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**THE INFLUENCING FACTORS OF E-HAILING ACCEPTANCE AMONG
PASSENGERS IN MALAYSIA**

By

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College of Business
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(Operation Management)**



Kolej Perniagaan
(College of Business)
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Abstract

E-hailing services are gaining increasing recognition among public transport users globally, including in Malaysia. In many developing countries, where conventional transportation systems often struggle to meet the demands of rapidly growing populations, e-hailing offers a viable alternative. By leveraging digital technologies and internet connectivity, these services facilitate more efficient and accessible mobility, enabling users to travel conveniently from one location to another. However, e-hailing services remain relatively new to many individuals, which affects the level of public acceptance. This study investigates the factors influencing passengers' acceptance of e-hailing services in Malaysia. The study identifies five key determinants of acceptance: physical security, legal awareness, perceived safety, reliability, and user charges. A quantitative approach was adopted, utilizing an online survey conducted through Google Forms, with a sample size of 410 regular e-hailing passengers in Malaysia. Some limitations occurred throughout the study such as scope of the study was limited to one country, Malaysia and research relied on self-reported data, which was gathered via online survey. The findings indicate that all the identified factors, including physical security, legal awareness, perceived safety, reliability, and user charges, are significantly associated with passengers' acceptance of e-hailing services. This study contributes to theoretical discussion on safety and security in the context of shared mobility services by integrating physical security and perceived safety with Technology Acceptance Model (TAM). This research concludes with actionable steps for stakeholders in the industry, government, and technology sectors to improve the e-hailing services' acceptance based on the key factors: regulatory clarification, safety measures, reliability, and affordability.

Keywords: E-hailing services; Physical security; Legal awareness; Perceived safety; Reliability

Abstrak

Perkhidmatan e-hailing semakin mendapat pengiktirafan dalam kalangan pengguna pengangkutan awam di seluruh dunia, termasuk di Malaysia. Di kebanyakan negara membangun, di mana sistem pengangkutan konvensional sering menghadapi kesukaran untuk memenuhi keperluan populasi yang semakin meningkat, perkhidmatan e-hailing menawarkan alternatif yang berdaya maju. Dengan memanfaatkan teknologi digital dan sambungan internet, perkhidmatan ini menyediakan mobiliti yang lebih cekap dan mudah diakses, membolehkan pengguna bergerak dengan selesa dari satu lokasi ke lokasi yang lain. Walau bagaimanapun, perkhidmatan e-hailing masih dianggap baharu oleh sebahagian besar masyarakat, dan ini mempengaruhi tahap penerimaan mereka terhadap perkhidmatan tersebut. Kajian ini menyelidik faktor-faktor yang mempengaruhi penerimaan pengguna terhadap perkhidmatan e-hailing di Malaysia. Kajian ini mengenal pasti lima faktor utama yang mempengaruhi penerimaan tersebut, iaitu keselamatan fizikal, kesedaran undang-undang, keselamatan yang dirasakan, kebolehpercayaan, dan caj pengguna. Pendekatan kuantitatif diaplikasikan, menerusi kaji selidik dalam talian yang dijalankan menggunakan Google Forms. Saiz sampel adalah sebanyak 410 pengguna tetap khidmat e-hailing. Terdapat beberapa batasan berlaku sepanjang kajian seperti skop kajian terhad kepada satu negara, Malaysia dan penyelidikan bergantung kepada data yang dilaporkan sendiri melalui tinjauan dalam talian. Dapatan kajian menunjukkan bahawa semua faktor yang dikenal pasti, termasuk keselamatan fizikal, kesedaran undang-undang, keselamatan yang dirasakan, kebolehpercayaan, dan caj pengguna, mempunyai hubungan yang signifikan dengan penerimaan pengguna terhadap perkhidmatan e-hailing. Kajian ini menyumbang kepada perbincangan teori mengenai keselamatan dan sekuriti dalam konteks perkhidmatan mobiliti bersama dengan mengintegrasikan keselamatan fizikal dan keselamatan yang dirasakan dengan Technology Acceptance Model (TAM). Penyelidikan ini disimpulkan dengan langkah-langkah praktikal untuk pihak berkepentingan dalam industri, kerajaan, dan sektor teknologi untuk meningkatkan penerimaan perkhidmatan e-hailing berdasarkan faktor-faktor utama iaitu penjelasan peraturan, langkah-langkah keselamatan, kebolehpercayaan, dan kemampuan.

Kata Kunci: Perkhidmatan e-hailing; Keselamatan fizikal; Kesedaran undang-undang; Keselamatan yang dirasakan; Kebolehpercayaan

Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; and any editorial work, paid or unpaid, carried out by a third party is acknowledged.



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List Of Abbreviations

APAD	Land Public Transport Agency
MAA	Malaysia Automotive Association
MCO	Movement Control Order
MOT	Ministry of Transport
MPV	Multi-Purpose Vehicle
PSV	Public Service Vehicle
SPAD	Land Transport Commission Malaysia
SUV	Sports Utility Vehicle
TAM	Technology Acceptance Model
TNCs	Transportation Network Companies
VMT	Vehicle Miles Travelled



1.0 INTRODUCTION

1.1 Introduction

This chapter presents the background of this research study, followed by the problem statement, the research questions, the research objectives, the scope of the study, the significance and contribution of the research, and finally, the chapter summary.

1.2 Background of Study

The transportation industry is one of the industries that are developing along with the growth of technology. "Shared mobility" was introduced and implemented in urban public and sustainable transportation as E-hailing or ride-hailing focuses on shared transportation services among passengers using a private car based on a mobile application (Gao & Chen, 2019). E-hailing services using mobile applications were introduced by Garrett Camp and Travis Kalanick in San Francisco in March 2009 (Teo, Mustaffa & Rozi, 2018).

Today, E-hailing is widely used worldwide as the number of E-hailing passengers from different E-hailing providers is increasing steadily. The leader of the international E-hailing company, Uber, is progressively completing a total of 4.98 billion rides in 2020 (Bhaduri & Gosmawi, 2023). In 2017, approximately 55-60% of public transport passengers in Chicago have shifted to be E-hailing passengers (Mahmoudifard et al., 2017). Moreover, according to Acheampong et al. (2020), about 41% of E-hailing passengers in Ghana use E-hailing services for work trip-related and school purposes. Therefore, it can be concluded that E-hailing is actively used with broad scope.

In Malaysia, the importance of public transport and taxis is high for people who do not own any transport, especially in the urban city. The new E-hailing service that started to operate in Malaysia greatly impacts public transport users because there is an increasing demand for transportation (Nazri et al., 2021). Using E-hailing services brings many positive and negative sides to the transportation system, citizens, and the environment in Malaysia. As the number of cars on the road declines, more people use public transportation, and the requirement for parking spaces also decreases. The beneficial effect can be related to Vehicle Miles Travelled (VMT) and the reduction in greenhouse gas emissions. However, road congestion still happens due to "empty" vehicle trips, which happen whenever E-hailing drivers drive around a certain area to find customers while in the car, there is no customer (Salim et al., 2020).

Malaysia ranks third in the world in terms of car ownership, with a percentage of 93%. According to the Malaysia Automotive Association (MAA), the total number of new passenger vehicles on Malaysian roads in 2022 is 459,090, which is an increase of 0.7% from the previous year, 452,663 in 2021 (Malaysian Automotive Association, 2022). This shows that the demand for transportation such as passenger cars, multi-purpose vehicle (MPV), and Sports Utility Vehicle (SUV) is high in Malaysia, including for E-hailing private cars.

Recent developments in technologies such as smartphones and the internet contribute to the expansion of E-hailing services because the service is driven by digital applications (Javid, Abdullah & Ali, 2022). Furthermore, the new service of public transport has significant factors that can promote the development of the shared economy, namely the electronic hailing industry (E-hailing), which owns dominant factors such as regulation, safety, security, reliability, and user charges (fee).

Between 2014 and 2015, the Land Transport Commission (SPAD) Malaysia conducted a survey in order to transform the taxi industry and regulate E-hailing applications, and a proposal was sent to The Cabinet for deliberation. This proposal will help Malaysia create a level playing field for the taxi industry and also for the E-hailing applications so that they can work together with better regulations and rules to balance both industries (Azhar, 2016).

The regulation of E-hailing services in Malaysia was effective on 12 July 2018, including some amendments to the Land Transport Act 2010 and the Commercial Vehicles Licensing Board Act 1987 in 2017 (Izham, 2019). The regulation of E-hailing is made with the purpose of balancing both the traditional taxi industry and the E-hailing industry in Malaysia. E-hailing service was not welcomed by the taxi community in the early operation period. The taxi community was badly affected after the E-hailing service became available in Malaysia as the passengers of taxis slowly shifted to E-hailing (Todd, Amirullah & Xing, 2018).

The rise of e-hailing services, including Grab, EzCab, MULA, and Pink Ride, has overtaken public transportation in Malaysia. Nevertheless, the revenue growth of E-hailing services in Malaysia showed a great drop to -34.9% in 2020 due to the COVID-19 Pandemic hitting Malaysia the same year. In 2021, the E-hailing service's revenue growth greatly increased back to 60.6% but then dropped again in 2022 to 20.7% only. Furthermore, the number of E-hailing passengers in Malaysia slightly increase by less than 0.2 million for over three (3) years from 2020 until 2022. After 2022, the number of E-hailing passengers in Malaysia increasing by more than 0.7 million from 2022-2024 (Statista,2024). The full details are shown in Figures 1.1 and 1.2.

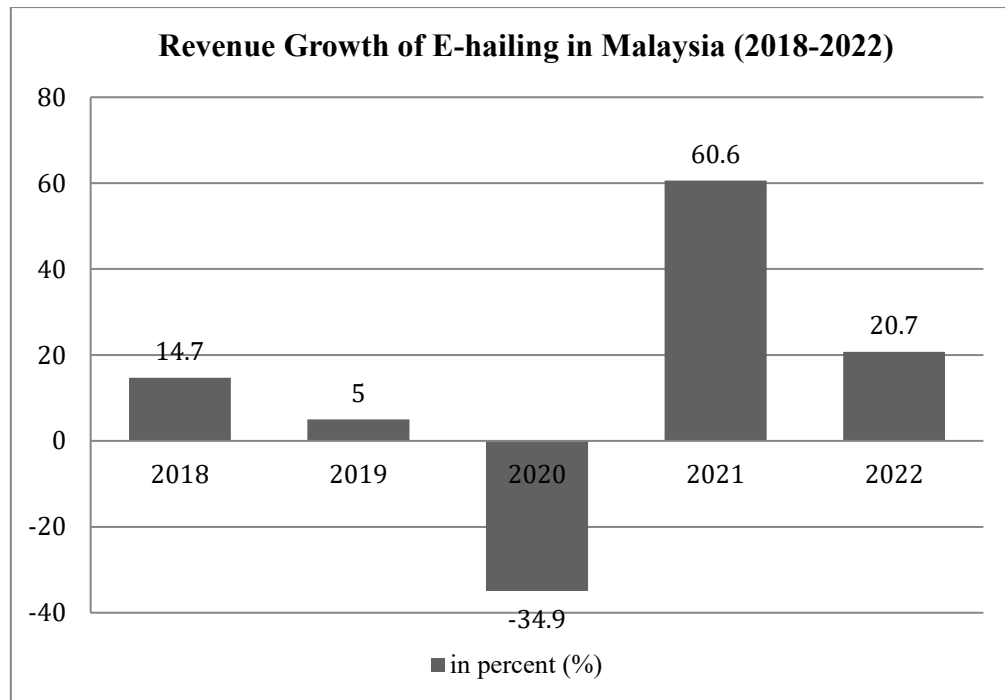


Figure 1.1
Revenue growth of E-hailing Malaysia
 Source: Statista, 2024

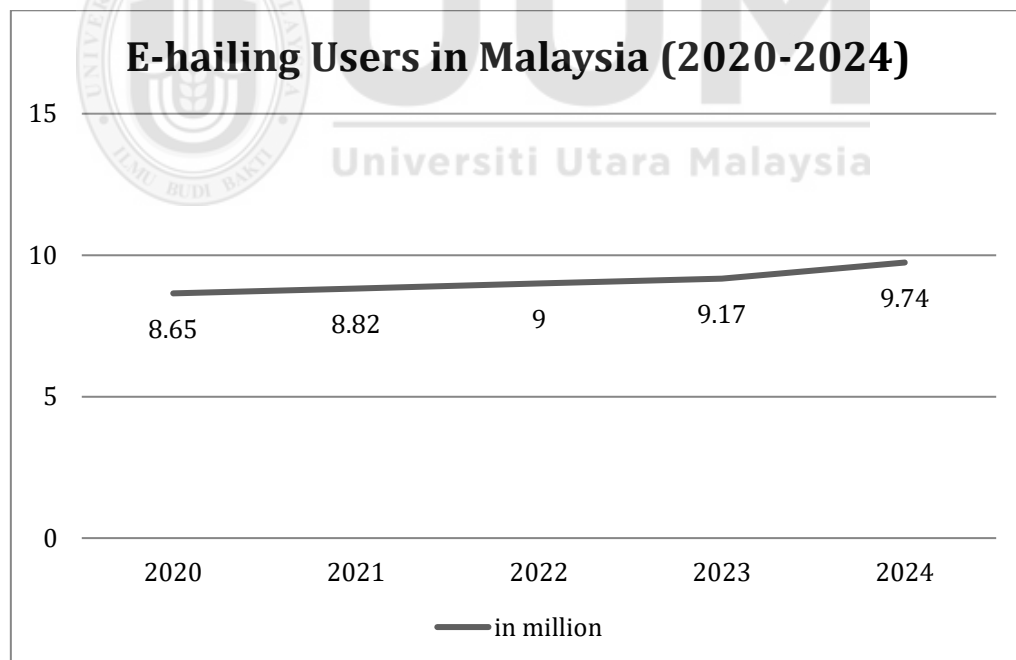


Figure 1.2
E-hailing passengers in Malaysia
 Source: Statista, 2024

Regardless of the dramatic increase in revenue growth and the number of passengers in recent years, E-hailing services are still under criticism for their regulations and quality (Salim et al., 2020).

According to Mat et al. (2021), the current government regulations on the E-hailing industry are ineffective in reducing the risk to passengers. Even though the E-hailing service was seen as advantageous for most passengers, it was also seen as a threat to them because of their low self-efficacy and vulnerability towards the service, especially for females who were travelling alone. This means some of the passengers are unable to put full trust in accepting the service, which is affecting the performance of the E-hailing industry as a whole. Full trust and acceptance should have been obtained by the existence of E-hailing regulations from their customers after years of operating in Malaysia. These challenges created numerous issues in the E-hailing industry of Malaysia, causing the passengers to doubt the use of the service and decreasing the number of E-hailing service usage.

Legal awareness, perceived safety, physical security, reliability, and user charges are the other issues related to E-hailing services, especially in Malaysia. A lot of previous studies in Malaysia have found a lot of different issues in the country's E-hailing service (Teo, Mustaffa & Rozi, 2018). Despite being the top gainer in the public transport industry in Malaysia, there are still people struggling to be aware of the E-hailing regulation (Salim et al., 2020). It is a big struggle to reduce the issues mentioned.

1.3 Problem Statement

In 2020, the E-hailing service seemed to face a problem in order to stay operating over the years as a part of public transportation in Malaysia. Malaysia was facing its first movement control order (MCO) for the whole nation due to the Corona Virus Pandemic and is now slowly moving towards endemic. Due to the situation, the E-hailing service seems to be having a problem operating properly because the standard operation procedure from the government keeps changing to make sure the COVID-19 cases in the nation are reduced and under control (Nadzri & Hassan, 2020). Therefore, the acceptance of E-hailing services among Malaysians is seen as an issue in both urban and rural areas of the country (Jais & Marzuki, 2020).

Nowadays, technology and the internet are widely used, including in Malaysia. The convenience of using the internet and technology has a positive impact on E-hailing services (Chin, Leng & Yacob, 2021). Nevertheless, E-hailing companies are still struggling to get people's acceptance of their service. The practitioners and academics show interest in the E-hailing service's passengers' acceptance and quality, especially after the COVID-19 pandemic (2020-2021) hit the nation (Nazri et al., 2021).

Despite the recognition given to the E-hailing service (Teo, Mustaffa & Rozi, 2018), the problem with the acceptance of the service still needs to be discussed. Based on a study by Daud, Omar, and Yusof (2021), the amount of transportation ownership positively influences their travel mode. If a household owns more than one transport, the likelihood of them using public transport will be low as they prefer to drive their own transport. In the first half of 2022, Malaysian Automotive Association (MAA) announced that the purchase of passenger cars in Malaysia increased by 48% from the first half of 2021 despite of the Covid-19 pandemic era. Hence, that resulted in a

higher number of registered vehicles, 33.3 million in 2022 than in 2021 Malaysian population, 32.6 million, as mentioned by a road safety expert, Prof Dr. Kulanthayan K.C. Mani (Chan, 2022). Therefore, the problem of passengers' acceptance towards E-hailing services is worrisome due to the serious situation of the transportation industry in Malaysia. This needs to be fixed by the related supply chain, which includes the E-hailing companies and the government of Malaysia.

In recent years, E-hailing services have received praise and criticism as they have started to expand from one area to another area in Malaysia. Consequently, these are the problems faced by the E-hailing industry supply chain, E-hailing companies, and the Malaysian government, namely legal awareness among passengers, reliability usage of the E-hailing application, passengers' perceived safety, passengers' physical security and the user charges of the service (Mat et al., 2021, Chung & Khaled, 2020, Melan et al., 2021).

Regulations exist for everything in order to improve economic efficiency by allowing an industry to operate with laws. As for the E-hailing industry, the regulators and legislators had a hard time catching up with the excessive growth of E-hailing, which led to the late issuing of policies and regulations for the industry. For example, a few years back in Singapore, the policymakers hesitated to issue a regulation on the E-hailing industry when Uber suddenly penetrated the emerging market, resulting in a lack of clear guidelines and insufficient government enforcement (Yunus et al., 2019).

Due to the lack of enforcement and clear industry policies, legal awareness among E-hailing passengers is affected. Legal issues happen not only in foreign countries; Malaysia is also included. E-hailing services in Malaysia started operating in 2014, and Grab is the first to launch an E-hailing company (Zulkiffli et al., 2021). However,

the legal regulation and enforcement established for the E-hailing industry in Malaysia was effective on 12 July 2018 (Izham, 2019). This shows that the E-hailing industry in Malaysia has gaps in the period of completing the policy and regulations for four (4) years. A lack of knowledge and understanding of the E-hailing regulation will disadvantage passengers, especially regarding their rights. Furthermore, according to Jenal et al. (2021), government policy (legal awareness) significantly influences the development of E-hailing passengers' acceptance.

Most E-hailing passengers are having problems with handling the E-hailing application. Even though the application has been made to make it easier and reliable, not all E-hailing passengers are pleased and fully trust the online system (Daud, Omar & Yusoff, 2021). Reliable information is vital in order to make sure the E-hailing services are accepted by the passengers; where E-hailing companies must confirm and ensure their passengers that transparency is always available in E-hailing services so that their safety is guaranteed (Jenal et al., 2021). According to a study by Melan et al. (2021), reliability has a significant influence on a passengers' acceptance of an E-hailing service. Without reliability, it will negatively impact E-hailing passengers' acceptance of the service.

In numerous countries, there are many concerns regarding the safety of E-hailing customers while using the services, including Malaysia. For example, when it comes to background screening, E-hailing drivers do not have as many difficulties as taxi drivers, resulting in a lack of perceived safety for the E-hailing passengers (Jaafar, 2017). In 2024, there is a report regarding a female E-hailing passengers was assaulted by the E-hailing drivers, dragged out of the vehicle and abandoned at the highway (Malay Mail, 2024). This kind of incident negatively impacts other E-hailing passengers to accept the service due to criminal cases related to E-hailing service.

There is no doubt about all the good benefits a passengers can get while using the E-hailing service, but a passenger still needs to be alerted to ensure their safety (Nor et al., 2021).

Most E-hailing passengers have issues with physical security while using the E-hailing service. Some of the security features in the E-hailing applications from different companies are not updated when the most critical feature is needed to ensure the E-hailing passengers feel safe while using the service (Chen & Nazar, 2021). Lack of physical security will negatively influence the acceptance of E-hailing passengers of the service.

User charges or the price of the E-hailing service also affecting a passenger's acceptance of E-hailing (Chung & Al-Khaled, 2020). A founder of Big Blue Taxi Service, Datuk Shamsubahrin Ismail, called out to the Malaysian government to control and monitor the price of E-hailing service (Yusof, 2022). In 2024, some E-hailing drivers start to put additional charge for air condition service towards the passengers. Jose Rizal, a Malaysian E-hailing Alliance Secretariat Chief says, this practice exists due to the lack of law enforcement by the government. It should not happen because such practices do not beneficial towards E-hailing passengers as they need to pay extra without the E-hailing companies' acknowledgment (Carvalho & Lim, 2024). A study by Ann and Shafi (2022) showed that the price or user charges are able to influence the acceptance of an E-hailing passengers towards the service, which is related to their affordability and the quality of services offered by E-hailing companies.

There have still emerged multiple safety, security, liability, and law issues and problems relating to e-hailing services in Malaysia. There is an unsettled debate about whether E-hailing services can be sustained in the public transportation industry.

Despite many issues happening around this service, the service shows growth with high demand from the community, not only in Malaysia but worldwide. Also, the situation remains vague, and the regulations for E-hailing passengers are incomplete and still lacking in various ways.

Hence, this research contributes to the body of knowledge by filling the gap in the literature. By using the current research highlights legal awareness as one new factor in the passenger's acceptance of E-hailing services. The importance of this factor was mostly neglected by most previous research. Second, based on previous research, four other factors, including reliability, perceived safety, physical security, and user charges, are introduced in this research to lessen the severity of the current existing problems in E-hailing services. Third, this study explores the effect of all the combined factors (legal awareness, reliability, perceived safety, physical security, and user charges) on the passenger's acceptance of E-hailing services. Lastly, there were limited research focusing on passengers' acceptance towards E-hailing services in Malaysia. It is easier to search and find the topic from other countries' studies. Therefore, the current research is expected to understand this topic on Malaysian E-hailing passengers and determine how to solve the E-hailing service acceptance problem in Malaysia by filling different gaps in the existing literature.

1.4 Research Question

The problem statement of the current research revealed several main issues regarding the passengers' acceptance of E-hailing services in Malaysia. Based on these problems highlighted, several questions are identified below.

RQ1: What is the relationship between physical security and acceptance of e-hailing services among passengers in Malaysia?

RQ1: What is the relationship between legal awareness and acceptance of e-hailing services among passengers in Malaysia?

RQ3: What is the relationship between perceived safety and acceptance of e-hailing services among passengers in Malaysia?

RQ4: What is the relationship between reliability and acceptance of e-hailing services among passengers in Malaysia?

RQ5: What is the relationship between user charges and acceptance of e-hailing services among passengers in Malaysia?

1.5 Research Objective

The current research has the following objectives.

RO1: To understand the relationship between physical security and acceptance of e-hailing services among passengers in Malaysia.

RO2: To understand the relationship between legal awareness and acceptance of e-hailing services among passengers in Malaysia.

RO3: To understand the relationship between perceived safety and acceptance of e-hailing services among passengers in Malaysia.

RO4: To understand the relationship between reliability and acceptance of e-hailing services among passengers in Malaysia.

RO5: To understand the relationship between user charges and acceptance of e-hailing services among passengers in Malaysia.

1.6 Scope of The Study

The E-hailing or Ride-hailing industry has spread dramatically worldwide. It has achieved the highest position in the public transportation industry due to the growth of modern technology (Akbari et al., 2020). However, this industry still faces various issues in Malaysia, such as passengers' acceptance towards E-hailing services, especially in Malaysia (Nazri et al., 2021). The current research focuses on E-hailing passengers in Malaysia. Therefore, the data collection was held for a year from March 2022 until March 2023 by conducting an online survey (Google Form). Further details of this will be explained in Chapter 3.

1.7 Significant of the Study

This study is considered to be essential for the community in Malaysia, especially for E-hailing passengers and E-hailing drivers, because most of the previous studies did not focus on safety, security, and governance holistically. A study by Zulkiffli et al. (2020) investigated factors that affect customer satisfaction with E-hailing, but the study did not focus on safety and security. The previous studies can be seen as focusing more on comfort, quality service, and price. Safety and security are the least important factors to be considered by researchers, and these should not happen. Safety and security factors are the most important in the transportation industry to make sure the passengers and users are safe while using the service (Bachok et al., 2014). So, safety, security, and legal awareness will be part of the independent variables of this study.

