THE FACTORS INFLUENCING THE PURCHASE INTENTION OF ELECTRIC VEHICLES AMONG MALAYSIAN YOUNG ADULTS

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BY

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A final year project submitted in partial fulfilment of the requirement for the degree of

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(2) No portion of this FYP has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
(3) Sole contribution has been made by me in completing the FYP.
(4) The word count of this research report is 9957.

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DEDICATION

This research project is dedicated to Dr. Foo Meow Yee, my supervisor, whose experience and assistance have been important in refining my search abilities and understanding. Her guidance has been invaluable to my professional and academic growth.

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LIST OF ABBREVIATION

EVs	Electric Vehicles
BEVs	Battery Electric Vehicles
PHEVs	Plug-hybrid Vehicles
HEVs	Hybrid Electric Vehicles
TPB	Theory of Planned Behaviour
PE	Performance Expectancy
PV	Price Value
EC	Environmental Concern
PR	Perceived Risk
SI	Social Influence
PI	Purchase Intention
AEVs	Autonomous Electric Vehicles
IV	Independent Variable
DV	Dependent Variable
SPSS	Statistical Package for Social Sciences
ANOVA	Analysis of Variance

PREFACE

This research project is submitted as part of my final year project in partial fulfilment of the requirements for the degree of Bachelor of International Business (Honours) in Universiti Tunku Abdul Rahman. The study was supervised by Dr. Foo Meow Yee. The tittle of this research project is the factors influencing the purchase intention of electric vehicles among Malaysian young adults. The study examines five key factors that significantly influence the purchase intention of electric vehicles such as performance expectancy, price value, environmental factors, perceived risk, and social influence. These factors were carefully selected based on their relevance to consumer behaviour and their potential impact on the purchase intention of electric vehicles in Malaysia. Hence, this study aims to provide a clear understanding of the behaviours of young adults in Malaysia in the context of electric vehicles.

ABSTRACT

The automotive industry is undergoing a significant transformation with the rise of electric vehicles as a sustainable alternative to conventional fossil-fuel-powered cars. The purpose of this study is to find out the factors that will influence the purchase intention of electric vehicles among Malaysian young adults. Moreover, this study is specifically focused on the specific age group from 18 to 40. The factors studied that can influence purchase intention of electric vehicles among Malaysian young adults are performance expectancy, price value, environmental concern, perceived risk, and social influence. The study is using a quantitative approach. There are 203 sets of questionnaires that have received by using an online questionnaire in Google Form from the respondents; however, only 180 sets of questionnaires can be usable and analyzed by using the Statistical Package for Social Science (SPSS). The result shows that a positive relationship is observed between performance expectancy and social influence on intention to purchase electric vehicles. On the other hand, the implications of the study for the automotive industry, marketers, policymakers, government, and manufacturers are explained. Lastly, the limitations and recommendations will be explained and suggested for future researchers to make improvements. This research can contribute to the academic understanding of the factors of young adults' purchase intention towards electric vehicles in Malaysia and behavior in the changing automotive industry.

Keywords: electric vehicles, performance expectancy, price value, perceived risk, social influence, purchase intention, PE, PV, PR, SI, PI

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

The purpose of this study is to have a better understanding on Malaysian young adults' purchase intention towards Electric Vehicles (EVs). This chapter will include research background, problem statement, research objective, research questions, and significance of the study in this research.

1.1 Research Background

Nowadays, there are two of the most common types of motorized vehicles, such as cars and trucks on the road. Currently, the automotive industry is continuously growing and getting more trendier with the market. The industry keeps improving in speed, range, safety, comfort, and fuel efficiency consistently. The innovative technologies combined with more optimized production processes have made many people more affordable to the vehicles in daily life. However, with the increasing number of vehicles, the air pollution has become more serious due to conventional vehicles heavily reliant on fossil fuels. Due to these concerns, the automotive industry is starting to shift towards electric vehicles. Electric vehicles are vehicles that use renewable energies like wind, solar, or hydropower to run on electric energy as their power source (Brinkmann & Bhatiasevi, 2021).

According to Susskind et al. (2020), Malaysia is one of the highest among ASEAN countries for greenhouse gases globally in the year 2015 due to the carbon dioxide emissions affected, which were very high at 7.27 million tonnes per capita emission. This has been viewed as a threat in the country. This is because many people rely on privately owned vehicles rather than the public transportation. Therefore, the Malaysian government aims to adopt electric vehicles to help reach its goal of zero

emissions by 2050 because it can lower emissions by up to 30%. The National Energy Transition Roadmap (NTER) targets Electric vehicles to make up 80% of all vehicles by 2040 (Energy Watch, 2024).

