefficient of determination value (R<sup>2</sup>) indicated 0.745, and this result shows that the independent variable

explains 74.5 percent of the adoption of cashless payment. The significance threshold for this research will be 5%, and the goal will be to establish whether or not there is a statistically significant relationship between the independent and dependent variables. The decision criterion is that if the p-value is lower than 0.05, reject H0 (There is no significant link between the independent and dependent variables); otherwise, do not reject H0. In other words, there is an essential link between the independent variable and the dependent variable.

The findings demonstrated that perceived utility, perceived ease of use, and relative benefit are less than the significance threshold of 0.05. Therefore, these three independent factors have an important link with the adoption of cashless payments. On the other hand, the p-value for felt security and social impact is greater than 0.05. Hence, felt security and social impact are not significant between dependent variables. In summary, perceived security and social impact have been eliminated out of this investigation and the hypothesis outcome at table below.

Table 13: Outcome of the tested hypothesis

No	Hypothesis	P-value	Result
1	H1 <sub>0</sub> : There is no significant relationship between perceived usefulness and the adoption of cashless payment.	0.000	Significant
2	H2 <sub>0</sub> : There is no significant relationship between perceived ease of use and the adoption of cashless payment.	0.000	Significant
3	H3 <sub>0</sub> : There is no significant relationship between perceived security and the adoption of cashless payment.	0.458	Not significant
4	H4 <sub>0</sub> : There is no significant relationship between relative advantage and the adoption of cashless payment.	0.000	Significant
5	H5 <sub>0</sub> : There is no significant relationship between social influence and the adoption of cashless payment.	0.355	Not significant

Source: Developed for the research

### 4.3.3 Multi Regression after removed insignificant

Table 14: Multiple Regression After Removed Insignificant Variables

Explanatory Variables	Regression			
	Standardized Coefficient Beta	Coefficients Standard Error	Significance level	t
Constant		0.175	0.045	2.084**
Perceived Usefulness	0.412	0.065	0.000	6.148***
Perceived Ease of Use	0.230	0.070	0.000	3.656**
Relative advantage	0.295	0.057	0.000	5.057**
R:0.863				
R square: 0.743				
Value (less than) <1.5 Not significant				
(1.5-2) * Alpha value is 0.10 level				
(2-5) ** Alpha value is 0.05 level				
>5 *** Alpha value 0.01				

Source: Developed for the research

The table above has excluded perceived security and social influence because these two variables have insignificant relationships with the dependent variable. Hence, this table can conclude that only perceived usefulness, ease of use, and relative advantage have a significant relationship between dependent variables. The coefficient of correlation (R) is 0.863. It shows that the independent variables are highly correlated with the dependent variable. Then, the R square is 0.743. In other words, 74.3% of the dependent variable are explained by these three independent variables.

#### Equation 4.1

$$ACP = \beta_1 + \beta_2 PU + \beta_3 PEOU + \beta_4 RA$$

$$ACP = 0.365 + 0.4PU + 0.257PEOU + 0.291RA$$

$\beta_2 = 0.4$	On average, an increase in perceived usefulness, the adoption of cashless payment will increase by 0.4 unit.
$\beta_3 = 0.257$	On average, an increase in perceived ease of use will increase the adoption of cashless payment by 0.257 unit.
$\beta_4 = 0.291$	On average, an increase in relative advantage, the adoption of cashless payment will increase by 0.291 unit.

## 4.4 Residual Analysis

### 4.4.1 Normality Test

Based on the normality test, the Jarque-Bera (JB) value calculation did not equal zero, which shows that the residuals of this model are not normally distributed. Furthermore, the p-value is smaller than 0.05. Therefore, reject  $H_0$ . Residuals are not normally distributed.

### 4.3.2 Heteroscedasticity Test

The p-value for the Breusch-Pagan test is 0.87. The p-value is bigger than alpha 0.05. Hence, do not reject  $H_0$ . Residuals are homoscedasticity.

Table 15: Heteroscedasticity Test

Sig	df	Chi-square
0.878	5	2.42

Source: Developed for the research

### 4.3.3 Multicollinearity Test

The Variance Inflation Factors (VIF) values are less than ten, which suggests that there is no statistical evidence to support the existence of a linear connection among the independent variables. Hence, do not reject  $H_0$ . There is no multicollinearity among the variables in the model.