On the other hand, based on the researcher's personal experience in customer service for one of the E-hailing companies, the researcher found out that the company is lacking in protecting its passengers, especially regarding their safety and security. A

study mentioned how E-hailing applications might be exposed to cybercrime through the booking made if there is lacking security and safety features, including the personal data of all E-hailing application users (Mat et al., 2019).

In addition, this study will explore the factors of passengers' acceptance regarding E-hailing services and the passengers' awareness of E-hailing's legal and regulatory aspects in Malaysia. Previous studies have not studied the relationship between legal awareness and passengers' acceptance towards E-hailing services. A study by Salim et al. (2020) focused on legal awareness among E-hailing drivers on the E-hailing industry regulations imposed by the Malaysian government, mainly from Grab drivers. Therefore, through this current study, passengers of E-hailing will be the main focus of the relationship between legal awareness and the acceptance of E-hailing service.

1.8 Contribution of The Study

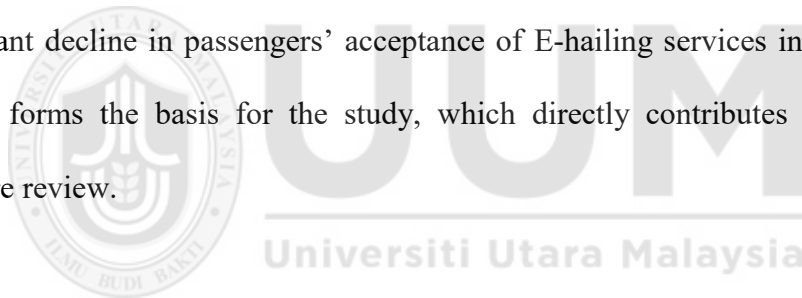
First of all, the recent study identified five significant factors that influence E-hailing passengers' acceptance towards E-hailing services, which are legal awareness among passengers, reliability of the E-hailing application, perceived safety of the E-hailing service, physical security of the E-hailing service and the user charges (price) of the E-hailing booking. These factors would contribute to helping E-hailing companies in Malaysia increase customers' acceptance towards their service, especially new customers.

Secondly, the research contributes to the existing body of knowledge by filling up the gap in the literature and become reference for upcoming research to improve E-hailing regulations in Malaysia, which was never mentioned in previous studies. Last but not least, the study highlights the legal and risk issues related to E-hailing services

and the public transport industry. This will remind the supply chain of the E-hailing industry, including E-hailing providers and the government, to improve the safety and security features of E-hailing applications and to create a better framework for E-hailing regulation.

1.9 Summary of the Chapter

This chapter has set out the motivation for the study, which is to identify factors that influence passengers' acceptance of the E-hailing service. The basis of the study is that although the E-hailing industry in Malaysia is developing rapidly, issues and factors still need to be measured, such as legal awareness, reliability, perceived security, physical security, and user charge. All these factors contribute to a significant decline in passengers' acceptance of E-hailing services in Malaysia. This chapter forms the basis for the study, which directly contributes to building the literature review.



2.0 LITERATURE REVIEW

2.1 Introduction

In this chapter, some literature about E-hailing services is reviewed and discussed. This chapter explains the relationship between the identified variables and passengers' acceptance of E-hailing services. A comprehensive systematic critical analysis of the topic is discussed to develop an understanding of the current study. Other core concepts will also be discussed to help researchers use the materials to provide a solution to the problems addressed in this study. In addition, this chapter also investigates earlier research on legal awareness, perceived safety, physical security, reliability, and user charges. Finally, this chapter analyzes the relevant literature on research questions and constructs literature supporting the study hypothesis, which helps develop the research framework.

2.2 The Concept of E-Hailing

E-hailing is a new mode that is gaining attention from the public in the transportation industry. The other names of E-hailing are ridesharing, car-hailing, car-sharing and ride-hailing. E-hailing is a transportation mode where passengers can choose their travel mode to move from one place to another place freely based on the data provided by an application by the e-hailing platform anywhere, anytime (Zhang et al., 2018). Based on a study by Flor, Ortuno, and Guirao (2022), E-hailing is a technology platform that emerges its' users, which are the passengers and the drivers, by connecting with each other in real-time. This E-hailing service model is based on the application of transportation technology, where the application will act as an

intermediary to connect individuals who need to travel from one place to another with a driver.

When a passenger makes a booking for a ride from one place through the application, the driver of the e-hailing, which is the nearest to the passengers, will get a notification about the booking made from the e-hailing application. The driver needs to go to the passengers to pick them up and continue with the ride-booking by dropping the passengers off at the place that the passengers pick in the booking (Sham et al., 2019).

E-hailing service works with an application developed by the e-hailing provider which this application works on smartphones to make a booking, make the fare payment, and give ratings based on the services given by the drivers, which is now both drivers and passengers may give a rating to each other. These E-hailing companies are called E-hailing operators or Transportation Network Companies (TNCs) in the transportation industry (Jais & Marzuki, 2020).

As e-hailing is gaining much attention from society, several users or passengers prefer e-hailing as their public transportation mode because of the convenience and affordable services provided. In Malaysia, more e-hailing companies have started to operate, such as Grab, EzCab, MyCar, and many more. The competition between these e-hailing companies is also rising as the demand for e-hailing is increasing rapidly. Another reason why the demand for e-hailing is increasing is that the number of people who have started using and applying the usage of internet and app-enabled platforms is increasing as it gives people much convenience in terms of time, space, and energy (Chung & Al-Khaled, 2020).

However, due to the rising growth of e-hailing services in society, the demand for other public transportation modes is getting lower. It does not mean that public transportation is not gaining any demand anymore. However, society prefers to use e-hailing services to move than public transportation, especially for short-distance travel. The low demand for public transportation and high demand for e-hailing are influenced by many factors that play essential roles in this situation. This situation is not only happening in Malaysia but also in almost all countries that are already using e-hailing as a transportation mode (Chung & Al-Khaled, 2020).

As the demand for e-hailing is rising in different countries, the number of E-hailing drivers is increasing as well. For example, a research study was carried out among Chinese citizens regarding the demand for E-hailing services and how it affected the taxi drivers. Because of the high demand for E-hailing services in China, traditional taxi drivers are learning the E-hailing app and registering as part of E-hailing driver partners. This makes the traditional taxi drivers follow the new technology trend to stay relevant and to continue their daily life revenue. However, traditional taxi drivers who are not good in technology still have issues and problems with the new trend of E-hailing applications and services. They are unable to understand the application of technology, which makes it hard for them to continue their services as the demand for traditional taxis is rapidly decreasing from year to year (Gan, Fan, Jiao, & Sun, 2021).

2.3 E-hailing Framework and Regulation in Malaysia

In general, E-hailing services have been seen as a growth and development for passengers because of the great choice they provide in the transportation industry with low charges (Izham, 2018). All over the world is showing positive feedback regarding the E-hailing service even though there are obstacles that the service providers and the

drivers need to face, including the service being banned in some countries (Oviedo, Jaramillo, & Nieto, 2021).

However, in Malaysia, the government has taken careful steps to improve this growing service since the service started operating in Malaysia. In 2018, Malaysian Transport Minister Anthony Loke Siew Fook said that E-hailing would not be banned in Malaysia even though there was opposition from the traditional taxi driver community. Instead of banning the service, the Malaysian government started to plot a regulation and law for the E-hailing service (The Star, 2018).

The enforcement of the E-hailing regulations in Malaysia is a starting point for the E-hailing service, which is recognized as a legal land transportation service in Malaysia (Ministry of Transport Malaysia, 2021). It is not always easy to implement new regulations, including the E-hailing service regulation. The implementation will include different stockholders of the service, such as the E-hailing providers, the E-hailing drivers, the government's body and institutions, and even the customers who will need to follow and obey the regulations (Todd, Amirullah, & Xing, 2018).

Therefore, the regulations for E-hailing services in Malaysia have evolved and updated from time to time, following the trends, demands, and technological developments over the years (Todd, Amirullah, & Xing, 2018). At the beginning of the implementation of the E-hailing regulation, the E-hailing drivers need to register and have licenses for their transportation that can be used for E-hailing under Public Service Vehicle (PSV). Meanwhile, the E-hailing provider companies need to register their company and business for an intermediary business license before operating their business (Jais & Marzuki, 2020).

E-hailing drivers need to go through some processes to obtain a PSV license. The process is developed by the government, and from time to time, a new process is added to it. E-hailing drivers must pass medical check-ups and criminal checks. Then, they are demanded to undergo a six-hour training and not to be blacklisted by Jabatan Pengangkutan Jalan (JPJ) (Izham, 2018). During the early implementation of the required regulation for the PSV license, some of the E-hailing drivers were showing frustration. They did not accept the rules because they found this process a burden for them to continue to be E-hailing drivers. E-hailing drivers became afraid if they failed to pass the requirements to get a PSV license.

The present laws reflect the commitment of the government to streamline e-hailing drivers throughout the transportation sector and to adopt some safety requirements for e-hailing operations. The government was able to resolve difficulties in labour regulation for the E-hailing drivers, consumer protection, and property rights by regulating the E-hailing services and the E-hailing companies (Gan, Fan, Jiao, & Sun, 2021). The regulation imposed on E-hailing services is almost the same regulation imposed on traditional taxi drivers, such as the PSV license. Both E-hailing and taxi drivers are required to have PSV licenses for their vehicles to be used as commercial taxis and E-hailing (Jais & Marzuki, 2020).

2.4 Acceptance of E-hailing Service in Malaysia

One of the main reasons E-hailing services are rapidly growing and that their service has become of big attention to the community in Malaysia is that more people are starting to adopt the use of online and application-enable platforms in their daily life activities. With the presence of multiple applications and online services, people tend to demand them because of the convenience and affordability of the service. E-hailing

services are in high demand, especially in big cities where people need to move around the city for various purposes such as work, study as college students, or maybe for groceries (Chung & Al-Khaled, 2020).

Furthermore, students from college or school mostly use E-hailing to shuttle them from their campus or college or school to go shopping and for any other study purposes. Most of these students found it easy, affordable, and convenient to move from one place to another with E-hailing as they do not need to wait too long for the transportation to arrive, which saves them time to travel (Man, Ahmad, Tee, & Rashid, 2019). That is why, in Malaysia, E-hailing customers are easily found in big cities such as Kuala Lumpur, Petaling Jaya, Putrajaya, Shah Alam, and Johor Bahru (Chung & Al-Khaled, 2020).

A previous study shows that 63.5% of E-hailing passengers agree that E-hailing provides easier access to service than public transportation in the urban city. However, they show a decrease in the probability of using the E-hailing service if the distance travelled to the destination is long. This happened because the pricing system of the E-hailing service was compared with the price of public transportation. The pricing system for E-hailing service is much more expensive than public transport for long-distance journeys (Nazri, Ambak, Ghani, & Yazid, 2021).

On the other hand, E-hailing services are not only about the customers and passengers; E-hailing providers need to consider the drivers and the riders' partners as they are part of the E-hailing application consumers. E-hailing services will not be able to work effectively and efficiently if there are no drivers and rider partners who want to work with the company. The acceptance of E-hailing services is not only due

to the passengers and customers but also the drivers and riders' partners (Rahman, Khan, Azmi, & Zakaria, 2020).

A study found that E-hailing drivers work for six (6) full days a week, with an average of 48 hours working hours a week and driving for 5885km in a week. The E-hailing drivers are overworked and have little tipping and fares. For example, the tipping of the E-hailing driver for each booking is 20% of the fare. If the fare for one booking with the shortest distance is RM 5.00, then the driver only gets RM 1.00 or one booking. The study also shows that the average total yearly earnings for the E-hailing driver are the same amount as the lowest wage in Malaysia, which is RM 1,200 after substituting the vehicle maintenance cost and the tax cost in a year (Lip, Jing, & Chi, 2020).

Therefore, since E-hailing services started operating in Malaysia, there have been many issues happening between the drivers and the passengers, between the drivers and the E-hailing providers, and between the passengers and the E-hailing providers. Additional regulations with a new perspective on the development of the E-hailing industry are needed to prevent more unfortunate issues among E-hailing drivers and passengers. Some of the issues include threatening the passengers' and drivers' safety while operating an e-hailing vehicle. In Malaysia, there have been many cases related to E-hailing services in the past few years (Lai & Chung, 2020). The occupation of an E-hailing driver is unsuitable for a long-term career since the earnings they receive are not suitable for the number of work hours. Moreover, the average earnings the E-hailing drivers received are the same as the minimum wage in Malaysia. It is more acceptable to make an E-hailing driver as a part-time job and as a side additional monthly salary (Lip et al., 2020).

2.5 Reliability and Customer Acceptance Towards E-hailing

Reliability has been mentioned as significantly related to public transportation and E-hailing services. In a transportation system, reliability is the capability to carry on the service consistently and reliably so that passengers can use the service. Therefore, it is said that reliability has a positive and significant effect on customer satisfaction with the public transportation services provided. Transportation companies' ability to assist their customers and provide real-time service is positively related to customer satisfaction (Man, Ahmad, Kiong, & Rashid, 2019).

The concept of reliability in the transportation industry was said to be consistent to execute the service. Meanwhile, for E-hailing services, there are different aspects that play important roles related to reliability. For example, the waiting time, the punctuality for the driver to arrive, the journey length, the distance for the desired journey, the scheduled routes, and even the communication are included as part of the reliability aspects that need to be taken care of in E-hailing service (Chung & Al-Khaled, 2020). The reliability of information from the E-hailing provider is also crucial for improving customer satisfaction while using the service, such as the content in the application and the promotions the E-hailing providers did (Teo & Rozi, 2018).

There were conflicts between the E-hailing providers and the E-hailing services users, including customers, passengers, and drivers related to reliability. Conflicts happen when there is an increasing competition rate between E-hailing providers, car dealers, car rental companies, and the taxi industry. The other transportation industries are against E-hailing services as the services affect their industry. This may lead to E-hailing passengers having prejudices over the reliability of collaborative work.

Increasing the passengers' and the consumers' confidence and encouraging them to actively participate in E-hailing business activities may overcome the conflict over the reliability of E-hailing passengers towards the E-hailing service. E-hailing providers and the government need to play their role in identifying the risks that may affect people's trust in E-hailing services and overcome the conflicts (Ramli, 2020).

2.6 User Charges and Customer Acceptance Towards E-hailing

User charges are closely related to the price charged for the services. In the context of services business, price or user charges play a very important role. For marketing mix purposes, price and user charges are vital elements for service companies, including E-hailing providers. In the E-hailing industry context, price and user charges are the fares charged to the passengers and the customers from the booking and the order made through the application to use its service (Teo & Rozi, 2018).

Previous studies show that price and user charges are positively correlated to demand and intention for E-hailing passengers to use the services. Other than that, customer loyalty and satisfaction may be affected by the price charged for the services. E-hailing passengers' intention to use the E-hailing services is influenced by the charges range. Different customers and passengers have different perspectives and acceptance in price ranges, and the price must be acceptable for them within their range based on the quality of service that they receive from the E-hailing companies. That means if the range price charged by the E-hailing providers is higher than their range price, the E-hailing passengers might not use the service and will find another alternative to use another transportation service (Assegaff & Pranoto, 2020).

If there is a dominator in the E-hailing industry, it will create conflict with the price charged. For example, with the implication of the merger of Uber and Grab in

Malaysia, Grab is seen as the dominator in the E-hailing industry even though there are a lot of new E-hailing providers launching their services currently. Because of these, Grab could increase the price charged for their services and, at the same time, reduce the quality of their service and their output. These are not healthy for the E-hailing industry, especially in Malaysia. Since Grab provides the most services in Malaysia, most E-hailing passengers know Grab and use its services only instead of other E-hailing applications and services. Even though there are complaints about the price and the reduction in quality, such as promotions for riders and drivers' reduction in drivers and riders' incentives, there are still many passengers demanding Grab's service due to the dominating power that Grab has (Rahman, Khan, Azmi, & Zakaria, 2020).

2.7 Physical Security and Customer Acceptance Towards E-hailing

Physical security is closely related to trust and belief in someone towards another (Ruangkanjanases & Techapoolphol, 2018). One might face anxiety when one encounters concerns about physical security. This may apply when one feels threatened by external entities and through the imputation of danger (Rumelili, 2020).

Physical Security is important for organisations and management. Physical protection of servers, hardware, and buildings is part of physical security. Furthermore, the protection of people, environments, and travelling are also included in physical security practices. As the environment changes to mobile offices, cloud computing, roaming users, and internet usage become broader, physical securities are seen as less important, but it is not any less important at all (Diesch, Pfaff, & Krcmar, 2020).

In E-hailing, the customer needs to book a journey and will get a different driver whenever they make a booking. Most E-hailing applications will show the driver's

details for every journey booking made, such as the driver's name, photos, and plate numbers. Customers and passengers might feel uncertain about their safety while riding E-hailing since they are in a car with a total stranger, the driver. However, the information they see from the application may be a reason for them to accept this service and adapt well to it in their daily life (Ruangkanjanases & Techapoolphol, 2018).

Although physical security is important for the drivers and rider partners of E-hailing providers, it is often ignored by the company. E-hailing providers should pay attention to their partners' security and trust to build up if both parties are putting high trust in each other. Nevertheless, some drivers and riders might have trust issues with the E-hailing providers and even with their passengers, especially E-hailing drivers (Li et al., 2022).

Security should be considered for all kinds of businesses and organisations, but most of the time, security measures are ignored from the conception and the security design. This happened because of the high cost and maintenance of the security system, and the businesses and companies considered security features a liability since they do not give direct profits and returns to the company. E-hailing providers and companies, however, show development in security systems for their customers and their partners (drivers and riders). However, the development only happened after numerous reports, incidents, and sensitive personal issues related to the operation (Kamais, 2019).

2.8 Legal Awareness and Customer Acceptance Towards E-hailing

The E-hailing industry is still a new industry with many shortcomings in many aspects. E-hailing service is made to make travelling easier and more convenient for

its passengers and consumers and even open new job opportunities for the community, especially as the E-hailing driver. However, policymakers are having challenges regulating the new industry when other parties are poorly impacted by the new technology development, such as traditional taxi drivers and operators. In Malaysia, to avoid more controversy regarding this new development, the government agreed to make regulations for the E-hailing industry and services. This is to ensure there will be a balance on the playing field with traditional taxis instead of banning the industry like in several other countries (Todd, Amirullah, & Xing, 2018).

Based on a previous study by Rahim et al. (2023), E-hailing passengers feel more confident when using E-hailing services if there are clear rules and safeguards in place for the service. If there is a legal guarantee of their safety while using the service, E-hailing passengers will become more accepting and willing to choose E-hailing service as their preferred public transport option (Hermawan & Kusuma, 2023).

Since the regulation for E-hailing is still new, the regulation was fully enforced for the whole nation of Malaysia in 2019 (Salim et al., 2020). There are still many passengers, customers, and even drivers and riders who are unaware of all the regulations. To be an E-hailing, drivers or riders need to understand the E-hailing regulations better as the regulations will guide them in E-hailing registration and the operation of E-hailing services. This includes knowing their right as an E-hailing driver-partner under the E-hailing providers they are registered with. Failure to follow and abide by the regulations and laws might bring a nightmare for them, and they will be convicted under the Land Public Transport (Amendment) 2017 (Salim et al., 2020).

2.9 Perceived Safety and Customer Acceptance Towards E-hailing

Perceived safety is the most sensitive factor for travellers or public transport users to choose and make decisions about which transport they would like to use for their journey. From a service quality perspective, perceived safety is a trip attribute such as journey time, personal safety individually, and transfer time, to name a few. However, in an E-hailing service context, customers or passengers doubt their safety while using the service. Their concern will be about the drivers, their privacy as passengers and customers, and the condition of the vehicle used for E-hailing service. Safety is an important concern for E-hailing passengers (Teo & Rozi, 2018).

Not all new technologies and new developments only bring good benefits to their users. Still, they can also bring harm and risks to their users and consumers, especially in terms of safety. Despite the risks and weaknesses, there are 80% of consumers prefer E-hailing services more than traditional taxi services, which leads to positive responses from E-hailing passengers and consumers in Malaysia (Todd, Amirullah & Xing, 2018).

There was a debate that focused on the legality of E-hailing services and regulations for consumers, which are passengers, drivers, riders, customers, and the E-hailing providers. In general, the chances of public transport drivers violating traffic regulations while in operations are high either by being involved in accidents or having low priorities regarding road safety. Numerous issues regarding driving behaviour and safety among E-hailing drivers have been reported. Some customers found it disturbing and felt unsafe using the E-hailing service. In addition, different E-hailing drivers will have different ways of thinking, attitudes, and behaviours toward safety and driving while working and in operation (Mahudin & Sakiman, 2020).

2.10 Theoretical Framework – Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is one of the theories that have been widely used to analyse human behaviour to adapt the technology over the years by so many scholars (Kalhor et al., 2022). The TAM model was developed by Fred Davis (1989) where it is primarily influenced by two factors: perceived usefulness (PU) and perceived ease of use (PEOU) (Kalhor et al., 2022). Various external factors may influence the behavioral intention which in turn determines people's usage of technology. According to the TAM model, the perceptions of technology use and intent to use it are significantly correlated. Therefore, a positive attitude may increase a person's likelihood of using the technology. Behavioural intentions are likely related to perceived usefulness and perceived ease of use as the model suggested that attitude is an effective construct (Marikyan & Papagiannidis, 2024).

In this study, there are five identified factors that influence passengers' acceptance of E-hailing in Malaysia which are: physical security, legal awareness, perceived safety, reliability, and user charges. In order to provide a better understanding of how E-hailing services are accepted by the passengers, all five factors are mapped onto the TAM framework. The previous study of Ruangkanjanases and Techapoolphol (2018) suggesting that PU and PEOU are significant on intention to use the E-hailing technology and services which lead to passengers' acceptance towards the service.

2.11 Research Framework

E-hailing refers to a transportation service for the customer to be able to book a ride to the desired destination from the pick-up point where the customer will be waiting in real time via the application using a smartphone or other technology gadget (Arumugam, Ismail, & Joeharee, 2020). E-hailing services keep growing rapidly

throughout the nation and bring many benefits to passengers (Jenal, Mohamed, Hanawi, & Idros, 2021). However, passengers' acceptance towards E-hailing services is important. There are various factors that positively influence the customers' acceptance of the service. The factors include physical security, legal awareness, perceived safety, reliability, and user charges.

Physical security, such as cyber security applied in E-hailing apps, has an impact on passengers' acceptance (Acheampong et al., 2020). Every technology and service must come with securities to ensure the passengers' securities are protected, and passengers are confident in using the services. Therefore, physical securities significantly affect the passengers' acceptance of the E-hailing service. Moreover, laws and regulations have a positive significance in the acceptance of E-hailing services. For example, in Malaysia, the E-hailing driver must follow the strict requirement to drive as an E-hailing driver. E-hailing passengers can trust the service as the E-hailing operators and drivers are both regulated by the Malaysian Government law (Izham, 2018). Therefore, legal awareness among the E-hailing drivers and passengers significantly influences the acceptance of the E-hailing service.

Other than that, negative safety issues can trigger customers' fear and anxiety about riding the E-hailing service. E-hailing providers need to actively improvise the safety features of their service regularly (Liu, Gao, & Rau, 2022). Safety will influence customers' acceptance of using E-hailing services. That is why perceived safety is positively significant in the acceptance of E-hailing services.

In order to ensure a smooth travel journey, the reliability of the transportation used needs to be considered. The same goes for the use of E-hailing services. A customer

will look for a comfortable and smooth journey to the destination using a reliable transportation service such as E-hailing (Zulkiffli et al., 2020). The capability of the E-hailing service to provide reliable service throughout the booked journey will be able to influence the customer to accept and use the service.

Last but not least, the user charges such as the ride fee and the price of the E-hailing service. User charge is a vital factor that influences the customers' acceptance of any service, including E-hailing services. The appropriate price for the service can influence the customers to accept the service, especially when the customer's perception of value towards E-hailing service matches the real value of the service served. That is why user charges are positively significant in the acceptance of the E-hailing service.