In Malaysia, young adults tend to show high awareness, knowledge, and positive attitudes when coming to environmental sustainability (Rahman, 2020). According to Khazaei (2019), young adults tend to imitate their peers as they can easily be influenced when making purchase decisions. This means if their friends, colleagues, and relatives highlight the advantages of electric vehicles, there is a high possibility young adult will consider purchasing it. Young adults can be grouped at 18 to 30 years old (Wilkinson & Dunlop, 2020). However, people that are aged 36-40 also have similar purchase behaviours with 20s to 30s (Porch, 2019). Therefore, it can be considered in the young adult age range group.

Electric vehicles can be described in terms of battery electric vehicles (BEVs), plug-in hybrid vehicles (PHEVs), and hybrid electric vehicles (HEVs). All these vehicles use electricity for improving vehicle efficiency (U.S. Department of Energy, 2021). In recent years, electric vehicles have gained market attractions and become more popular due to their characteristics as an alternative fuel vehicle (Zhuge et al., 2019). There is no denying the fact that electric vehicles will be a great help to solve many environmental problems, such as reducing dependence on oil, air pollution, environmental protection, sustainable consumption, and so on. These problems have been recognised by many countries; thus, they have implemented policy incentives to push and encourage people right into the electric vehicles market (Zimm, 2021).

According to Siddharta (2024), the automotive market in Malaysia was expected to recover and rise by an estimated 12% in 2023 after the Covid-19 pandemic. However, the Malaysian Automotive Association (MAA) is still of the view that even though Malaysia is not as developed as other countries, it still believes that the electric vehicles market will continue to grow in Malaysia because the results show that the electric vehicles sales volume increased by about 280% in 2023. Furthermore, the Malaysian government has also exempted import and excise duties for electric vehicles until 2024. The electric vehicle market might become

one of the leading sectors in the Malaysian automotive industry because of the incentives. The Malaysian government also subsidizes electric vehicles to encourage Malaysians to choose battery power over petroleum power for their next vehicle purchase by exempting road tax, subsidizing, providing charging facilities, tax incentives for manufacturers, boosting for charging operators for electric vehicles infrastructure, and charging stations to be eligible for a 70% tax exemption for 3 years (Yusry, 2024).

1.2 Problem Statement

The article highlights that many Malaysians are unaware of advantages electric vehicles performance. This can lead potential consumers to have concern about whether it can satisfy their needs and expectations, then reluctance to have intention to purchase electric vehicles without a clear understanding of how it performs compared to conventional vehicles. People who are unaware of the advantages may perceive electric vehicles as a less attractive option. Additionally, there is a knowledge gap about electric vehicles' performance (Arifin, 2023). This has created a need to understand the role of performance electric vehicles.

Next, safety concerns about the functionality of electric vehicles will also become a purchase barrier for Malaysians. Each of the electric vehicle models is equipped with a high-voltage electrical system that ranges from 100 to 800 volts. This has raised people concerns and afraid about the electric vehicles, whether it is overcharged, and whether there will ever be an electrical short circuit (Rizon, 2023). These concerns are considering viewing as risk concerns from the Malaysians. Thus, it is important to examine if these risks discourage people from intentionally to purchase electric vehicles and engaging in this behaviour in this study.

In addition, electric vehicles have a high initial cost, which is more expensive to purchase. The selling price in Malaysia ranges from RM150,000 to RM700,000, which is higher than the purchasing power of middle-class and lower-class groups (Yean, 2022). Although the government provides tax relief for purchasing electric

vehicles, the higher upfront price remains a significant barrier for many consumers. For example, the battery can be expensive due to its degradation over time, which means there is a high cost for replacement, adding financial burden and uncertainty for consumers (Yusry, 2024).

In contrast to these barriers, study shows that young adult tends to imitate their peers as they can easily be influenced when making purchase decisions (Khazaei, 2019). Furthermore, Ernst & Young's (EY) Energy transition consumer insights report that 81% of Malaysian young adults are willing to pay for sustainable products due to environmental concerns (Bernama, 2024). Young adults are viewed as knowledgeable about technology which is technology savvy. Some of them also have started to enter their prime spending years (Vafaei-Zadeh, 2022).