Table 16: Multicollinearity Test

Variables	Tolerance	VIF
Perceived Usefulness	0.262	3.823
Perceived Ease of Use	0.331	3.018
Perceived Security	0.460	2.175

Relative Advantage	0.332	3.010
Social Influence	0.390	2.565

Source: Developed for the research

Table 17: Summary Table for Residual Analysis

Diagnostic	Hypothesis	Decision
Normality Test	H <sub>0</sub> : Residuals are normally distributed H <sub>1</sub> : Residuals are not normally distributed	JB failed to achieve zero value, Reject H <sub>0</sub> . Residuals are not normally distributed.
Heteroscedasticity Test (Breusch-Pagan)	H <sub>0</sub> : Residuals are homoscedasticity H <sub>1</sub> : Residuals are heteroscedasticity	p-value >0.05. Do not reject H <sub>0</sub> . Residuals are homoscedasticity.
Multicollinearity test (Variance Inflation Factor)	H <sub>0</sub> : There is no multicollinearity among variables H <sub>1</sub> : There is multicollinearity among variables	VIF <10. Do not reject H <sub>0</sub> . There is no multicollinearity among variables.

Source: Developed for the research

## 4.4 Conclusion

The chapter utilized the data to describe descriptive analysis, Cronbach's alpha reliability test, Spearman's Correlation Analysis, multiple regression analysis and residual analysis. In the next chapter, the researcher will further describe the main results and conclusion of the investigation.



## Chapter 5: DISCUSSION, CONCLUSION AND IMPLICATION

### 5.0 Introduction

Based on the statistical analysis in chapter four, the study findings will be summarized and presented in this chapter. Aside from that, this chapter will go through the managerial and research consequences. Finally, this chapter will discuss limits and suggestions for further research.

### 5.1 Summary of Statistical Analysis

There is the total of 199 questionnaires have been gathered from the respondents. All of the respondents are a user of cashless payment. Most of them are female (65.83 percent) between 20 and 24 (70.35 percent). (70.35 percent). They are Chinese (91.96 percent) and continue studying (66.83 percent). (66.83 percent). The average salary for the respondents is below RM1000 (61.31 percent). (61.31 percent). They prefer to utilize mobile payment (80.90 percent) when making payments. 69.35 percent of the respondents will utilize the cashless payment more than five times in a month. However, most respondents will only attend the night market 1-2 times a month (68.84 percent). In this research, the dependent variable is the adoption of cashless payment, whereas the independent variables include perceived usefulness, perceived ease of use, security, relative advantage, and social influence.

Table 18: Summary of the Independent Variables

Independent Variables	Relationship
Perceived Usefulness	Significant
Perceived Ease of Use	Significant
Perceived Security	Not significant
Relative Advantage	Significant
Social Influence	Not significant

Table 19: Summary of the tested hypothesis

Hypothesis	Decisions
1	Reject H0. There is a significant relationship between perceived usefulness and the adoption of cashless payment.
2	Reject H0. There is a significant relationship between perceived ease of use and the adoption of cashless payment.
3	Do not reject H0. There is no significant relationship between perceived security and the adoption of cashless payment.
4	Reject H0. There is a significant relationship between relative advantage and the adoption of cashless payment.
5	Do not reject H0. There is no significant relationship between social influence and the adoption of cashless payment.

## 5.2 Discussions of Major Findings

The decision criterion for multiple regression analysis stated unequivocally that the null hypothesis would be rejected if the p-value was less than alpha 0.05. The findings revealed that perceived usefulness, ease of use, and relative advantage had a strong association with cashless payment uptake in Malaysia's night market. Then, since the p-value was greater than 0.05, the independent factors such as perceived security and social influence did not significantly link with the adoption of cashless payment in Malaysia night market. As a result, the variables were deleted from the model. In other words, there are no issues with the use of cashless payment in Malaysia.

The p-value for perceived usefulness is 0.000. Therefore, the researcher does not reject the null hypothesis based on the decision rule. In other words, perceived usefulness has a significant relationship with the adoption of cashless payment in Malaysia's night market. This outcome is supported by Mun et al. (2017) and Chan et al. (2020), as the research also stated that perceived usefulness was significantly related to the intention to use mobile payment services in Malaysia. The usefulness of the cashless payment can determine the intention of the consumer. For example, a consumer might prefer cashless payment if it was useful and has more advantages than the existing payment method. Then, the customer is willing to utilize the cashless payment either to buy from an online shop or a physical store. Thus, the service provider may create an application that can provide lots of conveniences and benefits or boost the efficiency of the customer as the utility of the cashless system is one of the important variables for deciding the acceptance of cashless payment.