From the discussion, for the current study, a study framework is developed as shown in Figure 2.1:

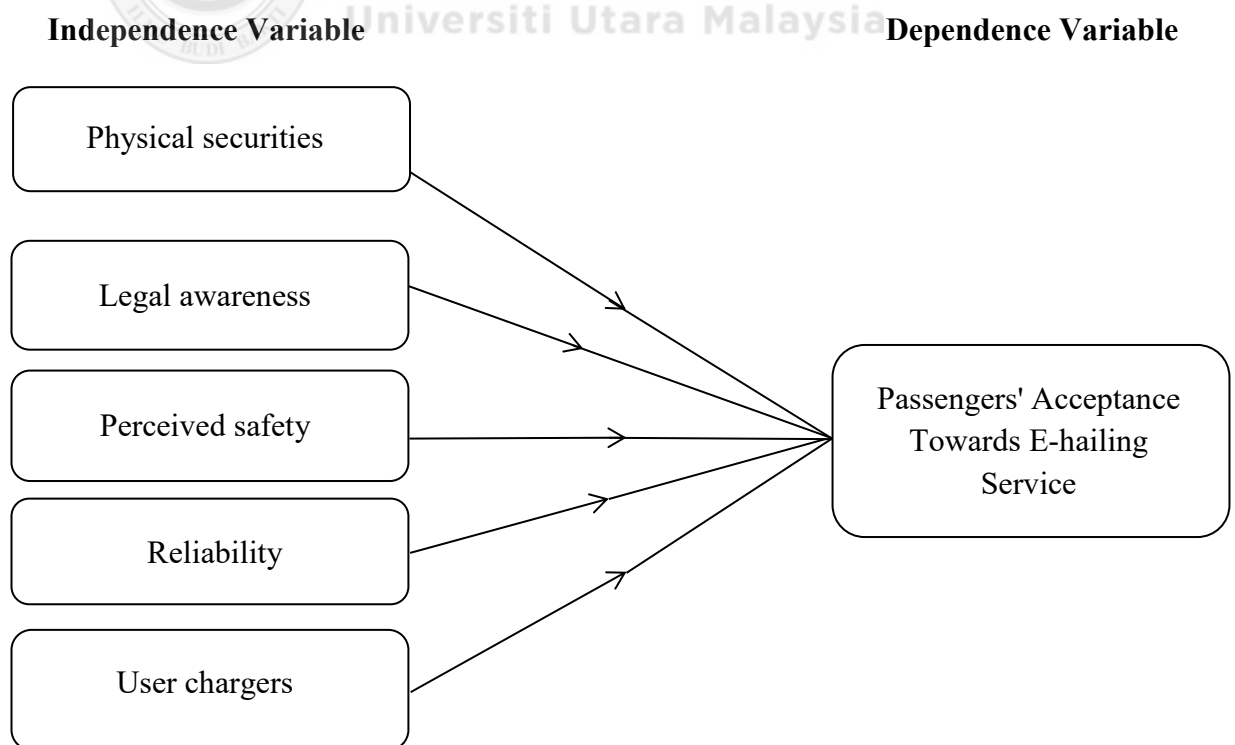


Figure 2.1
Research Framework

3.0 METHODOLOGY

3.1 Introduction

The methodology is a systematic data collection for techniques. The combination of ideas, theories, assumptions, and concepts forms good research. This study aims to investigate the relationship between legislative awareness and the acceptance of E-hailing services among passengers and the passengers' acceptance factors towards E-hailing services. This methodology chapter describes the methods the researchers used to collect data for their study, including the theoretical framework, research design, questionnaire design, research population and sample data, and methods used to analyse the data. Next, the researchers apply Cronbach's Alpha method to ensure the credibility of the data for the independent and dependent variables.

3.2 The Study Hypothesis

The focus of this research is the effect of passengers' acceptance of E-hailing services. Hence, from the above discussion on the framework development sub-chapter, the study comes up with the following hypothesis.

H1: There is a significant relationship between physical security and passengers' acceptance of E-hailing services.

H2: There is a significant relationship between legal awareness and passengers' acceptance of E-hailing services.

H3: There is a significant relationship between perceived safety and passengers' acceptance of E-hailing services.

H4: There is a significant relationship between reliability and passengers' acceptance of E-hailing services.

H5: There is a significant relationship between user charges and passengers' acceptance of E-hailing services.

3.3 Research Design

Research design is the overall plan for a study that allows for data collection, measurement, and analysis according to the research question. The approach and the method used in this study are discussed in this part. In order to achieve the objectives, a quantitative approach is adopted for this research, using a survey as the primary source. A survey is one of the techniques used for quantitative studies. Therefore, questionnaires were distributed to targeted sampling to collect the survey data that leads to findings and conclusions for the research (Queiros, Faria, & Almeida, 2017).

This approach also enables the research question's summary conclusion to be presented with a predetermined level of confidence, demonstrating the existence of a relationship between the independent and dependent variables. In this study, the researcher uses convenience sampling to collect the data. The focal point of the study is the E-hailing service. Therefore, the data were collected from the E-hailing users in Malaysia.

3.3.1 Population of the study

Sekaran and Bougie (2016) defined population as the total collection of individuals, occasions, or interesting objects the researcher desired to study. It was the collection of individuals, occasions, or objects of interest for whom the researcher wished to draw conclusions. The focus of the current study is to understand the influence of

different factors on passengers' acceptance of E-hailing services. Therefore, the population of this study is the passengers of E-hailing services in Malaysia, which meant all data collected for this study were from E-hailing passengers throughout the nation, Malaysia to determine the passengers' acceptance factors towards E-hailing services.

3.3.2 Unit of Analysis

The passengers' acceptance factors towards E-hailing services are the main focus of this study. Therefore, the data were collected from the passengers of E-hailing services. That is why the unit analysis of this study is individual.

3.3.3 Sampling Size

According to Krejcie and Morgan (1970), the sample size should be 384 if the population is more than 100,000. For this study, the number of E-hailing passengers in Malaysia is more than 100,000 (Statista, 2024). Hence, the sample size is 384. The table on the next page is the table of Krejcie and Morgan (1970), which stands for the number of samples needed based on the number of targeted populations.

Table 3.1
Table of Krejcie and Morgan

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
20	19	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Source: Krejcie and Morgan (1970)

3.3.4 Research Sampling

Sampling is the process of choosing a sufficient number of the appropriate elements from the population, allowing us to generalize certain traits or features to the population's elements after studying the sample and comprehending its characteristics (Sekaran & Bougie, 2016). There are two types of sampling techniques: probability sampling and non-probability sampling. Probability sampling helps the researcher select a sample from the population where all individuals in the population have an equal chance of being selected. According to Sekaran and Bougie (2016), when there are known participants in the population and none with a zero chance of being chosen, researchers can apply probability sampling. However, the researcher does not have a complete list of E-hailing passengers, resulting in no specific sampling frame to choose. Thus, the study was not able to use probability sampling.

Therefore, the study uses a non-probability sampling approach, and the sample was selected by using convenient sampling. Convenient sampling refers to a sample in which respondents in the target population meet certain criteria, such as good accessibility, geographical location, time availability, and willingness to participate in the study (Sekaran & Bougie, 2016). It is usually applied in large populations due to the difficulty in collecting data. Other than that, time and cost can be reduced using convenient sampling. Alvi (2016) mentioned that convenient sampling is an effective method to represent the population and the best way to get some information efficiently and quickly.

Hence, the sample for this study is E-hailing passengers in Malaysia because the targeted sample is Malaysians who actively use E-hailing services in their daily lives, where the data were collected through a quantitative survey.

3.4 Operational Definitions

An operational definition offers a concise explanation of the various variables used in the study to assess the associated variables (Creswell, 2015). The variables in this current study are based on previous studies. Several variables used in this study were taken from different studies. These variables included the acceptance of E-hailing services, physical security, perceived safety, legal awareness, reliability, and user charges. The variables measured are adopted from previous studies.

3.4.1 The Acceptance Towards E-hailing Services

There are factors that make E-hailing service quality, reputation, and customer ride experience do not match. These elements are necessary for the passengers' acceptance of E-hailing. Therefore, in this study, the factors of passengers' acceptance of E-hailing are highlighted in the sense of reliability, pricing, physical security, legal awareness, and perceived safety.

Hence, the passengers' acceptance in the context of E-hailing is defined as, "The E-hailing services must have good reliability, good legal, reasonable price, good physical security and good safety features which affect the passengers' acceptance."

3.4.2 Physical Security

The security frameworks of an E-hailing application may be different from those of different E-hailing providers. In this study, the security frameworks include the journey record during a booking, additional insurance for passengers' extra safety, location declaration, and driver and passenger details recorded in the E-hailing application.

Hence, in the context of the current study, physical security is defined as "It is a framework needed in the E-hailing application to ensure passengers able to view the journey record to the destination, able to subscribe to additional insurance during the booking, able to declare current location and have clear driver's detail record for passengers' safety."

3.4.3 Legal Awareness

Awareness means acknowledging that something exists and understanding the situation or object at the current time based on knowledge or experience. E-hailing regulation in Malaysia exists to regulate the E-hailing companies and the drivers and to make sure the transportation industry is balanced with the existence of E-hailing services.

Therefore, in this study, legal awareness is defined as "Acknowledging and understanding the legal and regulation of E-hailing services based on the knowledge of E-hailing passengers' rights and the experience using the services."

3.4.4 Perceived Safety

Individuals' view of safety makes generalized judgments about the risk of danger or loss. In this study, sharing different personal information, easy communication to the help center, and travel distance for a booking tend to affect E-hailing passengers' feelings of safety.

Hence, in the context of this study, perceived safety is defined as "A user's judgments about risk of danger or loss in using E-hailing services influenced by shared personal information, easy access of communication, and travel distance of a booking."

3.4.5 Reliability

Reliability is the ability to deliver services exactly as promised. In addition, the service must be consistent, honor commitments, and keep promises to customers. According to this study, the reliability of E-hailing services is based on ease of use, perceived trust, fair treatment from companies, and customer service experience. Hence, in the context of the current study, reliability is defined as "The promises and commitments that E-hailing services must serve which comprises ease of use, fair treatment based on current legal and trust."

3.4.6 User Charges

User charge is the price set to gain access to owning a product or using a service. In this study, the passengers' acceptance toward E-hailing service is formed of the consistency of the price, the quality of the service, the passengers' safety guaranteed while using the service, and a fair pricing system for users (passengers and drivers). Hence, in the context of the current study, user charge is defined as "Willingness of E-hailing passengers to pay the service price is based on the consistent rate price, good quality service, safety guarantee, and fair pricing system."

3.5 Research Instruments

In this study, the questionnaires were used to collect the primary data from the E-hailing passengers in Malaysia. The most suitable tool for examining the relationship between different variables is the measurement scale (Sekaran & Bougie, 2003). However, the Likert scale was used to collect data for this study. According to Jamieson (2004), the 5-point Likert scale is generally used as the measurement scale in research. However, there are some arguments in favor of scales with seven or an

even number of response categories. In this study, the 6-point Likert scale were used and has six categories such as 1 = strongly disagree, 2 = disagree, 3 = somehow disagree, 4 = somehow agree, 5 = agree, and 6 = strongly agree. The measures for all variables are given below.

3.5.1 The Acceptance Towards E-hailing Service

The acceptance of E-hailing service was measured with the help of reliability, pricing, physical security, legal awareness, and perceived safety. The scale items are adapted from the previous study, which was conducted by Ruangkanjanases and Techapoolphol (2018) and Todd, Amirullah, and Xing (2018).

3.5.2 Physical Security

Physical security was measured with the help of journey records, insurance, location declarations, and E-hailing applications. Scale items for these measures are adopted from Ruangkanjanases and Techapoolphol (2018).

3.5.3 Legal Awareness

Legal awareness is measured based on the passenger's knowledge of E-hailing regulation, passenger's rights, and passenger's experience using E-hailing. These scale items are adopted from prior studies conducted by Todd, Amirullah, and Xing (2018).

3.5.4 Perceived Safety

In the context of this study, perceived safety was measured by shared personal information, ease of communication, and travel distance of a booking. Scale items for these measures are adopted from Teo, Mustaffa, and Rozi (2018).

3.5.5 Reliability

Reliability is measured through ease of use, perceived trust, fair treatment from the companies, and customer service experience. Scale items are adopted from the previous study conducted by Chung and Al-Khaled (2020).

3.5.6 User Charges

User charges are measured based on the consistency of the price, the quality of the service, guaranteed safety, and a fair pricing system for users (passengers and drivers). These scale items are adopted from prior studies conducted by Chung and Al-Khaled (2020).

3.5.7 Questionnaire Description

The questionnaire is divided into two sections to check the effect of different factors on the passengers' acceptance of E-hailing services. The first section of the study is related to descriptive statistics. It consists of respondents' personal information such as age, gender, age, profession, race, and frequency of E-hailing application usage in a week.

The second section of the questionnaire includes the major variables of the study. These variables include physical securities, legal awareness, perceived safety, reliability, user charges, and passengers' acceptance of E-hailing services.

3.6 Procedure of Data Collection

A pilot study was conducted using a questionnaire with the help of five (5) experts from different universities across Malaysia with E-hailing experience before involving a sum of fifty (50) passengers. In March 2022, this study started to collect real data through an online survey (Google Form), such as sending online questionnaires through Facebook, Twitter, and WhatsApp to friends and groups and asking them to share with others who have e-hailing experience across Malaysia. After a year (2022-2023), finally, there were 426 data responses. Ultimately, the study used 410 valid data to conduct the following analysis. The specific details about real data will be discussed in Chapter 4.

3.7 Pilot Study

For this study, the questionnaire is adapted and translated into two languages, English and Bahasa Melayu. A pilot study is important because it helps improve the questionnaire (Neuman, 2014). Weaknesses in design and instrumentation were highlighted by having a pilot study (Blumberg et al., 2014).

The sample size for a pilot study is sufficient between 25 and 100, according to Emory and Cooper (1991). Therefore, ten experts from different universities were administered a questionnaire each, and another 50 questionnaires were distributed among the passengers of the E-hailing service. However, five experts did not respond and were not included in the pilot study. Hence, a total of 55 questionnaires were used to conduct the pilot study.

Based on the results of the pilot study, some improvements were made to the questionnaires based on the comments and advice from five experts. One of the

changes made was rephrasing the usage of certain words, such as changing “read” to “understand”. Additionally, some questions were unclear in their wording, so rewording was done to improve clarity and ensure better understanding.

3.7.1 Reliability & Validity Test

Cronbach's Alpha was used to measure the reliability of the set of surveys (Tavakol & Dennick, 2011). Reliability result, which is less than 0.6, is considered to be poor, while a range of 0.7 is considered acceptable. However, 0.8 is considered to be good (Sekaran & Bougie, 2016). In Table 3.1.1, Cronbach's Alpha is given for all variables.

Table 3.1.1

Passengers' Acceptance Towards E-hailing (PA) Reliability Results

PA-Reliability Statistics					
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items		
0.698	0.712		5		

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Satisfy with E-hailing company reliability	17.13	12.591	0.499	0.336	0.635
Satisfy with E-hailing security measure	17.16	12.186	0.566	0.385	0.611
Satisfy with E-hailing safety measures	17.77	11.643	0.461	0.225	0.645
Satisfy with E-hailing regulations provided	17.62	12.011	0.382	0.166	0.682
Satisfy with E-hailing user charges	17.77	11.569	0.408	0.185	0.672

Table 3.1.1 shows that Cronbach's Alpha related to Passengers' acceptance of E-hailing service is 0.698, which is in the range 0.7 acceptable range. According to Sekaran and Bougie (2016), a 0.7 reliability value is considered to be acceptable.

Table 3.1.2

Physical Security (PS) - Reliability Results

PS-Reliability Statistics					
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items		
0.713	0.747		4		

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Clear information on E-hailing driver (app)	13.02	8.701	0.562	0.436	0.626
E-hailing application system is trustworthy	13.24	8.044	0.627	0.521	0.583
Easy to declare location through the app	13.41	7.627	0.605	0.418	0.585
Insurance safety protection can be subscribed	13.98	7.973	0.310	0.105	0.806

Table 3.1.2 shows that Cronbach's Alpha related to physical security is 0.713, which is in the range 0.7 acceptable range. According to Sekaran and Bougie (2016), a 0.7 reliability value is considered to be acceptable.

Table 3.1.3
Legal Awareness (LA) - Reliability Results

LA-Reliability Statistics					
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items			N of Items	
0.784	0.785			4	

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Passengers' awareness of legal rights	13.38	8.613	0.650	0.450	0.703
Passengers know what to do if their rights are violated	13.71	8.483	0.603	0.404	0.725
Passengers are aware that not all loss is liable to the E-hailing company	13.37	9.104	0.539	0.295	0.757
Passengers are aware to make a police report if they lose their item while using E-hailing	13.49	8.612	0.575	0.345	0.740

Table 3.1.3 shows that Cronbach's Alpha related to legal awareness is 0.784, which is in the range 0.7 acceptable range. According to Sekaran and Bougie (2016), a 0.7 reliability value is considered to be acceptable.

Table 3.1.4
Perceived Safety (PS) - Reliability Results

PS-Reliability Statistics					
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items		
0.695	0.710		5		

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Passengers feel safe with the ETA and map feature in E-hailing app	17.76	12.048	0.493	0.305	0.636
Easy access to make report through E-hailing app	18.05	10.990	0.508	0.292	0.622
Well-trained drivers make passengers feel safe	18.07	11.074	0.538	0.301	0.611
Ride-sharing service safer than ride E-hailing alone	18.30	11.307	0.318	0.149	0.715
Short-distance journeys are safer than long-distance	17.93	10.961	0.452	0.236	0.646

Table 3.1.4 shows that Cronbach's Alpha related to perceived safety is 0.695, which is in the range 0.7 acceptable range. According to Sekaran and Bougie (2016), a 0.7 reliability value is considered to be acceptable.

Table 3.1.5
Reliability (R) - Reliability Results

R-Reliability Statistics					
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items		
0.828	0.833		8		

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
E-hailing apps are easy to use for first-timer	32.36	28.144	0.584	0.434	0.805
Easy to get E-hailing service during an emergency	32.42	27.863	0.578	0.415	0.805
E-hailing service is more comfortable than other public transports	32.47	27.873	0.562	0.453	0.807
E-hailing app makes it easy to make a report if there's something wrong happens	32.46	26.562	0.698	0.564	0.788
The e-hailing company always supports if passengers have any concerns about its service	32.46	27.653	0.649	0.507	0.797
The e-hailing company is always interested in safety issues	32.61	28.184	0.509	0.485	0.814
Passengers are concerned with their personal details being shared in the E-hailing app	32.53	28.333	0.423	0.439	0.828

E-hailing service gives fair treatment on legal and regulation towards its passengers	32.37	28.675	0.458	0.324	0.821
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Table 3.1.5 shows that Cronbach's Alpha related to reliability is 0.828, which is more than 0.8 acceptable range. According to Sekaran and Bougie (2016), a 0.8 reliability value is considered to be good.

Table 3.1.6
User Charges (UC) - Reliability Results

	UC-Reliability Statistics				
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items			N of Items
	0.897	0.899			9
Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
E-hailing service price is affordable	35.06	52.068	0.697	0.511	0.883
The price stated is right based on the total distance for every journey	35.14	50.772	0.730	0.604	0.880
Price remains consistent even though ETA does not tally with the actual time of arrival	35.06	50.647	0.721	0.598	0.880
Affordable fee for additional safety insurance	35.13	52.036	0.595	0.386	0.891
The price charged is suitable for the	35.06	51.454	0.757	0.604	0.878

service quality provided					
Passengers willing to pay higher prices for better safety	34.99	52.714	0.678	0.471	0.884
Passengers are concerned with their personal details being shared in the E-hailing app	35.02	52.894	0.565	0.344	0.893
E-hailing prices charged are lower than public transport	35.29	50.115	0.643	0.449	0.887
Commission deductions (20%) for drivers are suitable with the service price charged	35.29	52.559	0.591	0.380	0.891

Table 3.1.6 shows that Cronbach's Alpha related to user charges is 0.897, which is more than the 0.8 acceptable range. According to Sekaran and Bougie (2016), a 0.8 reliability value is considered to be good.

Table 3.2
Reliability Test Summary

Construct	Factor	Alpha (inter-item correlation)	Items	Cronbach's Alpha if the item is deleted
Passengers' Acceptance Towards E-hailing Service (PA)	Passengers' Acceptance Towards E-hailing Service (PA)	0.698	Satisfy with E-hailing company reliability	0.635
			Satisfy with E-hailing security measure	0.611
			Satisfy with E-hailing safety measures	0.645
			Satisfy with E-hailing regulations provided	0.682
			Satisfy with E-hailing user charges	0.672
Physical Security (PS)	Physical Security (PS)	0.713	Clear information on E-hailing driver (app)	0.626
			E-hailing application system is trustworthy	0.583
			Easy to declare location through the app	0.585
			Insurance safety protection can be subscribed	0.806
			Clear information on E-hailing driver (app)	0.626
Legal Awareness (LA)	Legal Awareness (LA)	0.784	Passengers' awareness of legal rights	0.703
			Passengers know what to do if their rights are violated	0.725
			Passengers are aware that not all loss is liable to the E-hailing company	0.757
			Passengers are aware to make a police report if they lose their item while using E-hailing	0.740
			Passengers feel safe with the ETA and map feature in the E-hailing app	0.636
Perceived Safety (PS)	Perceived Safety (PS)	0.695	Easy access to make report through E-hailing app	0.622
			Well-trained drivers make passengers feel safe	0.611
			Ride-sharing service safer than ride E-hailing alone	0.715

			Short-distance journeys are safer than long-distance	0.928
Reliability (R)	Reliability (R)	0.828	E-hailing app is easy to use for first-timer	0.805
			Easy to get E-hailing service during an emergency	0.805
			E-hailing service is more comfortable than other public transports	0.807
			E-hailing app makes it easy to make a report if there's something wrong happens	0.788
			The e-hailing company always supports if passengers have any concerns about its service	0.797
			The e-hailing company is always interested in safety issues	0.814
			Passengers are concerned with their personal details being shared in the E-hailing app	0.828
			E-hailing service gives fair treatment on legal and regulation towards its passengers	0.821
User Charges (UC)	User Charges (UC)	0.897	E-hailing service price is affordable	0.883
			The price stated is right based on the total distance for every journey	0.880
			Price remains consistent even though ETA does not tally with the actual time of arrival	0.880
			Affordable fee for additional safety insurance	0.891
			The price charged is suitable for the service quality provided	0.878
			Passengers willing to pay higher prices for better safety	0.884

Table 3.2 shows that the construct for passengers' acceptance of E-hailing service and perceived safety has a reliability value of more than 0.6, which is still acceptable. Meanwhile, the construct for physical security and legal awareness has a reliability value in the range of 0.7, which is also acceptable. However, the construct for reliability and user charges has a reliability value in the range of 0.8, which is good. According to Sekaran and Bougie (2016), a 0.7 reliability value is considered to be acceptable. Meanwhile, the range of 0.8 is good. Therefore, all construct reliability values are acceptable and good.



4.0 DATA ANALYSIS AND FINDINGS

4.1 Introduction

In order to answer the research questions, the findings of the collected data from the responses to the questionnaires will be discussed in this chapter. Two sections will be separated in this chapter: descriptive data and empirical data analysis. Through the descriptive data analysis, the demographic of the respondent's profile was described, such as Age, Race, Profession, Gender, Type of E-hailing Service, E-hailing Usage Frequency, and Positions of Rules in E-hailing supply chains in Malaysia.

Meanwhile, for the empirical analysis section, the analysis test was conducted and discussed, including frequency analysis, Pearson Correlation Analysis, and Multiple Regression Analysis. The analysis flow will be like as shown in Figure 4.1:

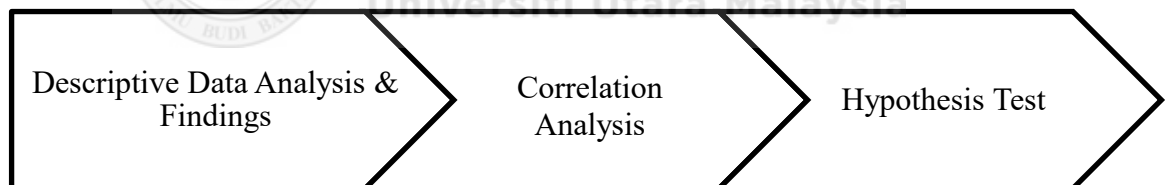


Figure 4.1
Analysis Flow

4.2 Descriptive Data Analysis and Findings

The questionnaire was made into an online survey using Google Forms, which is the most popular and basic online survey tool in Malaysia. The entire process of collecting data was conducted online for three months. The online survey was sent to persons from different districts who have been using the E-hailing application and service in Malaysia. Other than that, the questionnaires were sent to WhatsApp groups, Facebook, Twitter, and by e-mail. Therefore, all the responses have been checked and vetted for inconsistency.

4.2.1 Survey Response Rate

Table 4.1:

Survey responses

Description	Total	Percentage (%)
Total Received Questionnaires	510	100
Other Position Questionnaires	100	19.6
Accepted Questionnaires	410	80.4

In this section of the study, the survey response rate is presented. There are 510 responses from online surveys in the whole of Malaysia. However, there are 100 responses from other positions of E-hailing, which are mostly E-hailing drivers. Therefore, 401 useful responses from E-hailing passengers were analyzed in this study. Hence, the response rate of this study is 80.4%. According to Hair et al. (2011), the responses are considered acceptable if they reach a 50% rate, but it will be more desirable if the response rate reaches 80% and above. For this study, 80.4% is acceptable and can be used for research.

4.2.2 Demographic Profile of Respondents

The demographic profile of respondents is separated into eight distinct types: Age, Race, Profession, Gender, Type of E-hailing service, E-hailing application usage, E-hailing usage frequency, and Positions of rules in E-hailing supply chains in Malaysia. For E-hailing application usage and positions of rules in the E-hailing supply chain, they were removed because all responses used the E-hailing and only E-hailing passengers are needed for the study. Therefore, there is no need to test the usage and positions.

Table 4.2
Demographic Profile of Respondents (n = 410)

Item		Frequency	Percentage (%)
Gender	Male	102	24.9
	Female	308	75.1
Race	Malay	297	72.4
	Chinese	89	21.7
	Indian	13	3.2
	Others	11	2.7
Age	0-19	30	7.3
	20-29	281	68.5
	30-39	46	11.2
	40-49	32	7.8
	50+	21	5.1

Profession	Student	235	57.3
	Government	30	7.3
	Private	95	23.2
	Others	50	12.2
Type of E-hailing Service Used	Transport	70	17.1
	Food Delivery	76	18.5
	Transport & Food Delivery	264	64.4
E-hailing Application Usage Frequency (in 1 week)	1-2 times	283	69.0
	3-4 times	84	20.5
	5+ times	43	10.5



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4.2.3 Gender

The table and figure shown below show the gender of respondents in this study. It shows that there are 102, or 24.9%, males involved, and there are 308, or 75.1%, females involved in this study. Majority of the respondents are female. Previous study mentioned women are more likely to use E-hailing services than men because women are likely to use E-hailing services due to priority on safety (Yusoff et al., 2023). A study by Nazri et al. (2021), found that female university students in urban area are frequently used E-hailing service especially for short-distance journey which is aligning with the high percentage of female respondents in this study.

Table 4.3
Gender of Respondents

		GENDER	
		Frequency	Percent
Valid	Male	102	24.9
	Female	308	75.1
Total		410	100.0

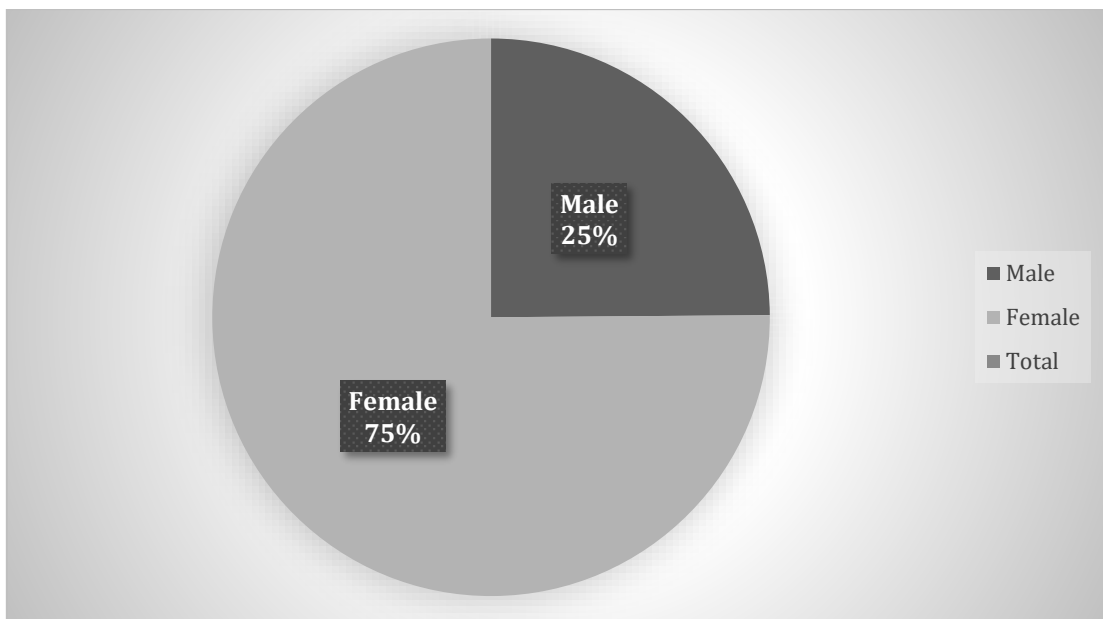


Figure 4.2
Gender of Respondents

4.2.4 Races

Races are one of the questions that need to be filled by the respondents for this study. The figure and table below show the races of respondents. Based on the table and figure, 297, or 72.4%, of respondents are Malay, 89, or 21.7%, are Chinese, 13, or 3.2%, are Indian, and 11, or 2.7%, are other races. Malay is the highest number of respondents for this study, followed by Chinese, Indian, and other races, which are synchronized to the data of the Malaysian Population by MyCensus (2020).

Table 4.4
Races of Respondents

RACES			
		Frequency	Percent
Valid	Malay	297	72.4
	Chinese	89	21.7
	India	13	3.2
	Others	11	2.7
	Total	410	100.0

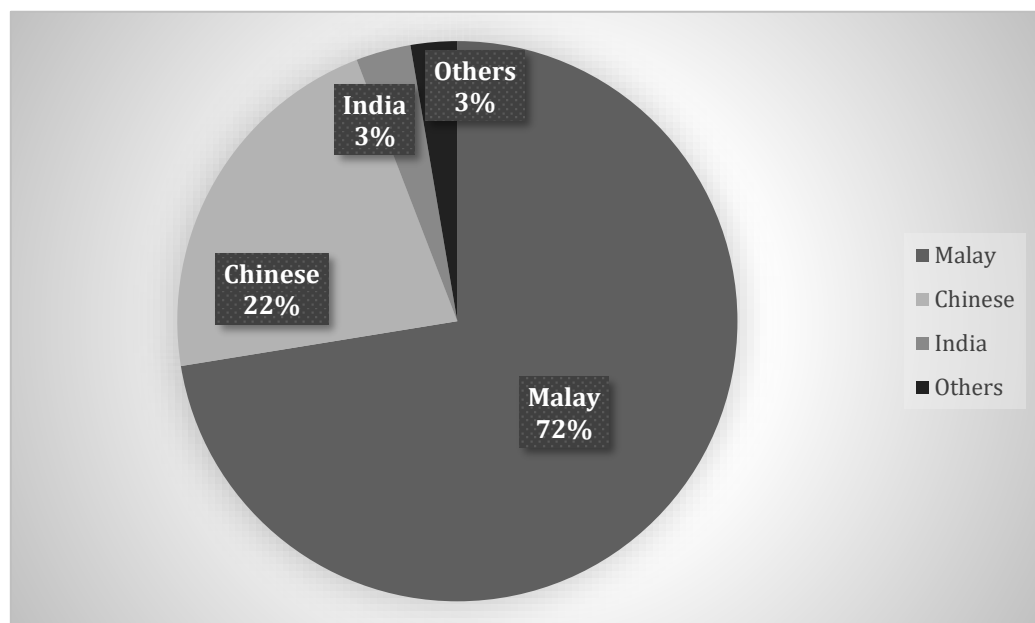


Figure 4.3
Races of Respondents

4.2.5 Age

The ages of respondents are shown in the table and figure below. There are five different categories for a range of ages, which are below 19 years old, between 20-29 years old, between 30-39 years old, between 40-49 years old, and above 50 years old. The numbers of respondents are 30 (7.3%), 281 (68.5%), 46 (11.2%), 32 (7.8%), and 21 (5.1%), respectively. Respondents aged 20-29 years old are the highest.

Table 4.5
Age of Respondents

Ages		Frequency	Percent
Valid			
	19 years and below	30	7.3
	20 - 29 years	281	68.5
	30 - 39 years	46	11.2
	40 - 49 years	32	7.8
	50 years and above	21	5.1
	Total	410	100.0

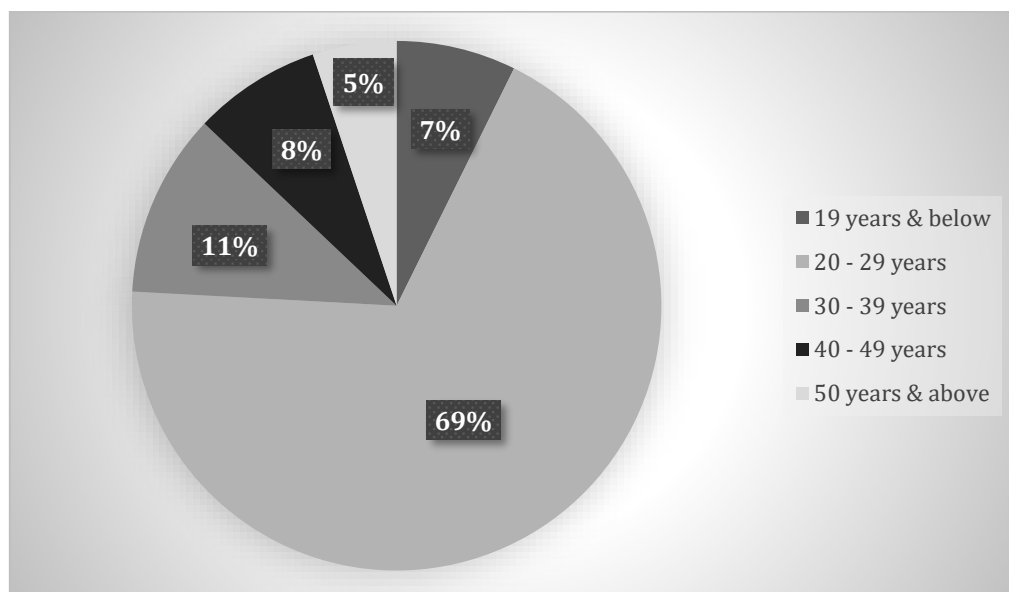


Figure 4.4
Age of Respondents

4.2.6 Profession

Respondents' professions are shown in the table and figure below. Accordingly, 235 respondents are students, which is 57.3% of the total number, and 30 respondents are government employees (7.3%). Meanwhile, 95 (23.2%) respondents are private employees, and 50 (12.2%) respondents belong to other situations, including owning a business, a housewife, a househusband, and the unemployed, to name a few.

Table 4.6
Profession of Respondents

Profession		Frequency	Percent
Valid			
	Student	235	57.3
	Government Sector	30	7.3
	Private Sector	95	23.2
	Others	50	12.2
	Total	410	100.0

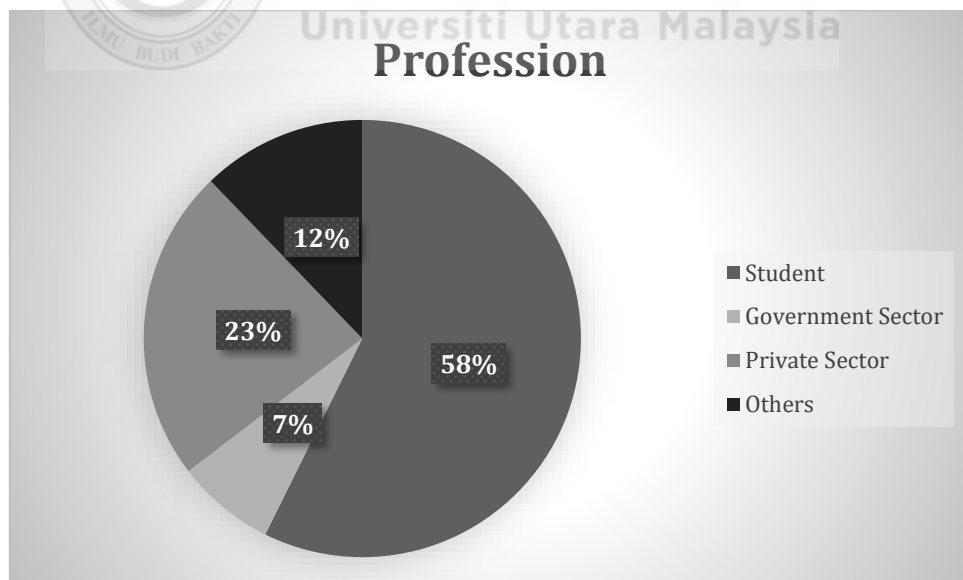


Figure 4.5
Profession of Respondents

4.2.7 Types of E-hailing services and Usage Frequency

Furthermore, there are three types of E-hailing services used by the respondents, of which 70 (17.1%) use E-hailing for transport service, 76 (18.5%) use E-hailing for food delivery. The rest, 264 (64.4%), use both services, transport and food delivery. In addition, there are three different stages of E-hailing service frequently used in a week, 283 (69.0%) use the service one to two times, 84 (20.5%) use the service three to four times, and 43 (10.5%) use the service more than five times.

Table 4.7

Type of E-hailing Service Used by Respondents

Type of E-hailing Service		Frequency	Percent
Valid			
	Transport	70	17.1
	Food delivery	76	18.5
	Transport, Food delivery	264	64.4
	Total	410	100.0

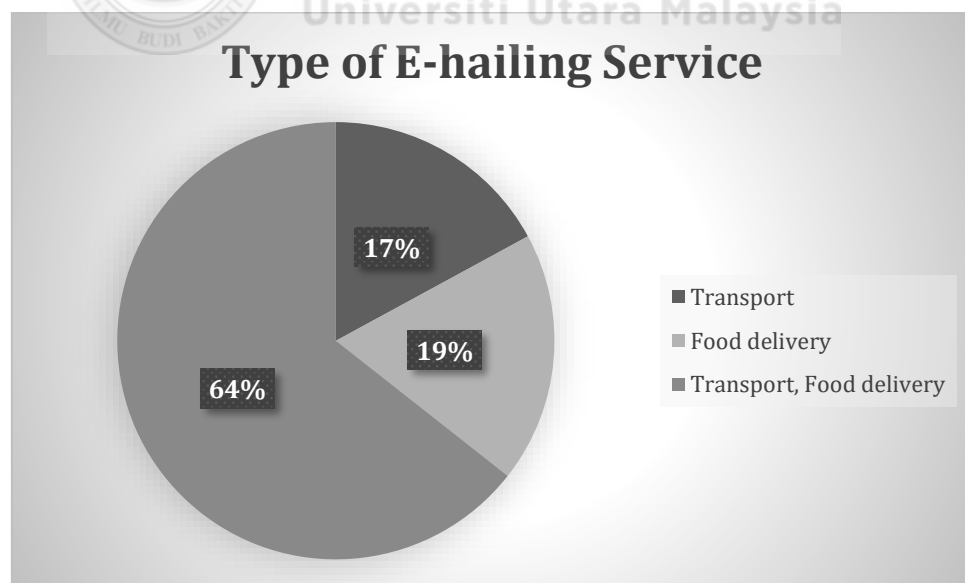


Figure 4.6

Type of E-hailing Service Used by Respondents

Table 4.8
Usage Frequency by Respondents

Usage Frequency			
		Frequency	Percent
Valid	1 - 2 times	283	69.0
	3 - 4 times	84	20.5
	more than 5 times	43	10.5
Total		410	100.0

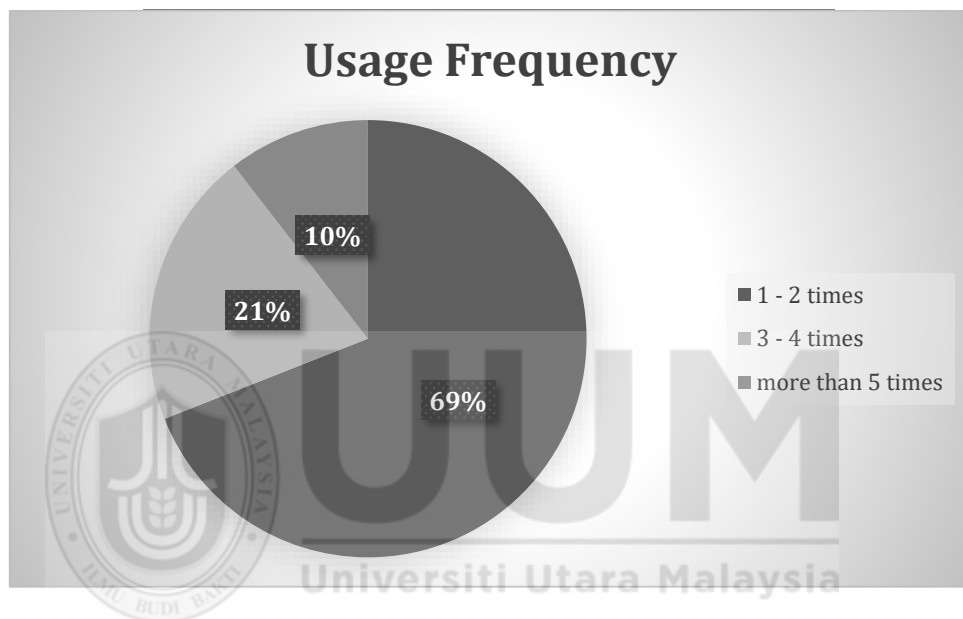


Figure 4.7
Usage Frequency by Respondents

4.3 Inferential Analysis

4.3.1 Pearson Correlation Analysis ($n = 410$)

A Pearson Correlation Analysis examines the relationship among a series of independent and interdependent variables. The strength of linear relationships among variables is shown by the results in the following table. In this study, the Sig. (2-tailed) the value determines whether those two or more variables have statistical significance. There is no statistically important correlation with the variables where the Sig. (2-tailed) value exceeds 0.05 in the table. Thus, if the Sig. (2-tailed) value of the table is less than or equal to 0.05, then, there is a statistical significance between variables.

E-hailing Passengers Acceptance Towards E-hailing		
Security	Pearson Correlation	0.616**
	Sig. (2-tailed)	0.000
Legal	Pearson Correlation	0.574**
	Sig. (2-tailed)	0.000
Safety	Pearson Correlation	0.683**
	Sig. (2-tailed)	0.000
Reliability	Pearson Correlation	0.682**
	Sig. (2-tailed)	0.000
User Charges	Pearson Correlation	0.690**
	Sig. (2-tailed)	0.000
***Correlation Significant at the level 0.01 (2-tailed)		

Table 4.9:
Pearson Correlation Relationship of IVs and DV

Researchers may respond to the hypothesis referred to previously using the following table:

H1: There is a significant relationship between physical security and positively related to passengers' acceptance of E-hailing services.

H2: There is a significant relationship between legal awareness and positively related to passengers' acceptance of E-hailing services.

H3: There is a significant relationship between perceived safety and positively related to passengers' acceptance of E-hailing services.

H4: There is a significant relationship between reliability and positively related to passengers' acceptance of E-hailing services.

H5: There is a significant relationship between user charges and positively related to passengers' acceptance of E-hailing services.

The researchers may conclude that, as p-values are less than 0.05, all hypotheses can be accepted according to the Pearson correlation table (Hauke & Kossowski, 2011).

4.3.2 Multiple Regression analysis ($n = 410$)

Researchers shall use multiple regression analyses to test the framework, using detailed information on independent variables as regards their accuracy in predicting dependent variables to examine interactions between independent variables (A. Jalil, 2013).

Table 4.10:
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.799 ^a	0.638	0.634	2.52585
Predictors: (Constant), Charges, Legal, Security, Reliability, Safety				

The table above shows that R^2 is 0.638, meaning that 63.8% of E-hailing passengers' acceptance of E-hailing service (dependent variable) can be explained by legal awareness, perceived safety, physical security, reliability, and user charges (independent variables). Based on Moore et al. (2013), $R^2 > 0.7$ is generally considered a strong effect size. As a result, the independent variables have been shown to be strong in predicting the acceptance of the E-hailing service among E-hailing passengers with a value $R^2 = 0.638$.

Table 4.11:
Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4552.133	5	910.427	142.702	0.000 ^b
	Residual	2577.489	404	6.380		
	Total	7129.622	409			

a. Dependent Variable: Acceptance

b. Predictors: (Constant), Charges, Legal, Security, Reliability, Safety

According to the table above, the F-value of 142.702 is significant at the 0.05 level. Therefore, researchers can state that predictor variables such as legal awareness, perceived safety, physical security, reliability, and user charges are significant to E-hailing passengers' acceptance towards E-hailing service ($P < 0.05$).

Table 4.12:
Summary of Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.557	0.838		0.665	0.506
	Physical Security	0.250	0.044	0.217	5.673	0.000
	Perceived Safety	0.157	0.051	0.152	3.090	0.002
	Legal Awareness	0.196	0.042	0.178	4.691	0.000
	Reliability	0.110	0.034	0.157	3.186	0.002
	User Charges	0.144	0.024	0.278	6.027	0.000

a. Dependent Variable: Acceptance

In order to determine the statistical significance of the dependent variable according to each independent variable, researchers can create an equation based on the table above. Equation: E-hailing passengers' acceptance towards E-hailing service = 0.557 +0.250 physical security +0.157 perceived safety +0.196 legal awareness +0.110 reliability +0.144 user charges.

As indicated above, physical security positively influences E-hailing passengers' acceptance of E-hailing services, with B = 0.250 and p = 0.000 being absolutely significant. This finding is consistent with Tsegay A. (2021) and Hamdan et al. (2022). Due to cybercrimes, E-hailing passengers feel threatened to use technology features such as mobile applications, online banking, and e-wallet (Tsegay A., 2021). E-hailing passengers must be expected to be offered the security service in a way they expect, as well as a safe experience acquired during their journey with E-hailing service (Hamdan et al., 2022). Thus, the hypothesis (H1) can be concluded to have been accepted by the researcher.

H1: The physical security provided by the E-hailing service is positively related to E-hailing passengers' acceptance towards E-hailing service.

The relationship between perceived safety and E-hailing passengers' acceptance of E-hailing service was accepted as $B = 0.157$ and $p = 0.002$, which is significant as the p-value is lower than 0.05. People start to carpool as they feel safe with the introduction of E-hailing services, which allow companies to track drivers and respond in real-time to passengers (Kalhor et al., 2022). The E-hailing passengers also feel safe when they are aware that the E-hailing drivers are all trained before starting their service (Lee, 2022). Previous studies have highlighted that perceived safety is the most sensitive factor for passengers or passengers of public transport when choosing and deciding which mode they wish to use in their journey. Therefore, this also applies to the E-hailing passengers accepting the E-hailing service (Teo & Razi, 2018). Thus, the hypothesis (H2) has been accepted.

H2: The perceived safety of the passenger is positively related to E-hailing passengers' acceptance towards E-hailing service.

The researcher examined the relationship between legal awareness and the E-hailing passengers' acceptance of E-hailing service. The result shows that legal awareness has a positive linear effect on the E-hailing passengers' acceptance of E-hailing service with $B = 0.196$ and $p = 0.000$, which is absolutely significant. Based on a previous study by Rahim et al. (2023), E-hailing passengers feel more confident when using E-hailing services if there are clear rules and safeguards in place for the service. The acceptance and willingness of E-hailing passengers to choose E-hailing service as their top choice among public transportation will increase if there is a legislative guarantee of their safety while using the service (Hermawan & Kusuma, 2023). Thus, the research can conclude that the hypothesis (H3) is accepted.

H3: Legal awareness among the passengers is positively related to E-hailing passengers' acceptance of E-hailing service.

The next hypothesis was suggested to examine the relationship between reliability and the E-hailing passengers' acceptance of E-hailing service. Overall, the reliability has a positive linear relationship with the E-hailing passengers' acceptance of the E-hailing service as $B = 0.110$ and $p = 0.002$ is significant. There were previous studies show a significant relationship between reliability and the E-hailing passengers' satisfaction while using the service, where the E-hailing service needs to be consistent and reliable to captivate the passengers' attention to use the service in real-time (Man, Ahmad, Kiong, & Rashid, 2019). Some of the reliability aspects that need to be considered when E-hailing services are implemented include waiting time, driver punctuality, journey duration, distance for a planned trip, timetabled routes, and even communication (Chung & Al-Khaled, 2020). Therefore, the hypothesis (H4) is accepted.