Next, perceived ease of use also showed a significant relationship between the adoption of cashless payment. The p-value of the perceived ease of use is 0.000. Based on the decision rule, reject the null hypothesis if the p-value is more significant than 0.05. The research outcome was supported by Yang et al. (2021) and Daragmeh et al. (2021) because the findings also showed that the perceived ease of use has a positive and significant relationship with the adoption of cashless payment. A consumer is willing to use the cashless payment system if the system is user-friendly. Furthermore, the results revealed that the impression of the technology in terms of perceived ease of use impacted customer intention to use. Thus, the service provider should launch a system that is user friendly to attract the attention of the consumer.

The result revealed that perceived security has no significant relationship with the adoption of cashless payment. The p-value of the variable is 0.458. Based on the decision rule, reject the null hypothesis if the p-value is more significant than 0.05. Research from Ahmad. (2021) has supported the analysis result. The research finding has removed the perceived security since it is not a good indicator for that research. The perceived security will not affect the adoption of cashless payment.

On the other hand, research showed a contrasting result. The findings from Mombeuil. (2020) showed that perceived security has a significant positive relationship with mobile wallets' adoption. This result was positive because the research only targeted experienced users. Based on respondents' perception, perceived security is one indicator that accepts the cashless payment method. Furthermore, the research from Jusoh & Jing. (2019) also showed that perceived security played a significant role in adopting cashless payment among Universiti Putra Malaysia (UPM) students. The researchers indicated that the inclination to use electronic payment is connected with the perceived security of the system. Thus, the greater the security of the cashless payment system, the higher the intention of the students from UPM to embrace the cashless payment. In brief, the journal that did not support the result revealed that perceived security has a significant positive association with the adoption of cashless payment since it is one signal to accept the cashless payment in Malaysia.

Relative advantage has a significant relationship with the adoption of cashless payment. It is because the p-value for relative advantage is 0.000. Based on the decision rule, do not reject the null hypothesis if the p-value is smaller than 0.05. The result is supported by Lin et al. (2020) relative advantage has a positive relationship with mobile payment. The consumer believes that using electronic payments can reduce transaction costs. In short,

relative advantage can also be considered one indicator that affects the consumer to adopt the cashless payment in Malaysia night market.

Lastly, the result showed that social influence did not significantly affect the adoption of cashless payments because the p-value for social influence is 0.355. Then, the decision rule stated that reject the null hypothesis if the p-value is more significant than 0.05. The result is supported by Hoo et al. (2021) because the findings showed that social influence was insignificant and unsupported. Social influence only played an essential role in the early stage of adopting the technology. Then, the electronic wallet entered the mature stage. Therefore, the influence of friends, relatives and spouses has been reduced. Furthermore, a study from Sharinah Puasa et al. (2017) showed that social influence has an insignificant relationship with the adoption of cashless payment. The consumer has aware of the advantages of adopting cashless payment. Then, they started to practice a new norm of living, especially during this pandemic.

The result is not supported by Patil et al. (2020) showed that social influence has a weak and significant relationship with the adoption of cashless payment. The users are sensitive to social influence and consider their expectations when using technology. Furthermore, the research from Abrahao et al. (2016) and Sopian & Ismail. (2018) showed that social influence could affect the adoption of cashless payment in Malaysia.

Table 20: Summary of the discussion for major findings

Variables	Findings	Comparison with other variables
Perceived Usefulness	The positive and significant relationship	Supported by Mun et al., 2017, Chan et al., 2020  The usefulness of the cashless payment can determine the intention of the customer
Perceived Ease of Use	The positive and significant relationship	Supported by Yang et al., 2021, Daragmeh et al., 2021  The perception of the technology for perceived ease of use has affected the intention of adopting cashless payment