H4: The reliability of E-hailing service is positively related to E-hailing passengers' acceptance towards E-hailing service.

Last but not least, the relationship between user charges and the E-hailing passengers' acceptance of the E-hailing service was accepted as $B = 0.114$ and $p = 0.000$, being absolutely significant. The finding is consistent with studies by Mohamad et al. (2023) and Ann and Shafi (2022). User charges or prices are also seen as an important factor in passengers' acceptance of the E-hailing service. E-hailing passengers' put service prices as their top priority before choosing and accepting the service (Mohamad et al., 2023). When deciding whether to use an E-hailing service, the first

thing the passengers' will be interested in is user charges (Ann & Shafi, 2022). Thus, hypothesis (H5) is accepted.

H5: The user charges are positively related to E-hailing passengers' acceptance of E-hailing service.

According to the result above, all independent variables show a significant impact on E-hailing passengers' acceptance of E-hailing service with physical security (beta = 0.250), legal awareness (beta = 0.196), and user charges (beta = 0.144) for being absolutely significant ($P = 0.000$) meanwhile perceived safety (beta = 0.157) and reliability (beta = 0.110) for being significant ($P = 0.002$) which is p-value is lower than 0.05.

4.4 Summary

To examine the relationships and impacts of independent variables on E-hailing passengers' acceptance of E-hailing service, this chapter provides an overview of all respondents' findings. Using the frequency analysis, the demographic characteristics of respondents were shown in the demographic analysis. The researchers tested the hypothesis by performing inferential analysis with Pearson correlation and multiple regression analysis. Using the findings from this chapter, researchers may then continue their discussion in the next chapters.

5.0 DISCUSSION, RECOMMENDATIONS, AND CONCLUSION

5.1 Introduction

Through this final chapter, overall conclusions are interpreted and summarized the key factors of the analysis report. The previous chapters already covered the introduction, literature review, methodology, results and analysis. This research aims to understand the relationship between the influence factors which are legal awareness, perceived safety, physical security, reliability and user charges and of E-hailing acceptance among passengers in Malaysia. Therefore, this chapter is discussing every key factor and present the conclusions drawn from the field study findings and offer recommendations based on the data collected.

5.2 Discussion of Findings

Significant insights have been gained because of the investigation on the acceptance of e-hailing services in Malaysia. The outcomes of this study are consistent with the research aims and hypotheses, and they provide a detailed knowledge of the factors that influence passengers' acceptance.

5.2.1 Legal Awareness and E-hailing Acceptance Among Passengers

According to the findings of the study, legal awareness has a significant influence on how people accept e-hailing services. Aligning with the hypothesis, a positive relationship was found between legislative awareness and passengers' acceptance. Through Technology Acceptance Model (TAM) framework, legal awareness can be linked to Behavioural Intention to Use. This finding suggests that a higher level of understanding of the legislation governing e-hailing services is correlated with a

greater readiness to utilise these services. This aligns with TAM's significance on the role of trust and confidence in shaping behavioural intentions. This conclusion aligns with the findings of a previous study conducted by Zhang et al. (2015), who highlighted the significance of regulatory frameworks in fostering trust among individuals who use shared mobility services.

5.2.2 Physical Security and E-hailing Acceptance Among Passengers

Additionally, the research highlighted the relevance of physical security measures within the realm of e-hailing services. Physical security can be linked to one of Technology Acceptance Model (TAM) framework which is Usage Behaviour. Enhanced security features, such as real-time monitoring and validated driver profiles, were shown to have a substantial impact on passengers' acceptance, according to the findings of the research.

According to Shaheen and Cohen (2019), who identified security as an important feature in the passenger's adoption of shared transport modes, this observation is in line with their findings. It suggests that platforms for e-hailing services must prioritise the implementation of solid security mechanisms in order to cultivate consumer confidence and acceptance. This aligns with TAM's significance that actual usage behaviour is influenced by the passengers' realization of the technology's benefits and risks.

5.2.3 Perceived Safety and E-hailing Acceptance Among Passengers

Safety concerns, especially perceived safety, have emerged as another important aspect that plays a significant role in determining the acceptance of e-hailing services. Based on the study's results, it was found that customers' views of safety, which

include both physical safety and data privacy, significantly impact their adoption of e-hailing services. Based on Technology Acceptance Model (TAM) perspective, perceived safety directly affects the Attitude Towards Using the technology. The results of Liu et al. (2022), who found that consumers' perceived safety had a substantial influence on their desire to participate in technology-based transportation services, agree with this study. Passengers are more likely to have a positive attitude towards E-hailing service if they feel safe while using the service which increases their intention to use it in the future. This aligns with TAM's significance that attitudes towards using a technology are influenced by the passenger's perceptions of the technology's benefits and risks. The consequence for companies that offer services related to e-hailing is quite clear: there is an extremely pressing need to strengthen safety measures and disclose these efforts to consumers in an open and honest manner.

5.2.4 Reliability and E-hailing Acceptance Among Passengers

In accordance with the hypothesis, it was discovered that reliability is a factor that determines passenger approval. The findings of the research indicate that the dependability of e-hailing services, which includes elements like the availability of services and timeliness, directly impacts the level of happiness and acceptance experienced by passengers on the platform. Therefore, reliability directly play a part to Perceived Usefulness from a Technology Acceptance Model (TAM) framework. The study conducted by Greenblatt and Shaheen (2015), which highlighted the significance of dependability in shared mobility services, lends trusts to the findings presented here. E-hailing services are reliable if the service able to consistently meet the passengers' needs in their service which will lead them to more likely view the service as useful and more likely to accept it. This correspond with the TAM's

assertation that perceived useful is an important factor of technology acceptance. It is consequently necessary for organisations that provide e-hailing services to guarantee a reliable and continuous service to maintain and grow their customer base.

5.2.5 User Charges and E-hailing Acceptance Among Passengers

Passengers' acceptance is also impacted by other factors, such as price structures and user charges. Based on Technology Acceptance Model (TAM) framework, user charges can be connected to Perceived Ease of Use. The passengers are likely to perceive the E-hailing service as ease of use if the pricing structure is straightforward and affordable. The research findings indicated that consumers are sensitive to price policies, with the preference being given to pricing models that are both competitive and transparent. This is in line with the findings of Rayle et al. (2016), who found that consumers who choose shared mobility solutions pay a significant amount of attention to the affordability of the solutions. This aligns with TAM's significance on the importance of ease of use in technology adoption. It is thus necessary for e-hailing companies to have pricing structures that are both fair and transparent to increase customer acceptance.

In conclusion, the results of this research add to a more in-depth knowledge of the elements that influence the acceptance of E-hailing services in Malaysia. The consequences of the effect of factors such as legal awareness, security, safety, reliability, and user charges, highlight the varied character of passenger acceptance. E-hailing service providers and government need to pay attention to these insights and put into action policies that address these important areas to create an environment favourable to the expansion and continued viability of e-hailing services. Additional studies might be conducted in the future for better understand these dynamics, with

the possibility of investigating the interaction between these components in various cultural and regulatory settings.

5.3 Research Contributions

The investigation on the acceptance of e-hailing services in Malaysia, with a particular emphasis on legislative awareness and the variables that impact it, contributes to the expansion of the existing body of knowledge in several noteworthy ways. The theoretical and practical contributions from this study give useful insights for various stakeholders, including legislators, service providers of e-hailing services, and consumers.

5.3.1 Theoretical Contributions

From a theoretical perspective, this research makes a number of important contributions to existing literature on e-hailing services by elaborating on the Technology Acceptance Model (TAM) and drawing on findings from the research outcomes. In line with previous literature, the study introduces legislation knowledge as an important part of TAM beyond their traditional attention to the perceived ease of use and use utility (i.e., Venkatesh & Davis, 2000). This expansion shines a light on the role of passengers' awareness and understanding of legal frameworks that govern e-hailing services in their acceptance and trust in the platform.

The findings demonstrate that regulatory clarity fosters consumer confidence, aligning with prior studies that emphasise the importance of regulatory environments in technology adoption (Zhang et al., 2015). Furthermore, this study contributes to theoretical discussion on safety and security in the context of shared mobility services by integrating physical security and perceived safety with TAM. It is shown that these

elements hold a crucial role in passenger acceptance, in line with the call to develop more complete frameworks dedicated to the shared mobility services (Shaheen & Cohen, 2019). E-hailing platforms such as Grab, InDrive, or Maxim are reminded to establish robust security checks to uphold the strong correlation of safety measures with passenger trust, as proposed by trust in sharing economy platforms (Hawlitschek et al., 2018).

In addition, this research also contributes to understanding how service reliability as well as competitive pricing will affect passenger acceptance. From service marketing literature (Berry et al., 2019), it extends and shows how operational excellence and value propositions play an important role in helping consumers trust and accept e-hailing services in the presence of competition. This study extends the use of TAM to include these findings for a more nuanced understanding of passenger behaviour as it pertains to shared mobility services.

5.3.2 Implications for Industry, Government, and Technology Advancement

The implications of this research are practical for policymakers such as Land Public Transport Agency (APAD), industry stakeholders, and technology developers looking into the improvement of e-hailing services especially in Malaysia. This reinforces the need to set out clear and suitable legislative frameworks for the establishment of confidence and acceptance by the consumer. Without having comprehensive regulatory clarity, regulatory clog and confusion will allow more people to perceive regulatory inefficiency, find no relevance to rules, and hence inhibit innovation (Shaheen & Cohen, 2019).

This study emphasizes how security measures like real time monitoring system and driver certification program play important role in increasing confidence and

acceptance of e-hailing service providers by the consumer. Robust security protocols investments can increase passengers' trust and addresses concerns about physical safety and data privacy. Reliability and low pricing also become a major focus as a highly competitive market pushes for openness and transparency in pricing and operational efficiency to satisfy customer expectations at all times.

These findings from a technological standpoint indicate opportunities for advancement in the security features, to improve service reliability, and to provide user-friendly platforms consistent with consumer tastes for affordability and transparency. Furthermore, the implications go beyond the individual consumer, and their effect extends to greater benefits of safer, more reliable, and more mobile transportation options that meet changing mobility requirements. Collaboration with the industry stakeholders can be fostered for the implementation of effective regulations, which can stimulate the growth and also serve public interests for the governments.

This research concludes with actionable steps for stakeholders in the industry, government, and technology sectors to improve the e-hailing services' acceptance based on those key factors, such as regulatory clarification, safety measures, reliability, and affordability.

5.4 Limitations of the Study

In the process of reflecting on the research method and the results of this study on the adoption of e-hailing services in Malaysia, it is essential to realise the inherent limitations. Not only do these limitations give a context for the results, but they also provide a road map for future research in this rapidly evolving subject. The fact that this research relied on self-reported data, which was gathered via questionnaires, is

one of the most significant limitations of the study. Even though surveys are generally recognised as an effective tool for collecting huge amounts of data in a short amount of time, they are prone to biases such as social desirability bias. This occurs when respondents submit responses that they believe to be more socially acceptable rather than their genuine sentiments or behaviours (Fisher, 2016). It is possible that this bias will impact answers that are connected to sensitive themes such as feelings of safety and understanding of legal issues, which might possibly distort the findings.

Although it was of a thorough nature, the scope of the research was limited to the geographical area of Malaysia. Although this geographical concentration is advantageous for conducting in-depth research, it restricts the results' capacity to be generalised to other situations. While the legislative, cultural, and economic environment of e-hailing services might vary greatly from one nation to another, and even within parts of the same country, these differences can also be important. As a result, it is essential to use care when extending these results to different contexts (Cohen & Shaheen, 2019).

As an additional point of interest, the cross-sectional design of this research allows for the collection of a snapshot of the perceptions and behaviours of passengers in a single instant in time. On the other hand, the e-hailing sector is characterised by fast technical improvements and regulatory policy changes. Over the course of time, these dynamic characteristics have the potential to greatly alter passenger acceptance and pleasure. According to Greenblatt and Shaheen (2015), longitudinal research would give a more nuanced understanding of how these elements change over time and affect the perceptions and behaviours of passengers throughout the course of some period.

The emphasis of the study is on elements that influence the adoption of e-hailing services, such as regulatory knowledge, security, safety, dependability, and price. Although the study is founded on previous research, it may not consider all significant variables. There are several elements that might play a big effect in determining Passengers acceptance and happiness. Some of these aspects include environmental awareness, brand loyalty, and the impact of advertising initiatives. According to Hawlitschek et al. (2018), if these aspects are not considered, it may result in an inaccurate knowledge of the intricate decision-making process that customers of e-hailing services go through.

In conclusion, the quick rate of innovation in the e-hailing business, in conjunction with the ever-changing legislative frameworks, poses a challenge to the temporal relevance of the research. Even though the results are indicative of the current condition, it is possible that they may become obsolete very fast when new technology, services, and laws occur. According to Lemon and Verhoef (2016), in order to keep up with these changes and give meaningful insights in a timely manner, continuous research is essential.

In conclusion, while this research contributes significantly to our understanding of the variables that influence the acceptance of e-hailing services in Malaysia, the limitations discussed earlier underline the need to interpret the data carefully. These limitations highlight the significance of undertaking further research, using a variety of approaches, and broadening the geographical reach to improve the robustness and generalizability of the insights gleaned from this ever-evolving subject.

5.5 Recommendations

Based on the results of this study on the acceptance of e-hailing services in Malaysia, several recommendations that may be put into action by e-hailing service providers, legislators, and researchers can be detailed. Additionally, suggestions for future research can be provided.

5.5.1 Recommendations for E-hailing Service Providers

Legislative frameworks guiding e-hailing service operations should be prioritised by e-hailing service providers to raise public awareness of its usage. In light of this study of a positive relation between legal knowledge and acceptance, providers can engage regulatory agencies by working with them to develop educational programs targeting consumers so as to inform them of how certain laws and regulations affect them. Cohen and Shaheen (2019) suggest such initiatives can enhance transparency and increase consumers' trust.

E-hailing providers must invest in advanced security measures in order to improve passenger acceptance. These improvements can be implemented in the form of passenger features like the ability to track, emergency assistance tools, and high driver certification protocols, which can improve passengers' safety perception. By being prominently displayed in apps and campaigns, these measures should provide a reassuring stamp on users' safety (Hawlitsek et al., 2018).

The safety of passengers remains a key concern. Rigorous safety standards should be adopted by providers, such as in-app safety tutorials, driver and rider safe rearing enforcement, as well as regular vehicle inspections. These measures can promote a

culture of safety to be the competitive advantage in a competitive market in order to cultivate customer loyalty (Shaheen & Cohen, 2019).

Market acceptance is being influenced by price and reliability, and so operational excellence is needed to address this. Providers should concentrate on minimising wait times, being available 24 hours a day, seven days a week, during peak times, and having a transparent pricing structure. They can further encourage continued patronage as well as pull new customers through their loyalty program or other incentives for frequent users (Berry et al., 2019).

5.5.2 Recommendation for Government and Regulators

Regulators should strive to balance traditional transport services with their passengers' safety and fairness to innovation. However, regulations can engage diverse stakeholders, including conventional personnel transport operators, passenger representatives, and e-hailing companies, to guarantee that the regulations cater to multiple benefits (Cohen & Shaheen, 2016).

Regulatory priorities with regards to e-hailing operations should include transparency. Accountability can be assured by policymakers through the requirement of disclosing pricing algorithms, background checks of the drivers, or certain privacy of the data. Such transparency can instill trust in the passengers at the same time as practicing fairness within the industry (Lemon & Verhoef, 2016).

This should also be considered by policymakers in regard to initiatives aimed at developing environmentally sustainable and inclusive e-hailing services. Financial incentives for the adoption of electric vehicles, integration of e-hailing platforms in public transport systems, and ensuring accessibility for persons with disabilities are

some of the things that could form part of these activities. Considered in broader transportation and environmental terms (Greenblatt & Shaheen, 2015), these measures are.

5.5.3 Suggestions for Academic Literature

Future research is needed to determine if cultural and geographical differences affect e-hailing service acceptance. The study of the influence of cultural views on consumer perception could provide significant understanding of the global and local strategy tailoring of e-hailing services' expansion around the world.

Longitudinal studies of the long-term effects of regulatory change on passenger acceptance would be beneficial. Such research could explore whether developing legal frameworks affects over time patterns of trust, satisfaction, and service usage by using mix method which is qualitative and quantitative approach for future studies and research.

An investigation into emerging technologies such as blockchain and artificial intelligence could lead to a potential enhancement of e-hailing's security and efficiency. Passenger-related issues should be the topic of research on how these innovations meet people's needs while enhancing service delivery, for example, in data privacy or operational reliability.

The recommendations provided herein are based on this study's findings and aim to improve passenger acceptance of e-hailing services in Malaysia. Stakeholders, including service providers, policymakers, and researchers, can develop a user-centric, secure, efficient, and sustainable e-hailing ecosystem that is responsive and contributes to the e-hailing growth in the long run by addressing key factors such as

legislative awareness, security measures, operational excellence, and environmental sustainability.

5.6 Conclusion

As a result of the inquiry into the acceptance of e-hailing services in Malaysia, crucial insights have been uncovered. These findings shed light on the complex relationship that exists between regulatory knowledge, security, safety, dependability, and price on passenger acceptance. In addition to emphasising the crucial role that transparent and supportive regulatory frameworks play in the process of cultivating an environment that is suitable for the development of e-hailing platforms, this study highlights the significant effect that legislative knowledge has on influencing passenger views and confidence in e-hailing and ridesharing services. Not only do the results highlight the vital significance of security and safety measures, but they also demonstrate how these aspects are inextricably tied to the trust of passenger and their desire to participate in e-hailing services.

The research also demonstrates that the stability of the service and the availability of competitive pricing have a significant influence on the acceptance and happiness of passenger. E-hailing service companies such as Grab, Maxim, InDrive, and AirAsia Move and government such as Ministry of Transport (MOT) and APAD may benefit from these findings since they not only contribute to the scholarly debate on shared mobility services but also provide suggestions that can be put into action to improve the quality of service and the overall passenger's experience. In the dynamic environment of e-hailing services in Malaysia, where innovation and user-centric tactics are essential to gaining a competitive edge, this study gives a comprehensive understanding that may be used to influence strategic choices and policy formulations.

In conclusion, this research acts as a guiding light, illuminating the myriad factors that play a role in the acceptance of e-hailing services offered in Malaysia. This serves as a reaffirmation of the dynamic interaction that exists between technology, legislation, and passenger preferences, which will determine the future of urban transportation. It is possible for Minister of Transport and APAD to chart a path toward an e-hailing ecosystem that is more connected, secure, and user-friendly if they navigate these difficult waters with educated insights and strategic foresight before making any decisions. As a result, this study not only constitutes a substantial addition to the subject of shared mobility but also provides the framework for future discoveries in this constantly developing sector.



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APPENDICES

Appendix A: Questionnaires

Section A: Demographic

1. Gender:
Male // Female
2. Age (year):
10-19 // 20-29 // 30-39 // 40-49 // 50-59 // 60-69
3. Race:
Malay // Chinese // India // Others
4. Profession:
Public // Private
5. Do you use any E-hailing app?:
Yes // No
6. Which position of roles are you in the E-hailing supply chain?:
Passengers // Driver partner // E-hailing provider
7. Type of E-hailing services you are currently on:
Transportation // Food Delivery
8. How frequently did you turn on E-hailing applications per week?:
1-2 times // 3-5 times // more than 5 times

Section B: Physical Security (scale 1 - 6 // strongly disagree - strongly agree)

1. I feel safe to travel with E-hailing service because the application gives clear information about their driver (Ex. driver's name, phone number, etc).
2. I am confident about my safety during travelling with E-hailing service because the application recorded my entire journey systematically.

3. I am not worried with my safety while using E-hailing service as I can declare my location easily by using email, messages or social networks.
4. I am subscribing the “Ride Cover” (additional insurance) for my safety protection every time I am using an E-hailing service.
5. I believe that the E-hailing company is actively taking action every time I made a report about my safety while using its service.

Section C: Legal Awareness (scale 1 - 6 // strongly disagree - strongly agree)

1. I am aware of my rights legally as a passenger/customer of E-hailing service and I know what to do if my rights were violated while using the E-hailing services.
2. I am aware that not all loss happened during the E-hailing service or operation is liable to the E-hailing company.
3. I believe that the E-hailing company should compensate its customers if any accidents happen during the E-hailing service operation.
4. If I lose my items while using the E-hailing service, I will make a police report immediately because I am aware that E-hailing company is not liable to any loss item during its operation.
5. I feel safer and more confident to use the E-hailing service with the existence of E-hailing regulation and act by the government.

Section D: Perceived Safety (scale 1 - 6 // strongly disagree - strongly agree)

1. Sharing my personal info (phone numbers, real name, IC numbers) to the E-hailing application to register and to book its service is fine for me.
2. I feel safe to use the E-hailing service/app because the app provides estimation time arrival and shows me the route to go to my destination.

3. The E-hailing application has easy access to its help centre (hotlines) for me to make any report especially for my safety while using the services.
4. I choose to use the E-hailing services because of the well-trained drivers.
5. I prefer to use ride-sharing E-hailing service (share ride with other passengers) rather than ride it alone.
6. I prefer to book a short-distance journey than a long-distance journey with the E-hailing service for my safety purpose.

Section E: Reliability (scale 1 - 6 // strongly disagree - strongly agree)

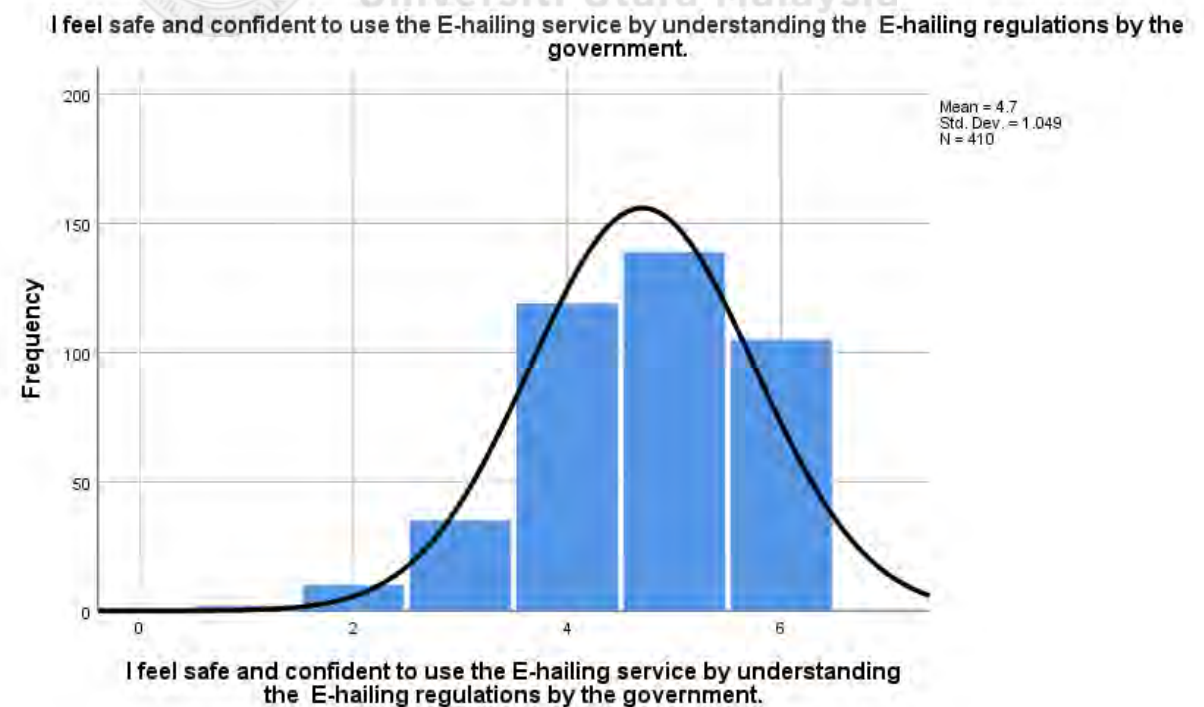
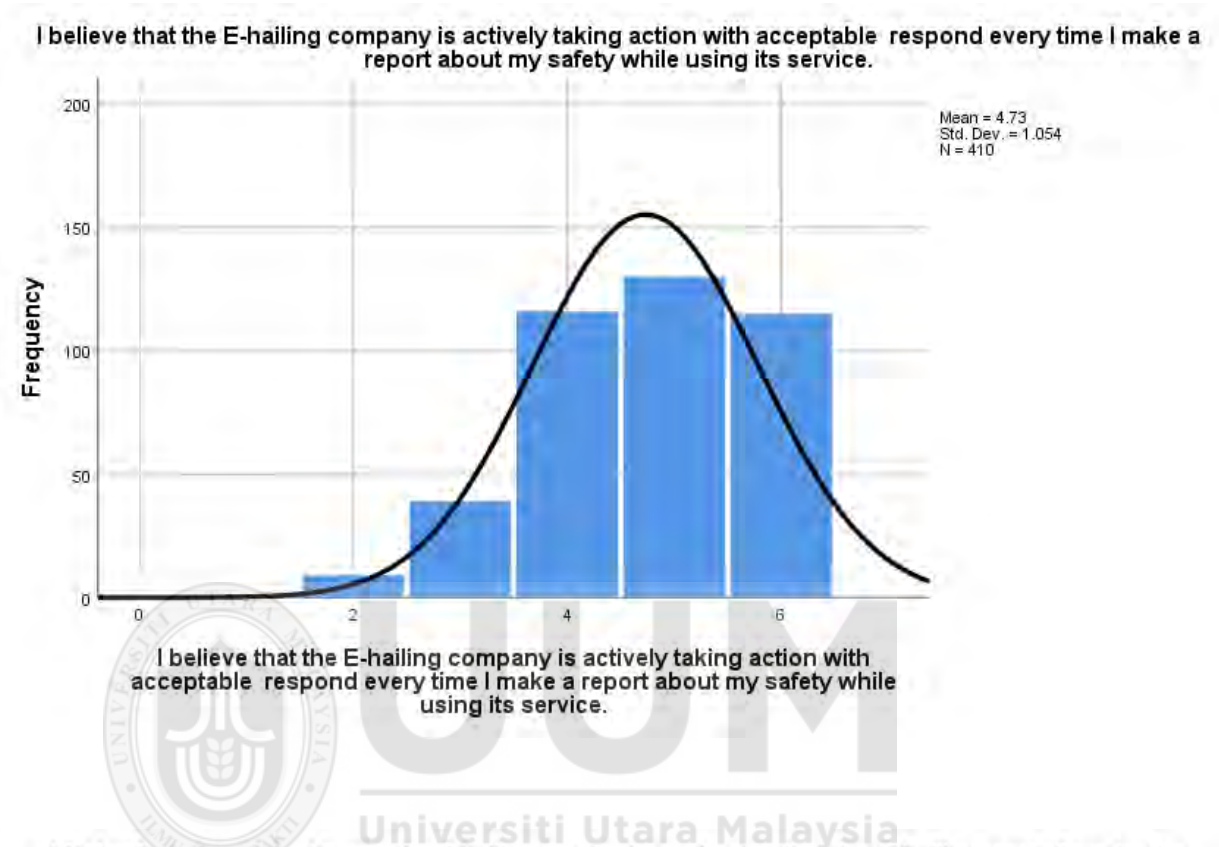
1. E-hailing applications are easy to adopt its features and functions for first-timers.
2. I can get an E-Hailing service easily if there's any urgent matter or emergency.
3. I feel safer using E-hailing services than other public transportation.
4. The E-hailing application is helpful and easy for me to make a report if there's something wrongs happen during its service.
5. I believe that the E-hailing company would always support me if I had any concern related to its services in any aspects (inc safety).
6. The E-hailing company is always interested in the safety issue that I raise.
7. I believe that I am legally protected for the whole journey while I am using E-hailing service.
8. I always pay for additional self-insurance every time I book an E-hailing service to protect my safety during the journey.
9. Sometimes, I am concerned about my personal details (such as phone number, home address, location) are shared with the E-hailing company through the application.

10. I believe that E-hailing service gives fair treatment in terms of legal and regulation towards its users.

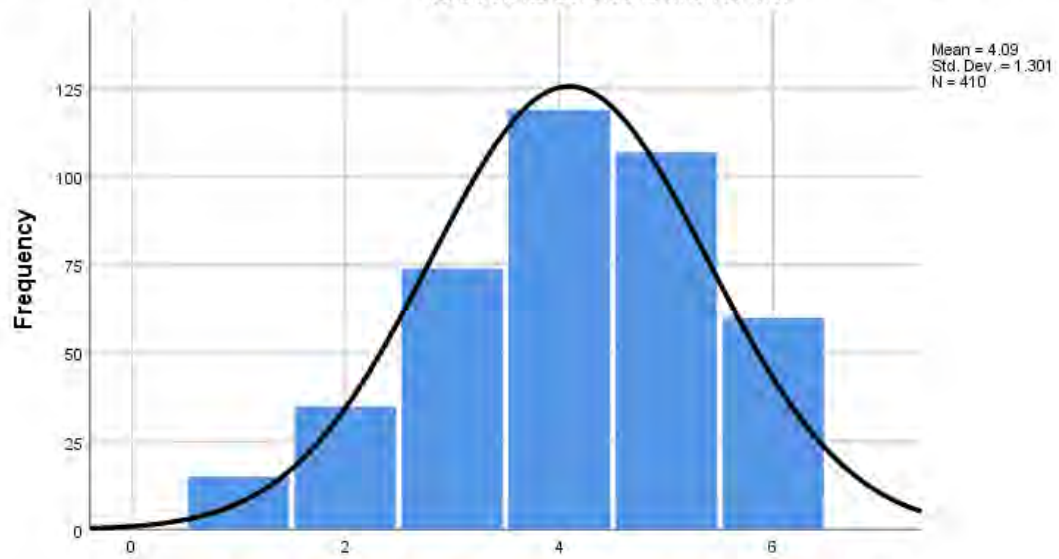
Section F: User Charges (scale 1 - 6 // strongly disagree - strongly agree)

1. I am satisfied with the pricing system for E-hailing service because the price is affordable.
2. I believe that the price stated is right based on the total distance for every journey that I booked.
3. The prices are not consistent based on the same distance but on different time (might be lower or higher).
4. The additional insurance fee for E-hailing user's safety purposes is reasonable.
5. The price charged is suitable with the service quality provided to the E-hailing users.
6. I am willing to pay higher price for E-hailing service if my safety is guaranteed for the whole journey.
7. I prefer to use E-hailing services because of the lower price charged.
8. I believe that E-hailing price charged is lower than other public transport price charged.
9. I agree and satisfied with the current E-hailing regulation for E-hailing drivers' commission deduction - 20% for each booking.
10. I believe that the commission deductions (20%) for E-hailing drivers are suitable with the price charged towards E-hailing customers.

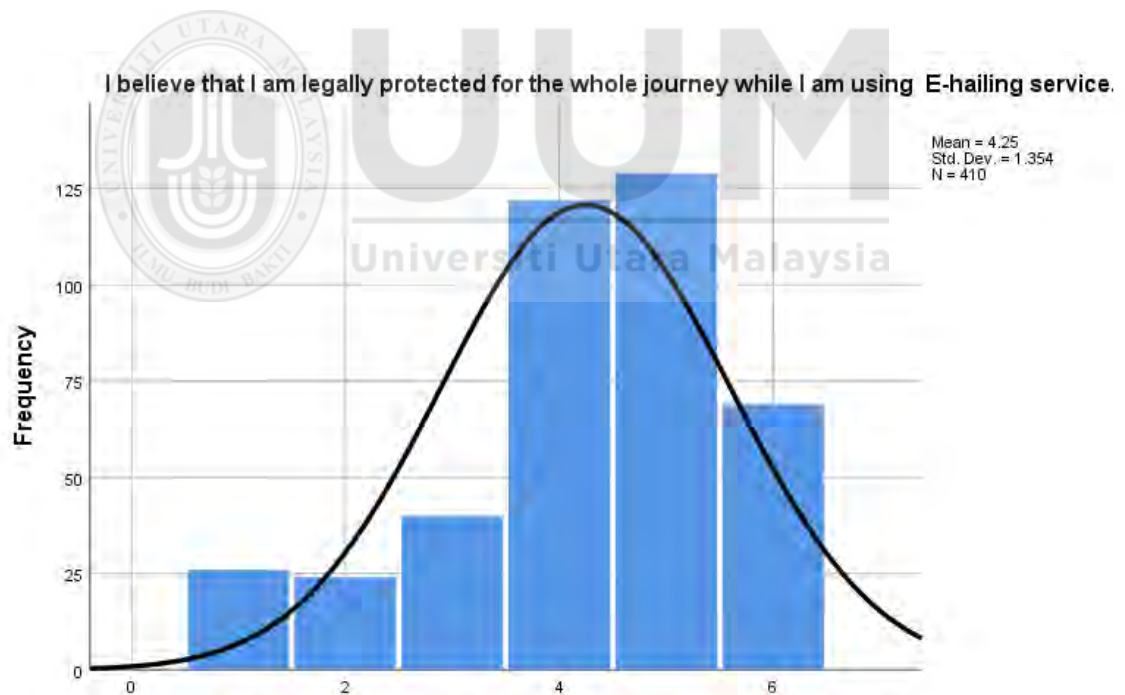
Appendix B: Normality Histogram



Sharing my personal info (phone numbers, real name, IC numbers) to the E-hailing applications to register and to book its service is fine for me.

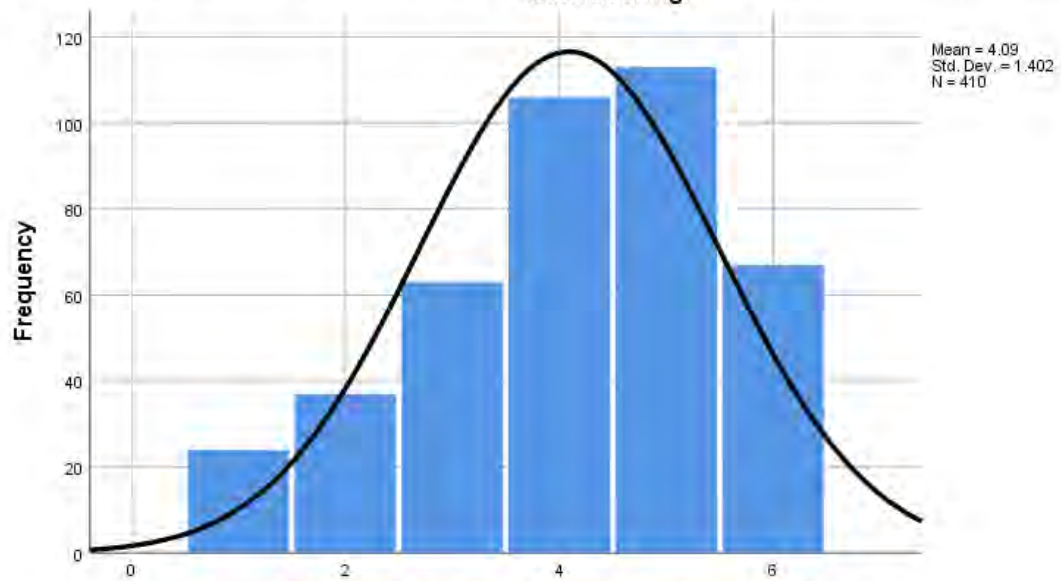


Sharing my personal info (phone numbers, real name, IC numbers) to the E-hailing applications to register and to book its service is fine for me.



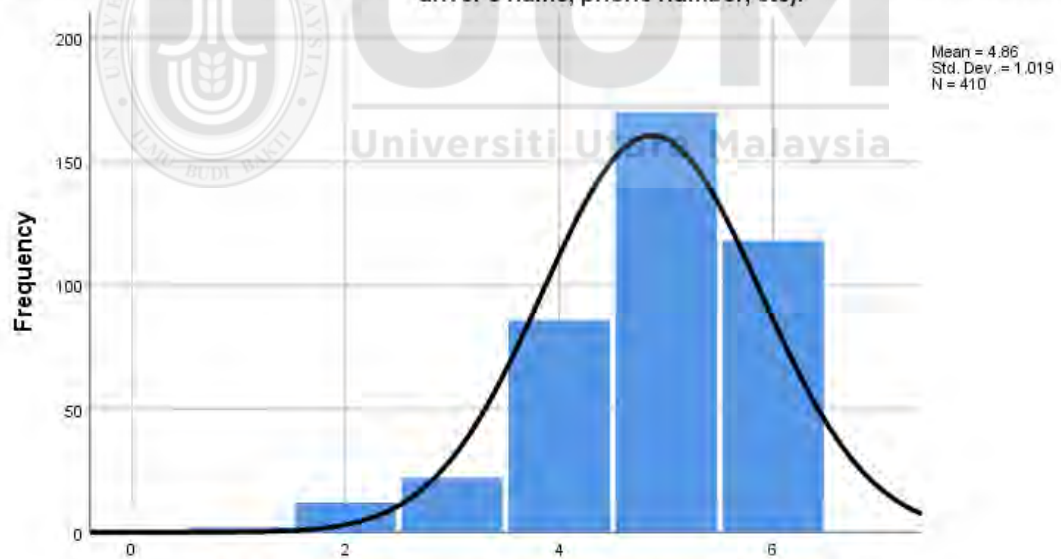
I believe that I am legally protected for the whole journey while I am using E-hailing service.

I agree and satisfied with the current E-hailing regulation for E-hailing drivers' commission deduction - 20% for each booking.



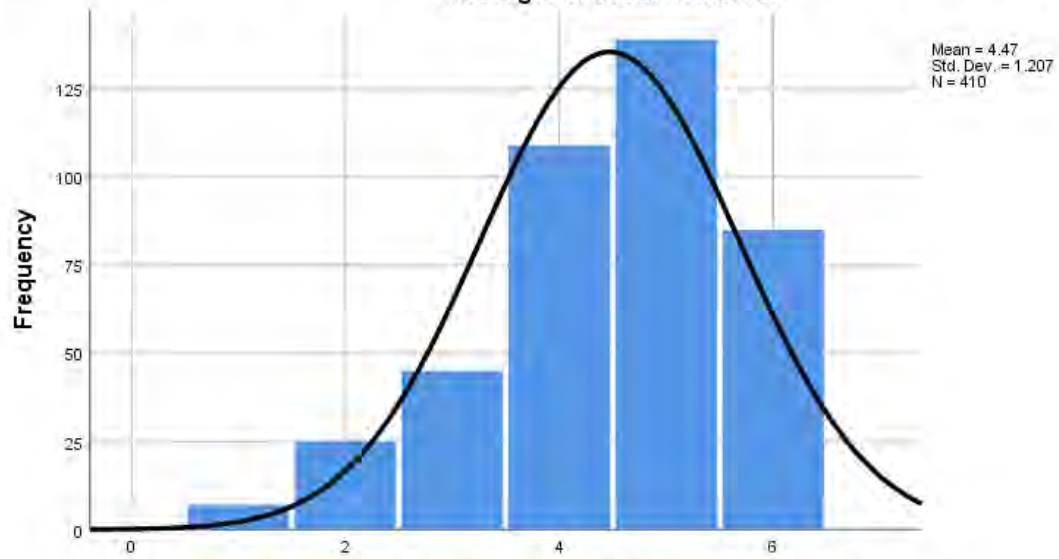
I agree and satisfied with the current E-hailing regulation for E-hailing drivers' commission deduction - 20% for each booking.

I feel safe to travel with E-hailing service because the application gives clear information about their driver (Ex. driver's name, phone number, etc).



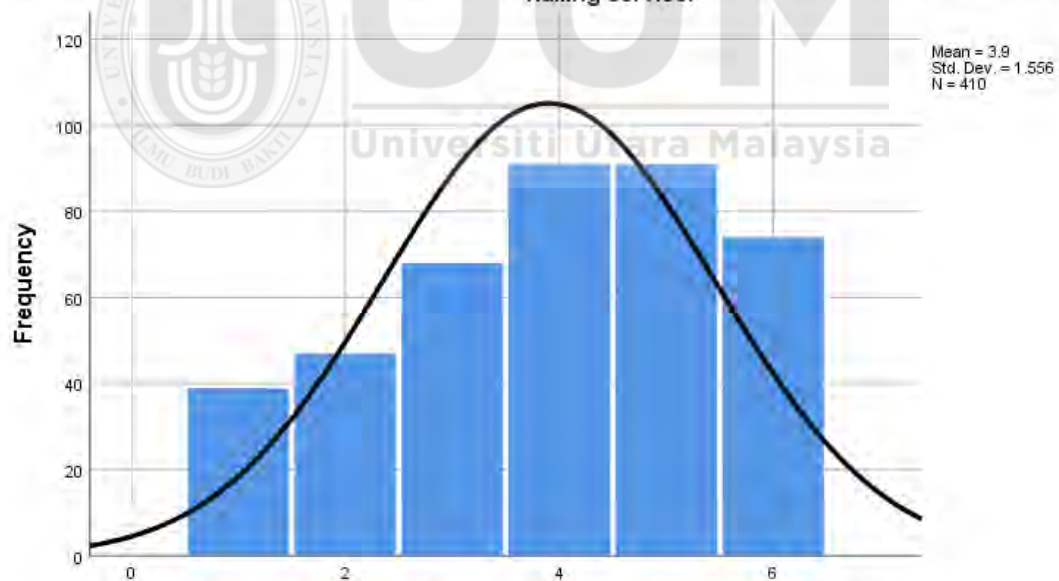
I feel safe to travel with E-hailing service because the application gives clear information about their driver (Ex. driver's name, phone number, etc).

I am not worried with my safety while using E-hailing service as I can declare my location easily by using email, messages or social networks.

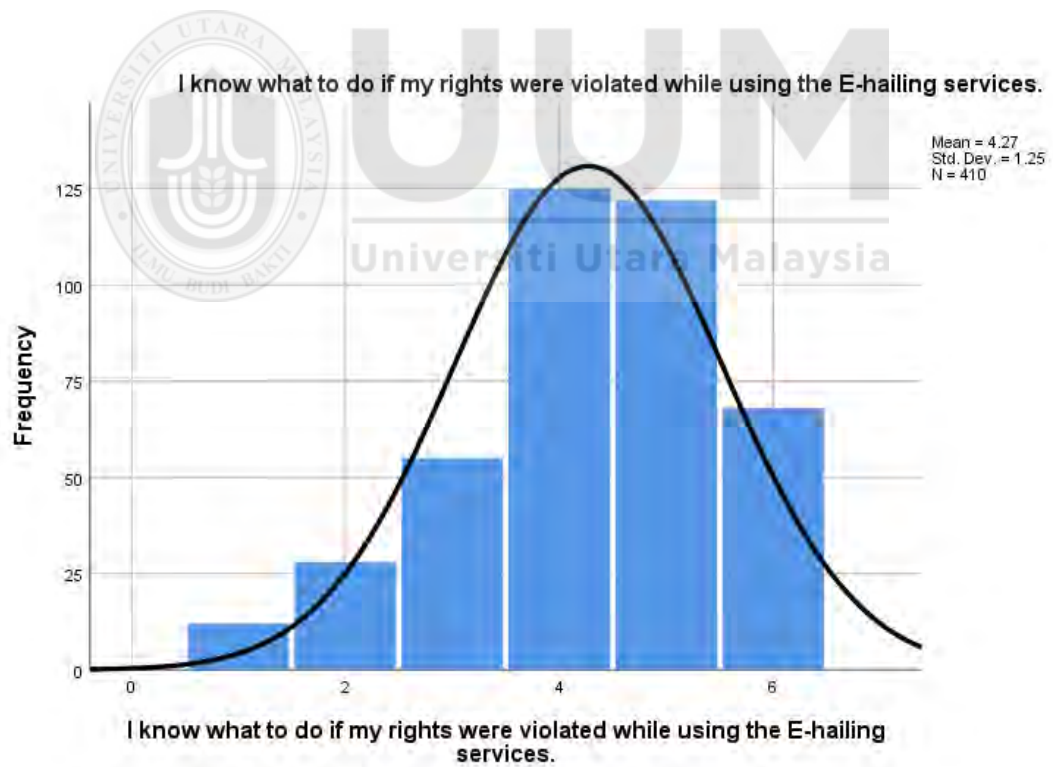


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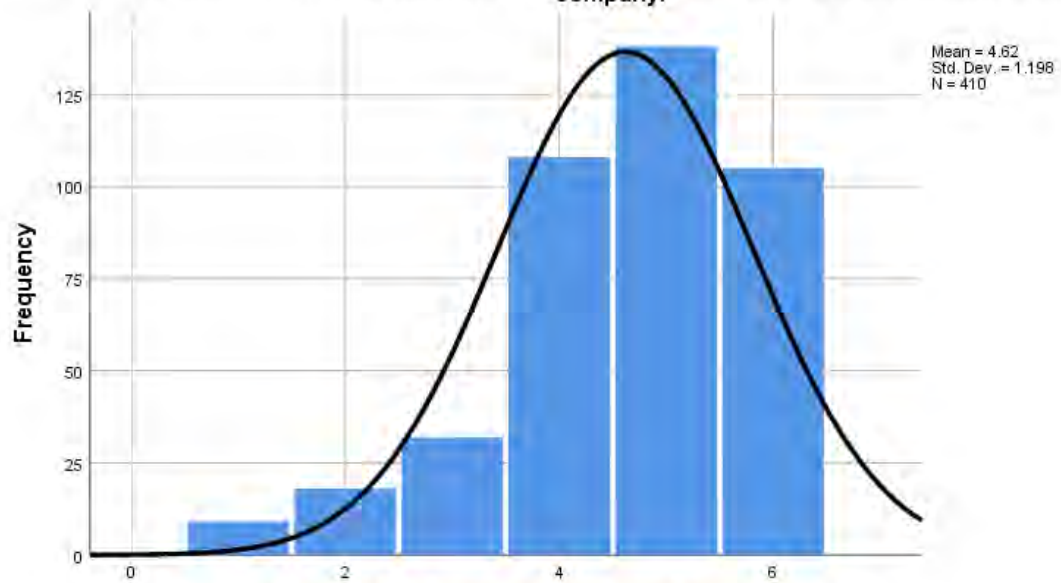
I am subscribing the "Ride Cover" (additional insurance) for my safety protection every time I am using an E-hailing service.



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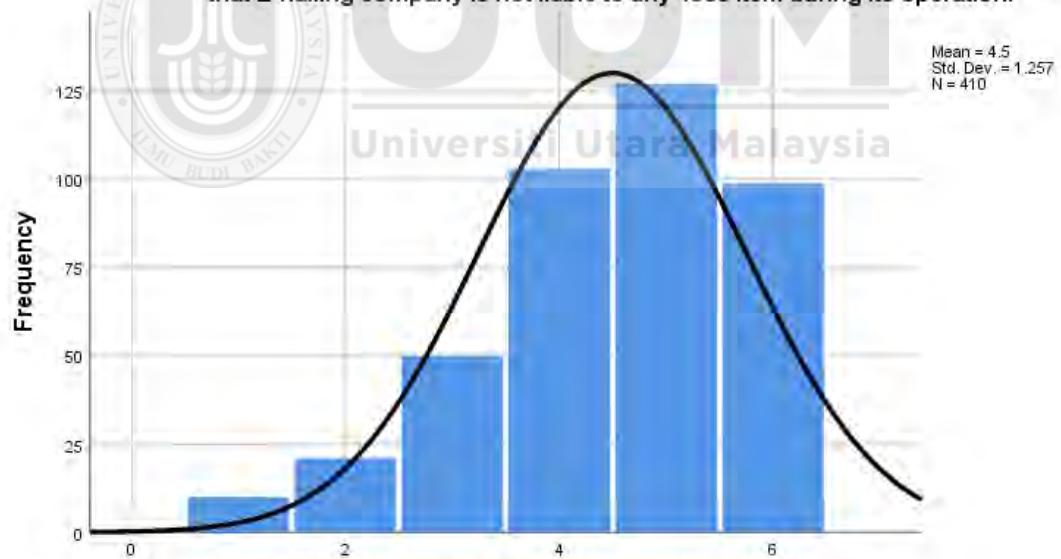


I am aware that not all loss happened during the E-hailing service or operation is liable to the E-hailing company.