Perceived Security	No significant relationship	<p>Supported by Ahmad, 2021</p> <p>Not affect the adoption of cashless payment</p> <p>Not supported by Mombeuil, 2020, Jusoh &amp; Jing, 2019</p> <p>Positive significant relationship because it is one of the indicators to accept the cashless payment</p>
Relative advantage	The positive and significant relationship	<p>Supported by Lin et al., 2020</p> <p>Believe that using electronic payments can reduce the transaction costs</p>
Social Influence	No significant relationship	<p>Supported by Hoo et al., 2021, Puasa et al., 2021</p> <p>Mature stage- influence from friends, relatives, and the spouse has been reduced.</p> <p>Aware of the cashless payment started to practice new norms of living</p> <p>Not supported by Patil et al., 2020, Abrahao et al., 2016, Sopian et al., 2021</p> <p>Users are sensitive to social influence</p>

## **5.3 Implications of the Study**

### **5.3.1 Managerial Implication**

Our research, based on the findings of our investigation, may be able to provide some contributions to a variety of various parties. The first group would include facilities providers of E-wallet services and organisations interested in offering E-wallet services in the future. The information gathered in this study may be useful to business owners who want to understand E-wallet problems better. According to the survey's findings, elements such as perceived ease of use and relative advantage are essential considerations when selecting an E-wallet. Because of this, facility providers may concentrate their efforts on these critical components to expand the present E-wallet services. Furthermore, innovators will have a better understanding of customers' needs in regard to the use of e-wallets in the future. It has the potential to increase the number of customers that use E-wallets.

Furthermore, our results may be of use to future research concerned with E-wallet acceptance issues in general. The factors utilized in this research may serve as a reference for a future investigation. Perceived usefulness, perceived ease of use and relative advantage are the factors that determine the adoption of cashless payment in Malaysia night market. The concerns of budgeting and security, on the other hand, have minor implications for the adoption of E-wallets. Future researchers may choose to remove any superfluous features from their studies or to take alternative factors into account while conducting future research. As e-wallets are becoming more popular in Malaysia, future researchers may choose to investigate this issue. Our work may be of use to future researchers in their investigations.

### **5.3.2 Policy Implication**

The government would be the party that would benefit from the findings of this investigation. Consumers who use E-wallets are more likely to be aware of the major aspects that influence their decision. The government can implement some

programs for promoting E-wallets among customers. For example, the government introduced the e-Tunai Rakyat RM30 and the e-PENJANA RM50 to encourage customers to adopt E-wallets as a payment method. Before receiving their money, consumers will be asked to download an E-wallet program on their mobile device. The findings of this research may provide further suggestions to the government on encouraging customers to continue using E-wallets rather than discontinuing E-wallets after using the money that has been provided.

Besides that, the government will be able to determine the adoption rate in western Malaysia. Since merchants still favour conventional payment methods over cashless payment, the adoption of cashless payment in west Malaysia might be low.

## **5.4 Limitations of the Study**

### **5.4.1 Unable to control the situation**

The researcher cannot control the respondents' situation while they are answering the questionnaire. The respondents may answer the question without reading the question correctly. Then, they will provide wrong information to the researcher, and the research outcome will be affected. Furthermore, the respondents may casually answer the questionnaire affected by the time frame.

### **5.4.2 Lack of Merchandiser View**

The targeted respondents for this research were the user of cashless payment. Therefore, the research outcome will only focus on the consumer perspective. Hence, the result is inaccurate because the trader has been neglected in this research. The merchandiser perspective will also affect the adoption of cashless payment in Malaysia.

### **5.4.3 Most of the respondents are from East Malaysia**

The research was focused on Malaysia's night market. However, most of the respondents are from East Malaysia. The respondents from west Malaysia have faced some difficulties while answering the questionnaire. Most of the night market in west Malaysia still prefer traditional payment methods.

## **5.5 Recommendations for Future Research**

### **5.5.1 Provides more time**

To avoid respondents being influenced by the time limitation, the researcher may give questionnaires to them in sufficient time. The researcher should allow respondents a few days to complete questionnaires. When individuals are pressed for time, it may deter them from responding without thoroughly reading the question.

### **5.5.2 Include merchandiser view**

To address the paucity of merchandiser perspectives, we urge that future academics do merchandiser viewpoints study. It is because merchandiser is also an essential component in E-wallet usage. More studies should be conducted to determine why a few merchants use E-wallets in their payment systems. It will give more information and more accurate findings on E-wallet adoption from various people's views.