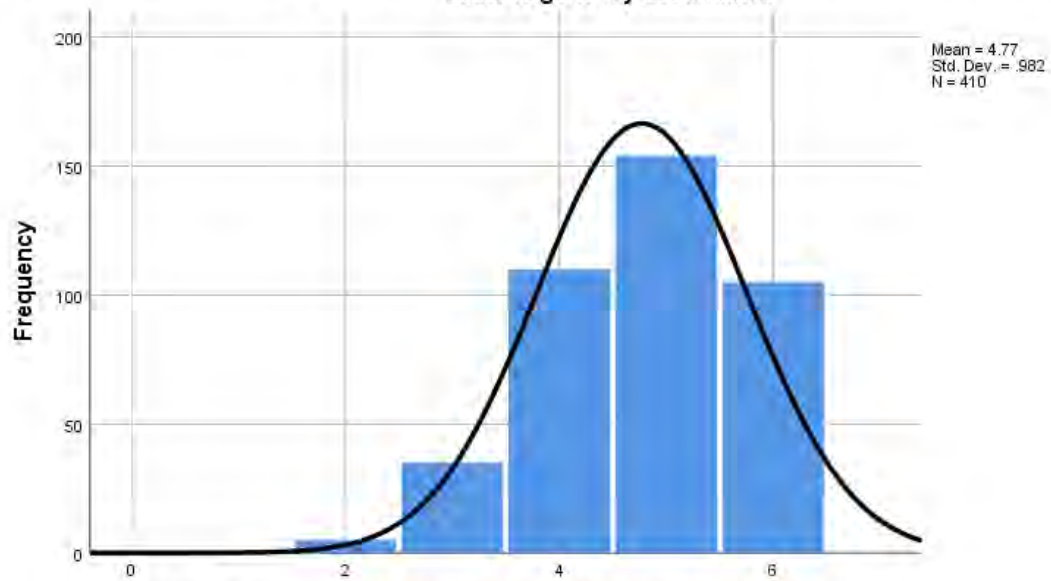
I am aware that not all loss happened during the E-hailing service or operation is liable to the E-hailing company.

If I lose my items while using the E-hailing service, I will make a police report immediately because I am aware that E-hailing company is not liable to any loss item during its operation.



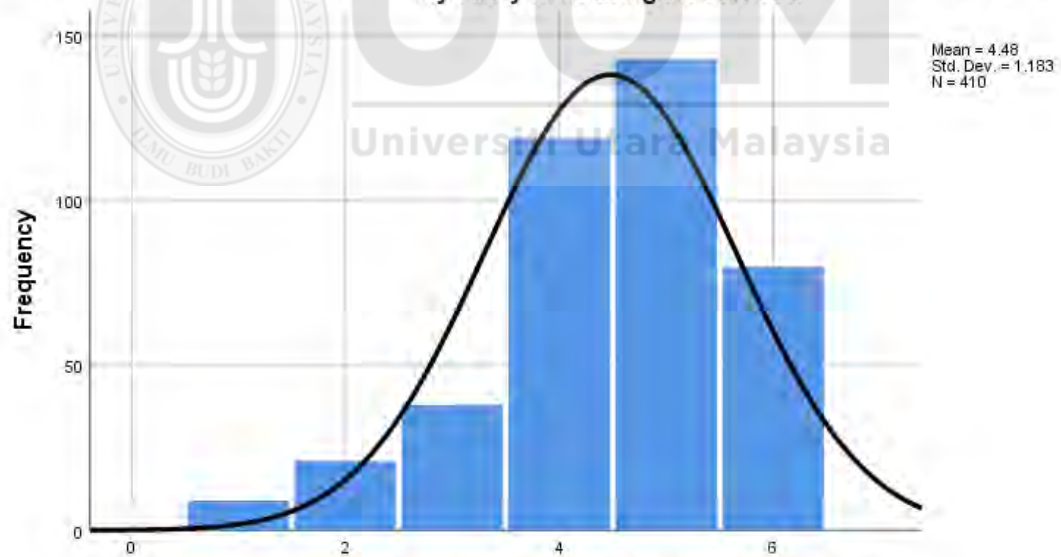
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I feel safe to use the E-hailing service/app because the app provides estimation time arrival and shows me the route to go to my destination.

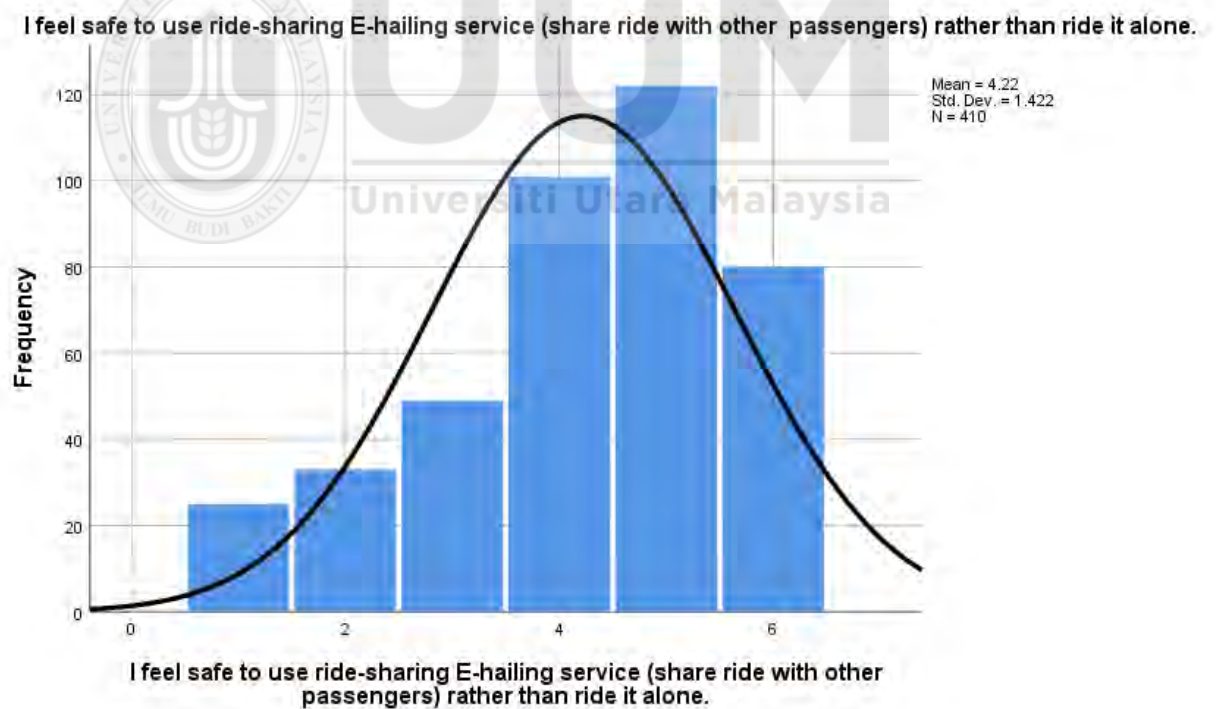
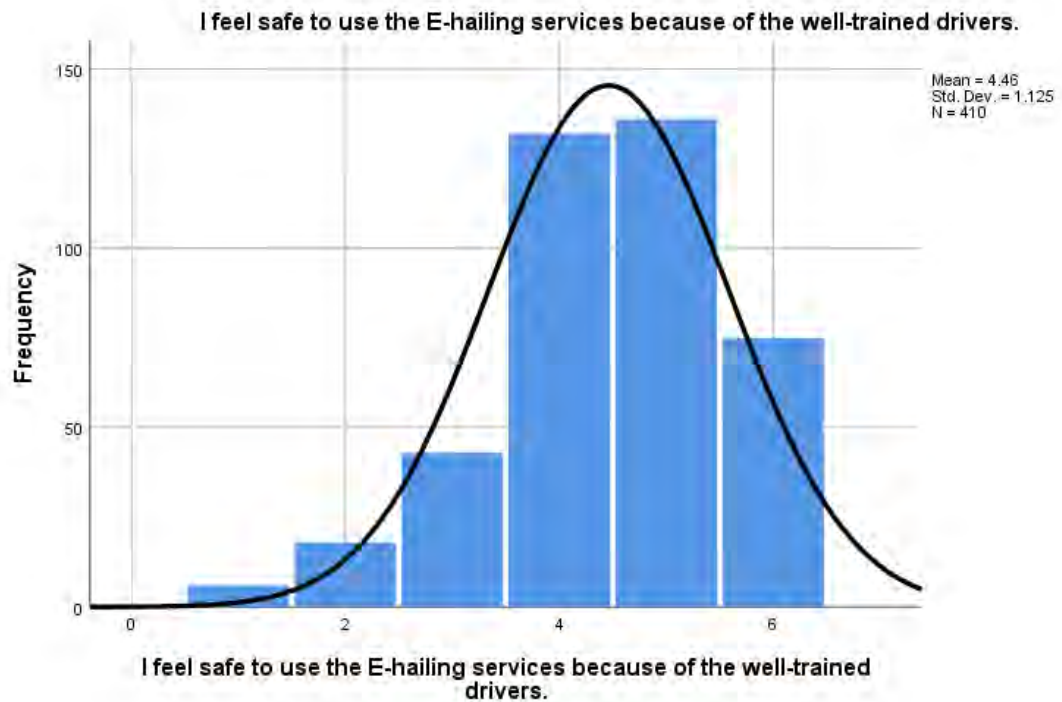


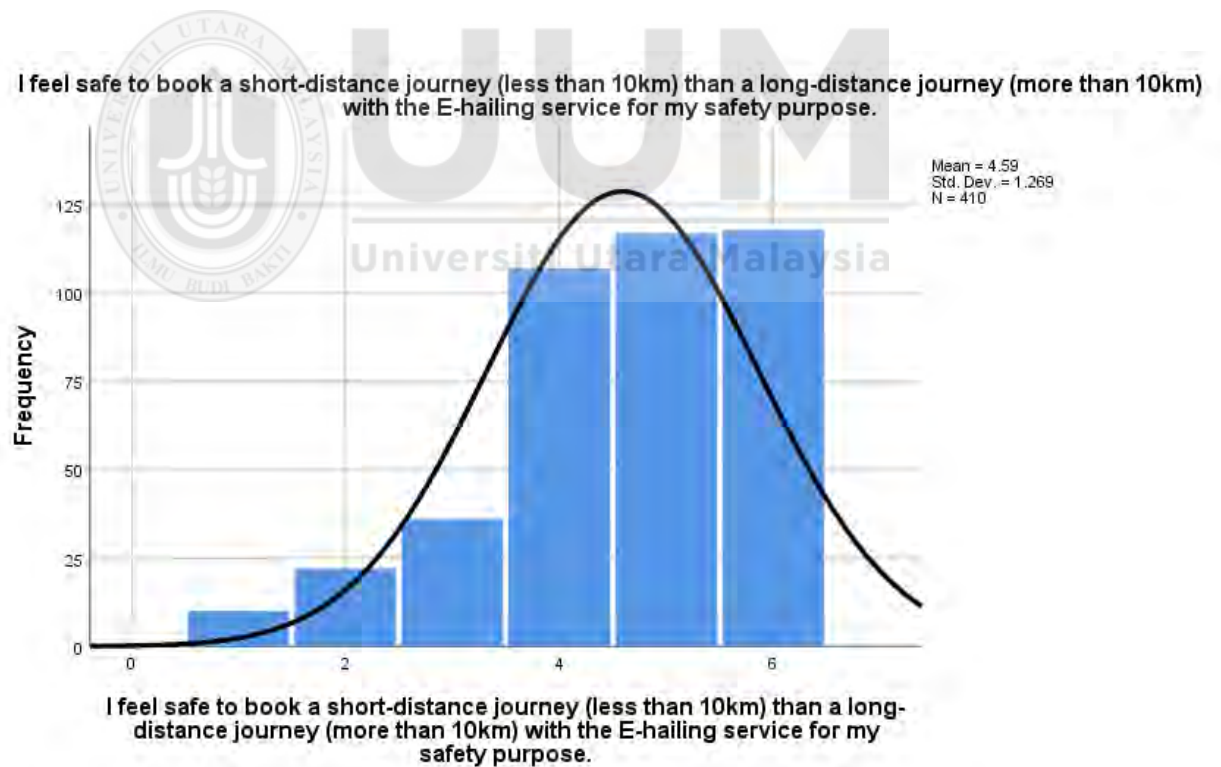
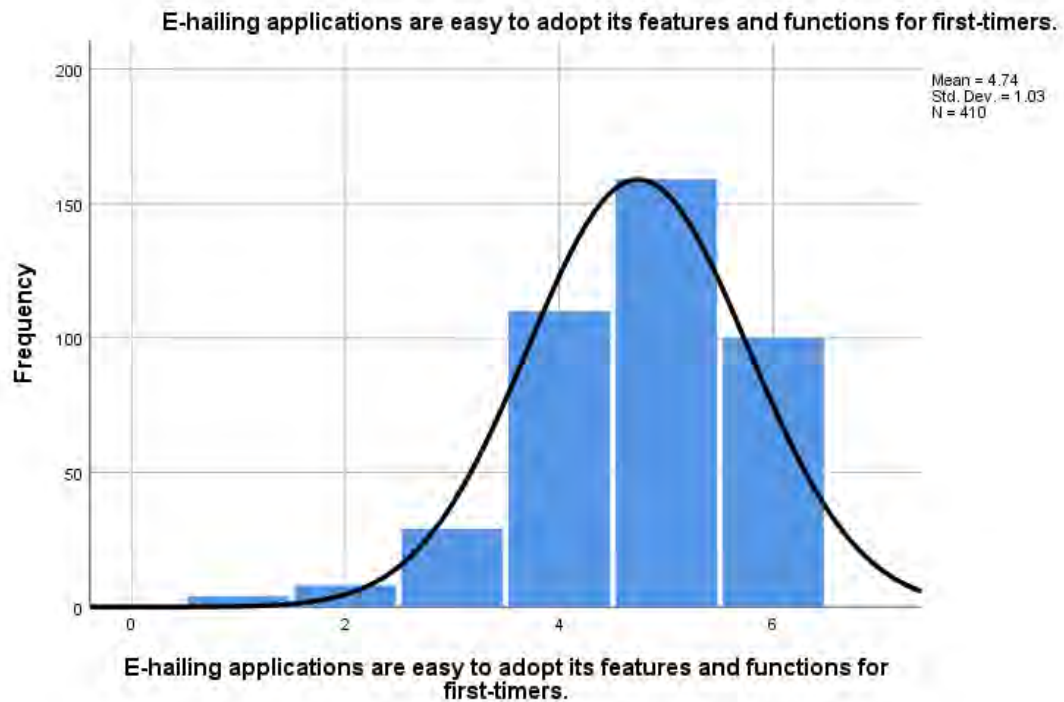
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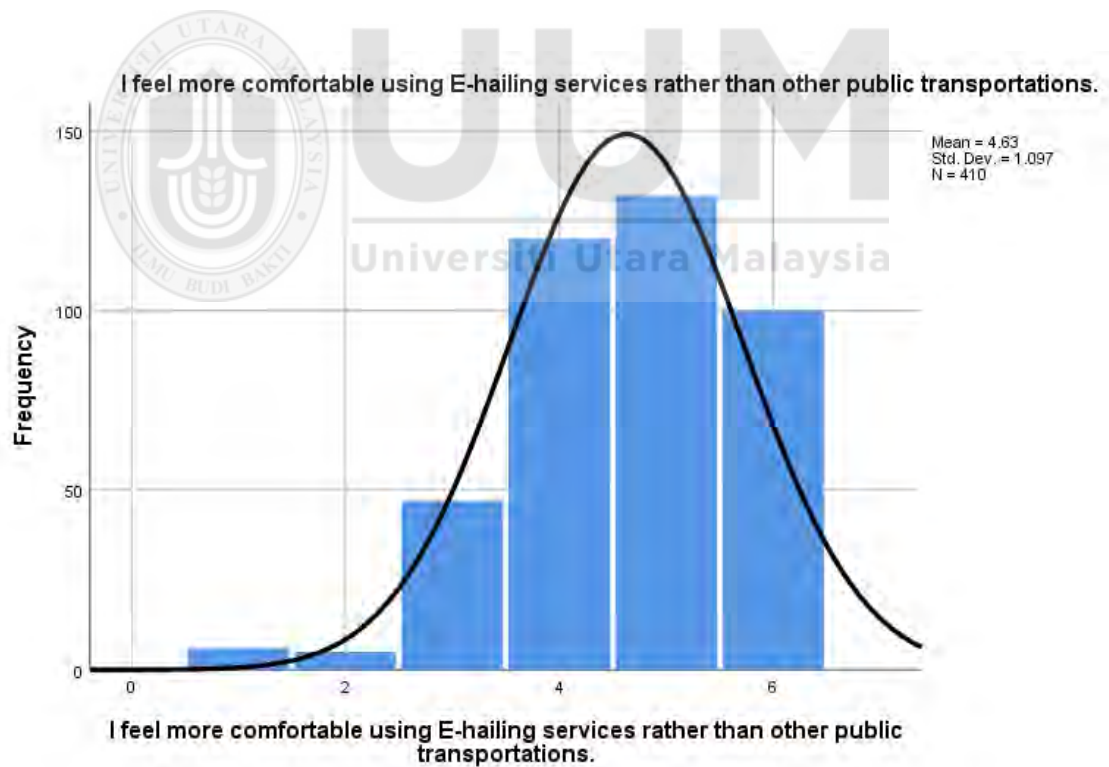
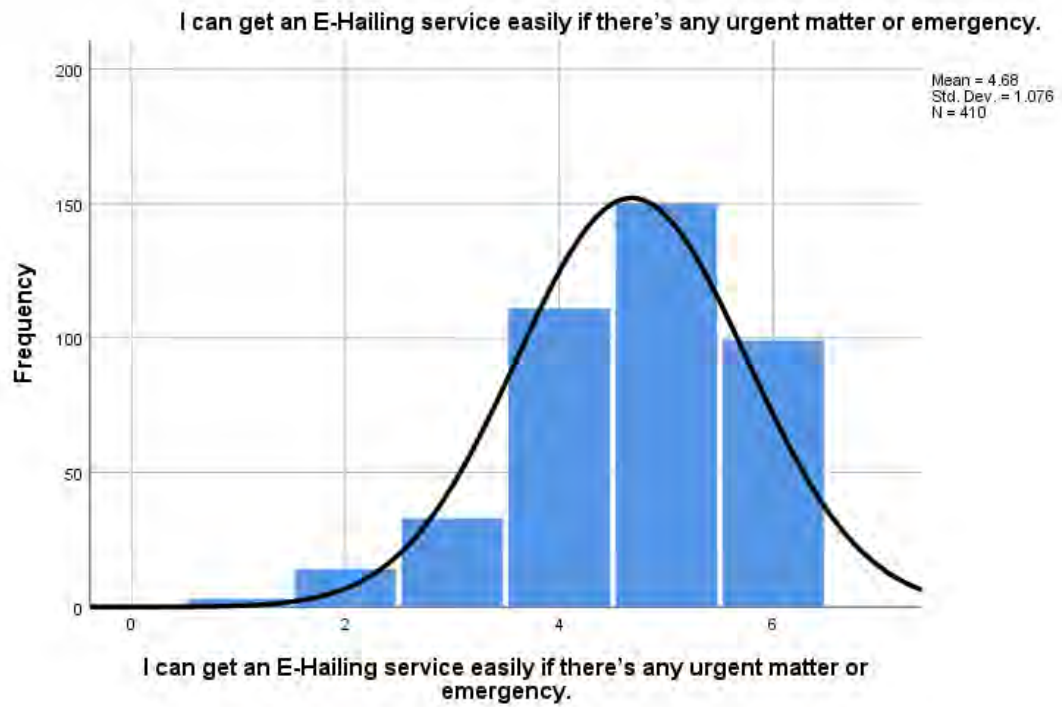
The E-hailing application has easy access to its help center (hotlines) for me to make any report especially for my safety while using the services.



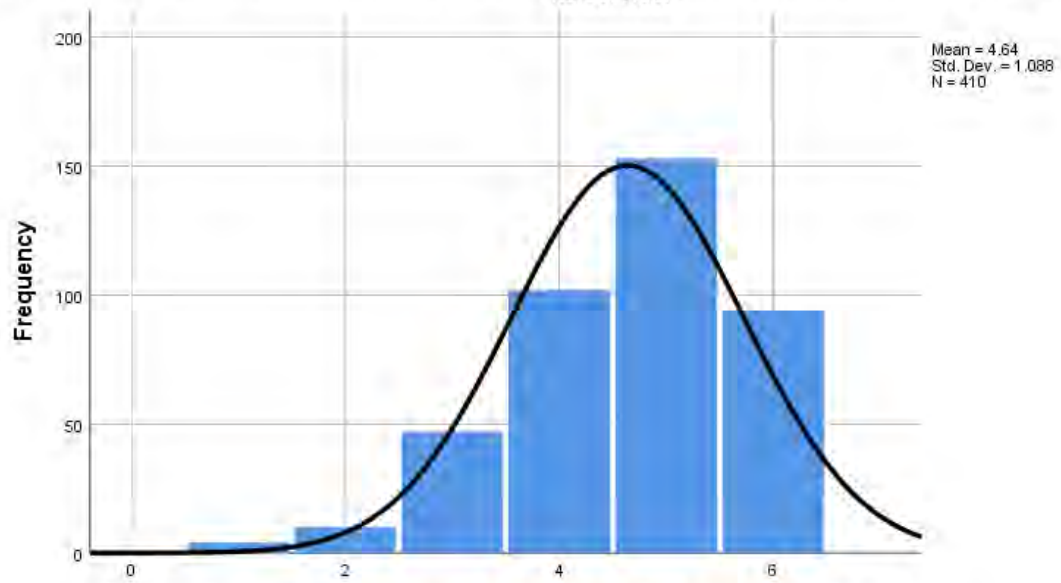
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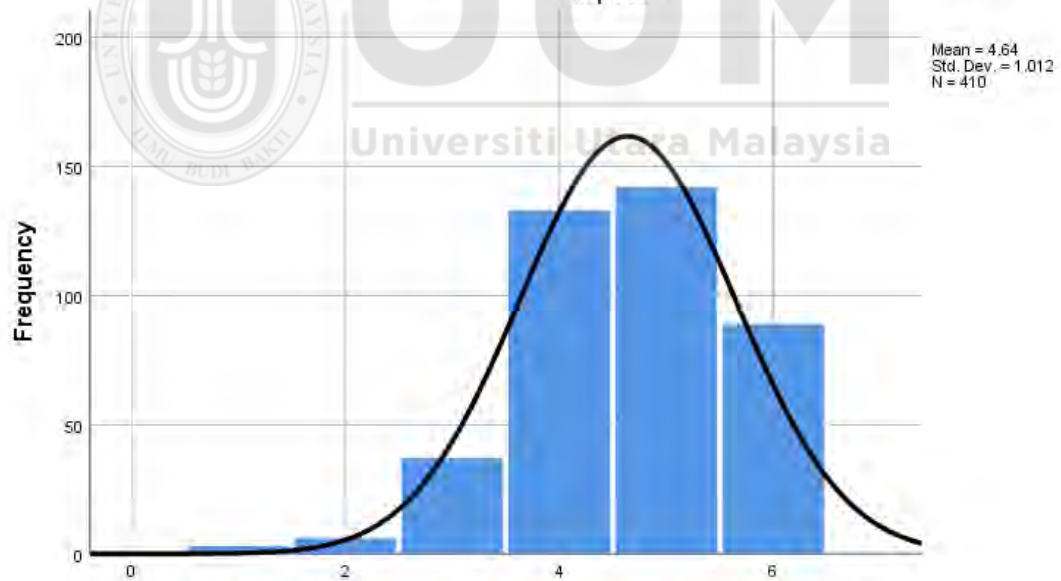


The E-hailing application is easy to adopt for me to make a report if there's something wrong happens during its service.

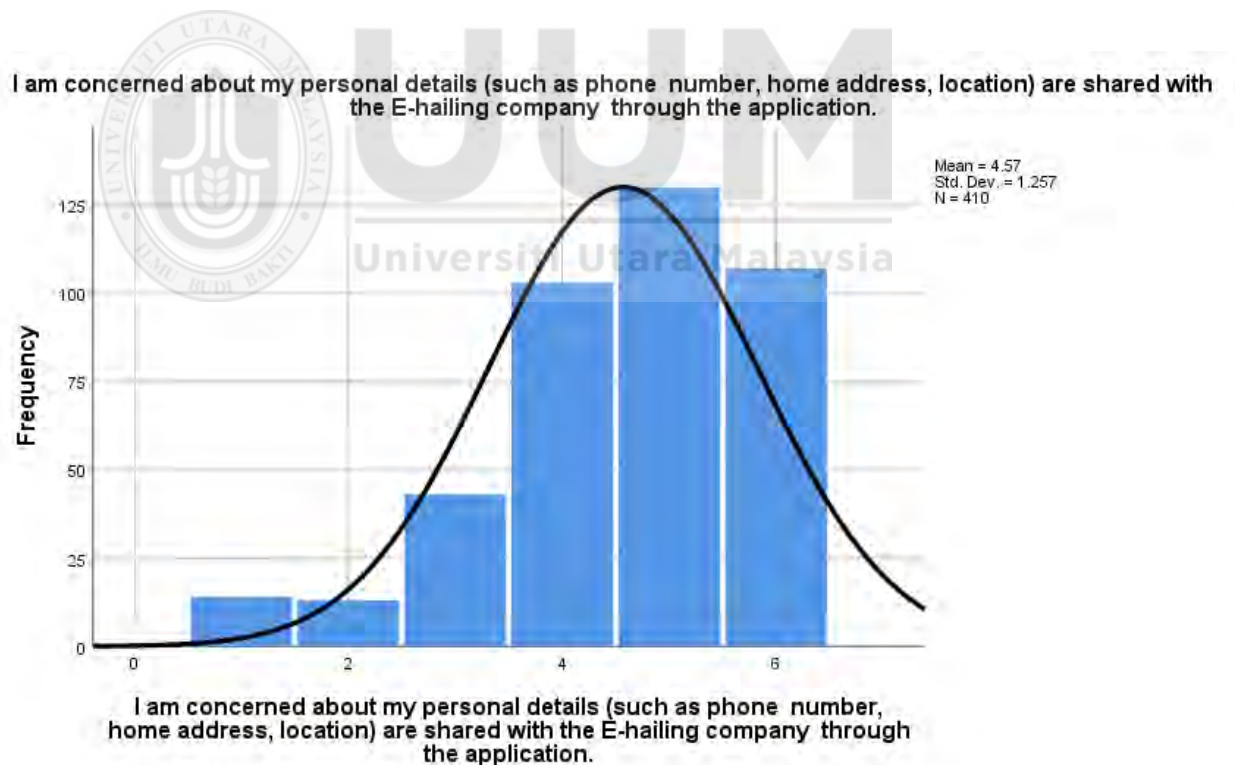


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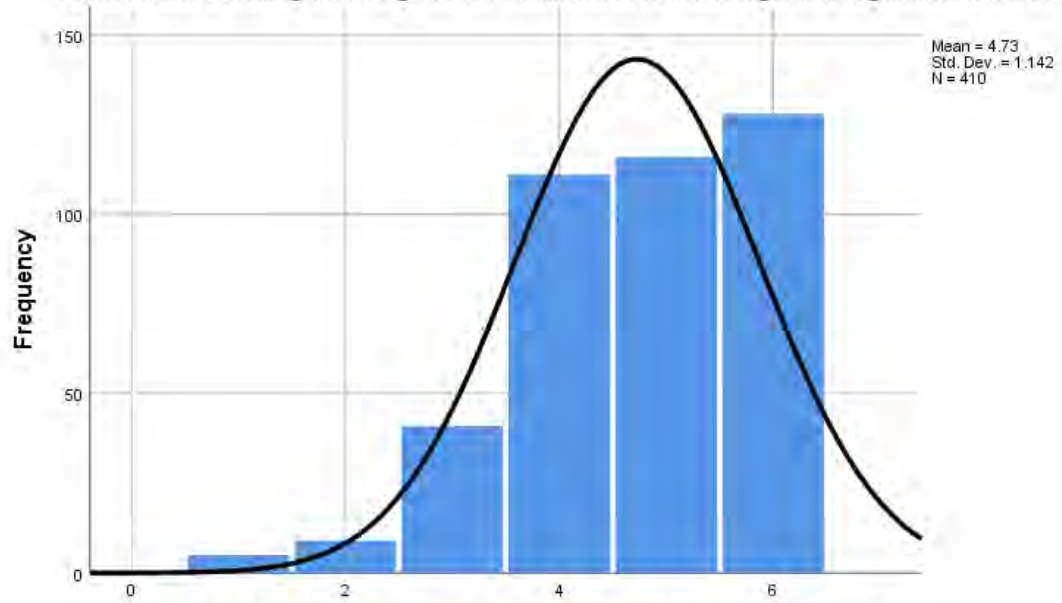
I trust that the E-hailing company would always support me if I had any concern related to its services in any aspect.



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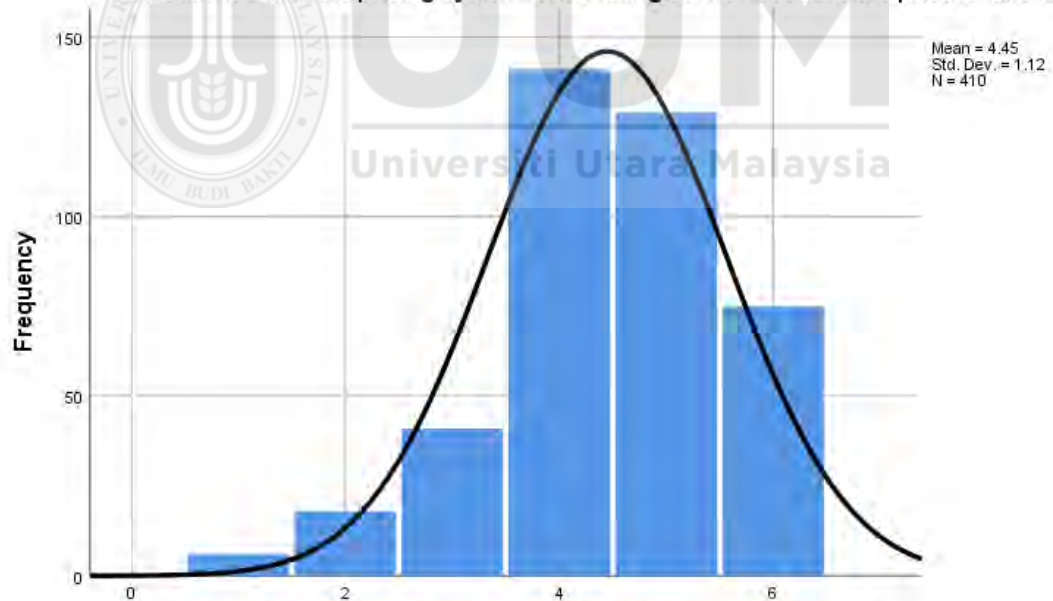


I believe that E-hailing service gives fair treatment in terms of legal and regulation towards its users.

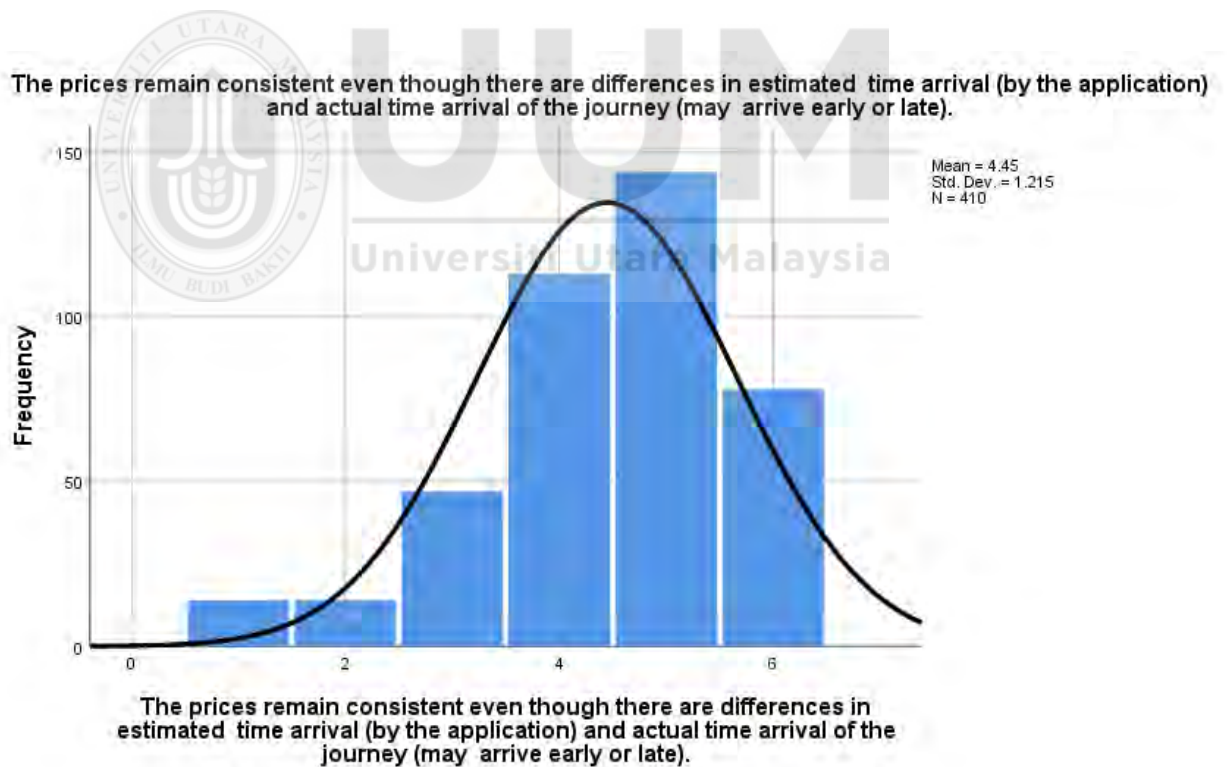


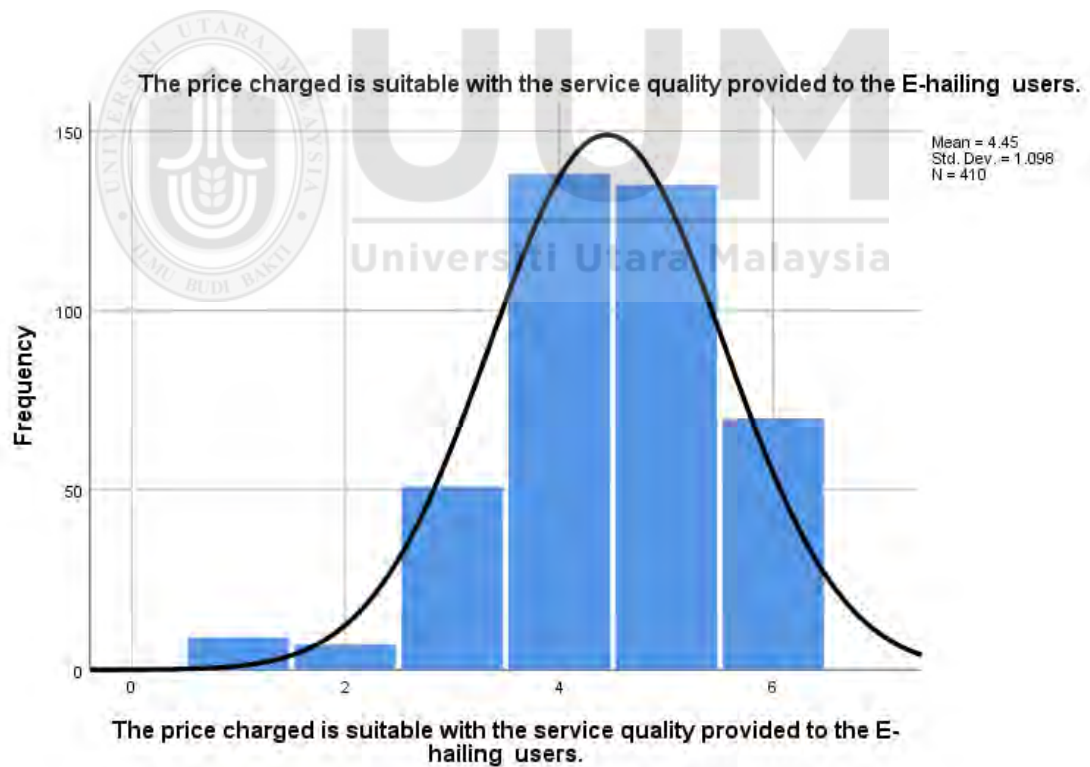
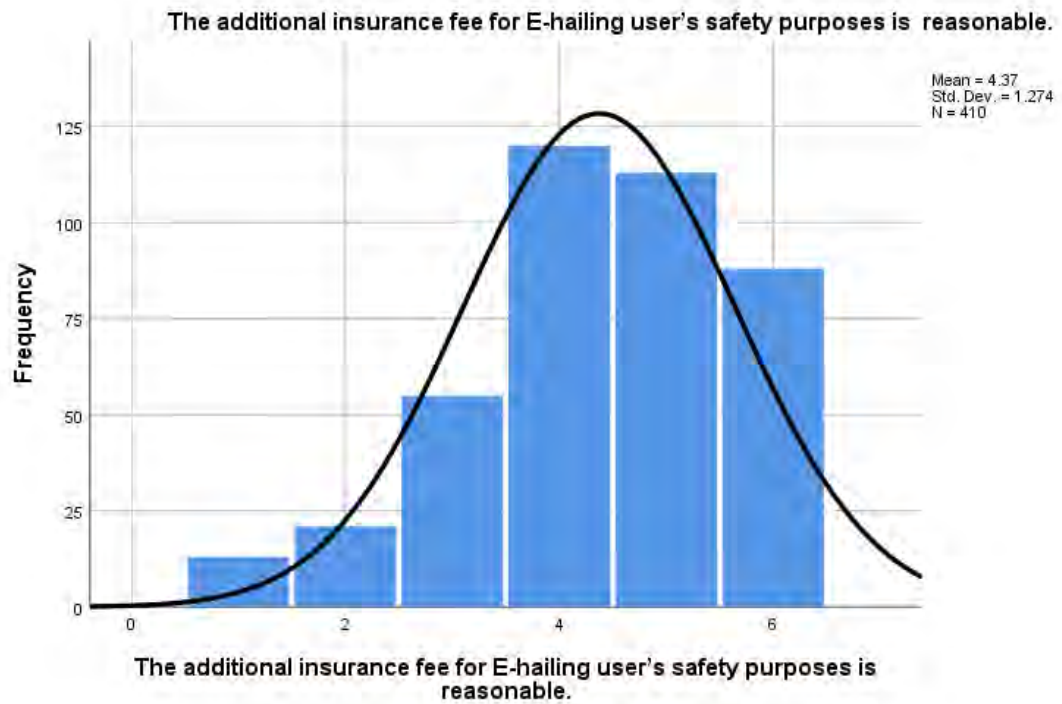
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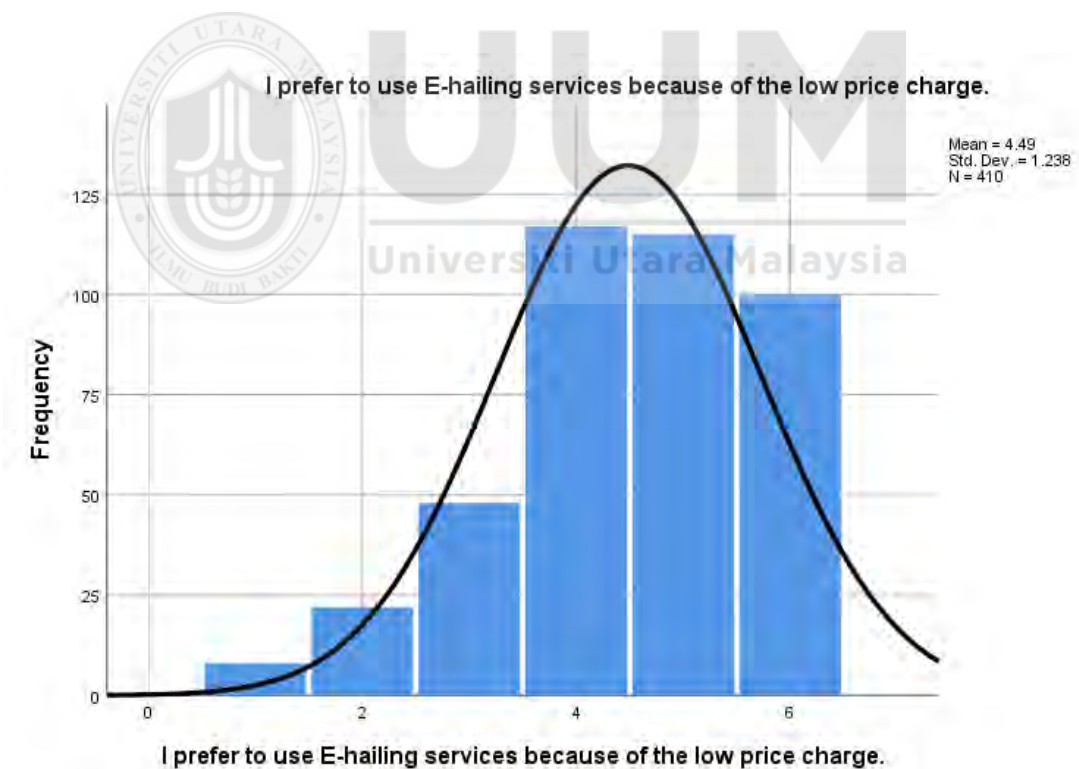
I am satisfied with the pricing system for E-hailing service because the price is affordable.

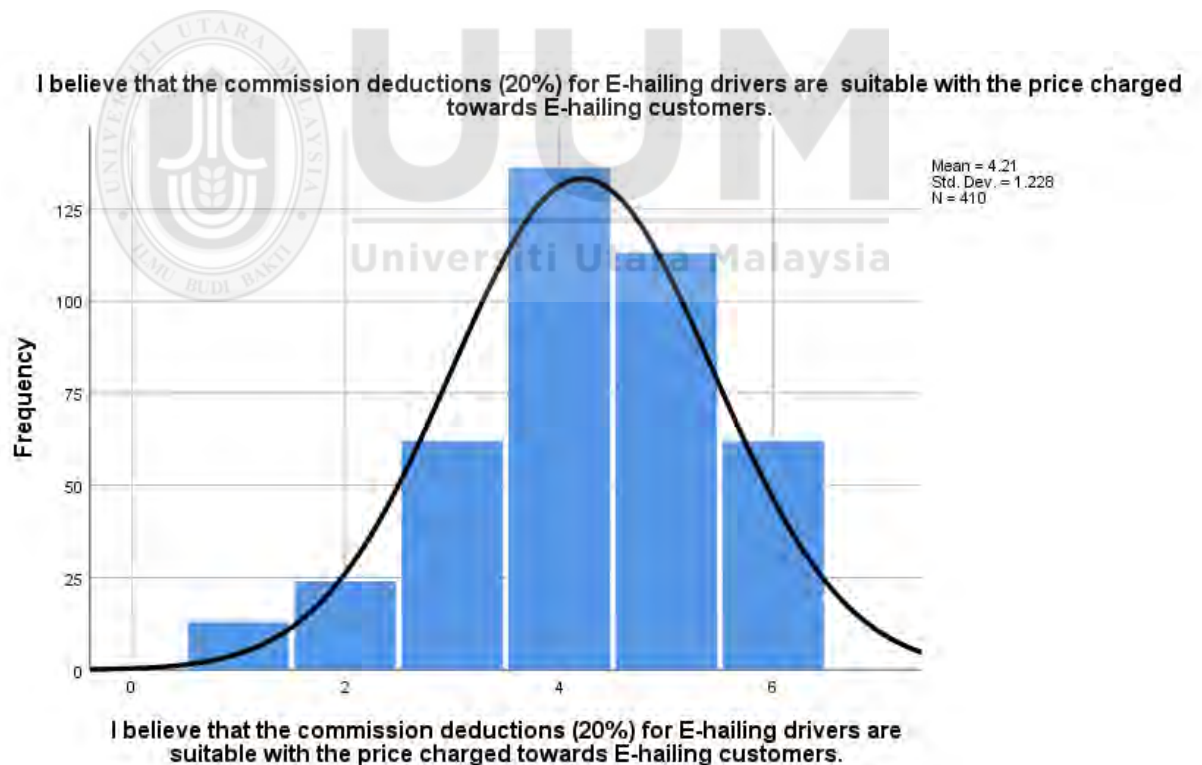
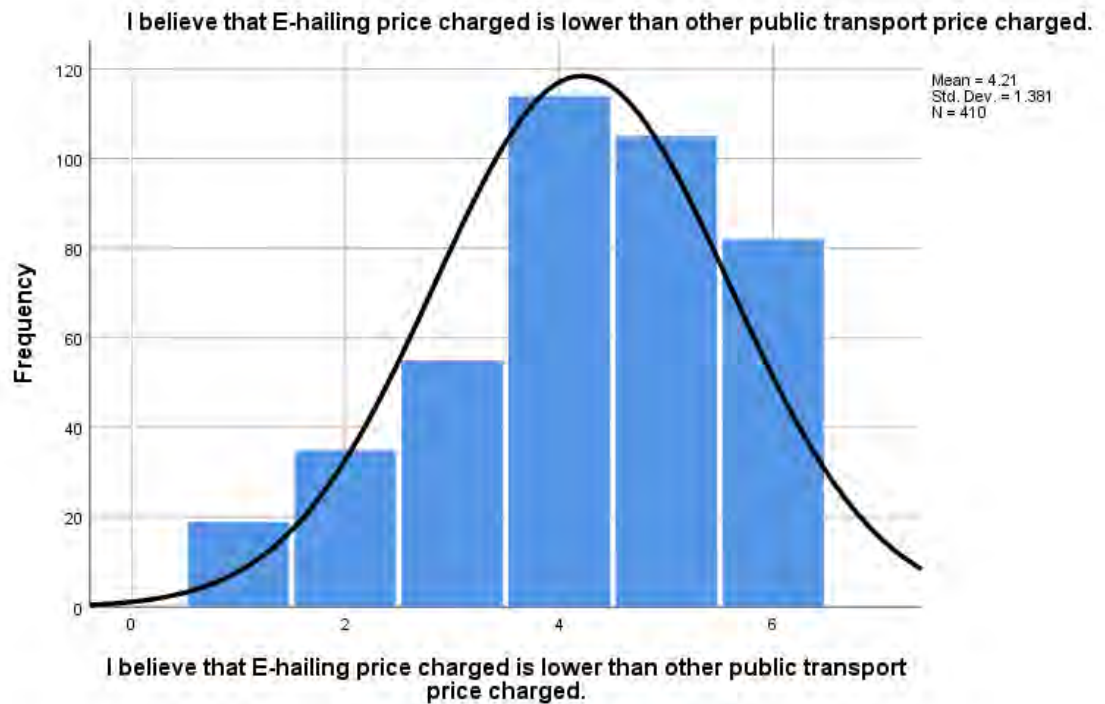


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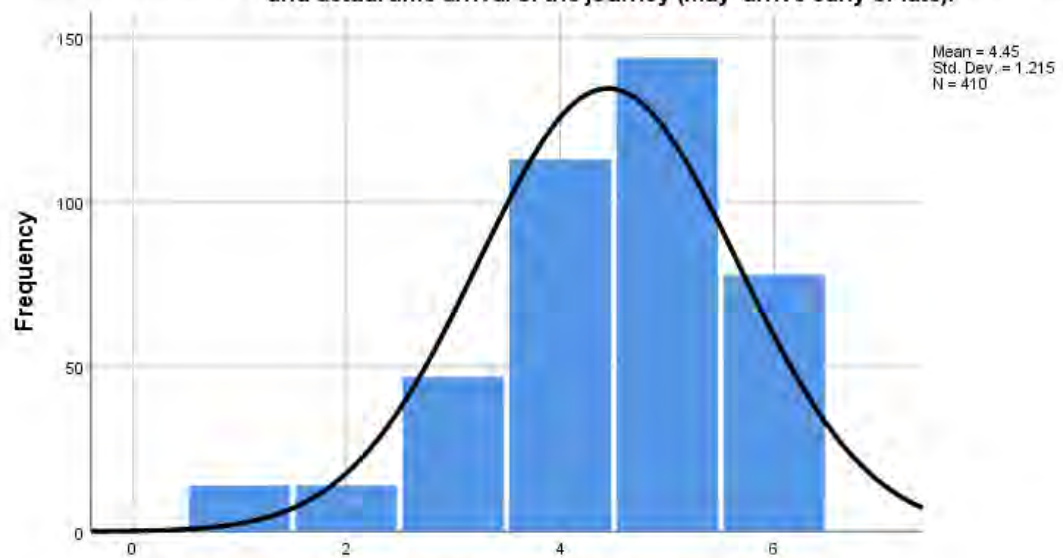








The prices remain consistent even though there are differences in estimated time arrival (by the application) and actual time arrival of the journey (may arrive early or late).



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