## **5.6 Conclusion**

In a nutshell, the study seeks to investigate the factors that influence the use of cashless payment in Malaysia's night market. Many experiments on the survey's data gathering were performed to assess this notion. The research found that perceived ease of use, usability, and relative advantage significantly correlated with cashless payment acceptance in Malaysia's night market. In contrast, perceived security and social impact were removed from the research model. In conclusion, this research has implications for future academics, government officials, and cashless payment service providers. The study's results also give a more straightforward method for service providers and the government sector to increase the number of consumers who utilize contactless payment.

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## **Appendix A**

### **Questionnaire**

Do you use cashless payment in night market? (Filtering question)

- ☐ Yes
- ☐ No

### **Demographic Information**

#### **Age**

- ☐ 20-24
- ☐ 25-30
- ☐ 31-39
- ☐ 40-49
- ☐ Above 50

#### **Gender**

- ☐ Male
- ☐ Female

#### **Ethnicity**

- ☐ Malay
- ☐ Chinese
- ☐ Indian
- ☐ Others:

#### **Average income per month**

- ☐ <1000
- ☐ 1001-2000
- ☐ 2001-3000
- ☐ 3001-4000
- ☐ 4001-5000
- ☐ >5000

#### **Marital status**

- ☐ single
- ☐ married
- ☐ others

#### **Education level**

- ☐ primary,
- ☐ secondary



- higher education

Occupation

- Student
- Working at government sector
- Working at private sector
- others

What type of cashless payment do you prefer?

- Contactless card (debit card, credit card)
- mobile payment (e-wallet, TNG, Grab, Boost)

How often do you use cashless payment in one month?

- 1
- 2
- 3
- 4
- >5

Name of pasar malam you have visited before.

How frequent you visit pasar malam?

- 1-2
- 3-4
- 5-6
- 7 and above

## Section B

### Dependent variables- Adoption of Cashless payment

No	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I use of cashless payments to purchase	5	4	3	2	1
2	There are lots of advantages in using cashless payment.	5	4	3	2	1
3	I prefer to use cashless payment if the merchant accepts cashless payment.	5	4	3	2	1
4	Cashless payment can replace the payment in cash.	5	4	3	2	1
5	I am willing to use cashless payment in my daily life.	5	4	3	2	1

### Independent variables- Perceived Usefulness

No	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Cashless payment helps to save time and cost.	5	4	3	2	1
2	Cashless payment provides more payment alternative for customers.	5	4	3	2	1
3	Cashless payment is more effective for conducting the payment.	5	4	3	2	1
4	Cashless payment makes the transaction easier.	5	4	3	2	1
5	Cashless payment is a useful payment option.	5	4	3	2	1

6	Cashless payment is a useful payment option.	5	4	3	2	1
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#### **Independent variable- perceived ease of use**

No	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Cashless payment is easy to use.	5	4	3	2	1
2	Cashless payment is easy to learn.	5	4	3	2	1
3	I found that the cashless payment is helpful in making payments.	5	4	3	2	1
4	Using cashless payment services is straight forward.	5	4	3	2	1
5	I found that it is challenging to utilize cashless payment services.	5	4	3	2	1
6	I agreed that the services of cashless payment in night market would be easy to use.	5	4	3	2	1

#### **Independent variable- Perceived security**

No	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	My private information is protected when adopting cashless payment system.	5	4	3	2	1
2	By using cashless payment, my payment credentials are secured.	5	4	3	2	1
3	I think the cashless payment can minimize the risk of fraud.	5	4	3	2	1

4	Cashless payments have adequate payment security.	5	4	3	2	1
5	I believe that the security system of cashless payment is high.	5	4	3	2	1
6	I think that using cashless payment in night market was unsecured.	5	4	3	2	1

#### **Independent variable- Relative Advantage**

No	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Cashless payment allows me to track my purchase history.	5	4	3	2	1
2	Cashless payment provides benefits to its user such as discounts or cash back.	5	4	3	2	1
3	By using cashless payment, it can enhance my payment process.	5	4	3	2	1
4	There was no restriction on the use of cashless payments.	5	4	3	2	1
5	I can monitor my spending behavior by adopting cashless payment	5	4	3	2	1

#### **Independent variable-Social Influence**

No	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I believe that cashless payment is the current trend.	5	4	3	2	1
2	Cashless payment enhanced my	5	4	3	2	1

	social status.					
3	My family and friends and colleagues think that I should adopt cashless payment.	5	4	3	2	1
4	I will adopt the cashless payment if my community embraces it.	5	4	3	2	1