According to Samarasinghe et al. (2024), the study has focused on graduate professionals those under 30 years of age in Sri Lanka's Colombo district, which limits their findings of generalizability and suggests to broaden sample demographic. Therefore, this research will broaden the demographic from 18 to 40 age group and specifically address the unique preferences and concerns of young adults in Malaysia. Young adults are viewed as knowledgeable about technology which is technology savvy. Some of them also have started to enter their prime spending years (Vafaei-Zadeh, 2022). Because this specific group can be influenced by their peers, attitudes, and distinct lifestyles toward technology. According to Aréchiga et al. (2022), it is considering the demographic can give the reverse effect without identifying personalized interventions for specific demographics, which strengthens opposition to electric vehicles.

While previous studies have extensively examined many factors such as performance expectancy, price, risk of influence on electric vehicles purchase intention, this study will incorporate environmental concern and social influence. Additionally, Zaino et al. (2024) suggested that further research is important to conduct a behavioural study to understand consumer behaviour insights and help businesses, government to develop effective strategies and policies, as well as encourage broader electric vehicle intention to purchase. This research can address

the gap and provide understanding the factors that influence Malaysian young adults' purchase intention toward electric vehicles.

1.3 Research Objectives

1.3.1 General Objectives

The main root of this research is to understand the factors influencing the purchase intention of electric vehicles among Malaysian young adults.

1.3.2 Specific Objectives

1. To investigate the relationship between performance expectancy and the purchase intention of electric vehicles among Malaysian young adults.
2. To examine the relationship between price value and the purchase intention of electric vehicles among Malaysian young adults.
3. To assess the relationship between environmental concern and the purchase intention of electric vehicles among Malaysian young adults.
4. To determine the relationship between perceived risk and the purchase intention of electric vehicles among Malaysian young adults.
5. To evaluate the relationship between social influence and the purchase intention of electric vehicles among Malaysian young adults.

1.4 Research Questions

1. Is there a significant relationship between performance expectancy and purchase intention of electric vehicles among Malaysian young adults?

2. Is there a significant relationship between price value and purchase intention of electric vehicles among Malaysian young adults?
3. Is there a significant relationship between environmental concern and purchase intention of electric vehicles among Malaysian young adults?
4. Is there a significant relationship between perceived risk and purchase intention of electric vehicles among Malaysian young adults?
5. Is there a significant relationship between social influence and purchase intention of electric vehicles among Malaysian young adults?

1.5 Significance of the Study

The significance of this research is to understand the factors influencing the purchase intention of electric vehicles among Malaysian young adults. By examining these factors and focus on specific consumer demographic, the researchers can understand and gain deeper insights into the reason behind of purchase intention for electric vehicles.

Next, the findings from this study can help companies and marketers in creating specific marketing strategies and programs for incentives to fit the preferences and expectations of Malaysian young adults. By understanding and gaining insights into them, this can potentially increase the purchase intention rate of electric vehicles.

Moreover, by understanding the factors influencing purchase intention, this can help the government in developing policies to promote the intention to purchase electric vehicles. They can make an effective design and implement decision of policies, subsidies, and public awareness initiatives to address the barriers to electric vehicles purchase intention.

Next, based on the problem statement mentioned, previous studies have overlooked this demographic. To fill a gap in the existing literature, this study contributes to academic knowledge, which specifically focuses on the preferences and concerns of Malaysian young adults based on the purchase intention of electric vehicles.

Therefore, this study is expected to enhance and provide valuable insights to the body of knowledge about young adults' behaviour in relation to the intention to purchase electric vehicles in developing countries like Malaysia.

1.6 Chapter Layout

This study has a total of five chapters, with the sequence from introduction, literature review, methodology, and data analysis to the last chapter being discussion and conclusion. The concern of each chapter is explained below:

Chapter 1: Introduction

In the introductory chapter, there is an overview of the study context, explanation of the research problem, the significance of the study, and research questions.

Chapter 2: Literature Review

In this chapter, there are all independent variables, and dependent variables will be discussed by using relevant journals of other researchers. Proposed research frameworks and proposed hypotheses will be developed based on the research objectives and research questions.

Chapter 3: Methodology

In this chapter, research and sampling design, which include sampling frame used, sampling technique, and sample size of the research, will be discussed. Data collection method and proposed data analysis will also be included.

Chapter 4: Data Analysis

This chapter will show the results and analyses of the results that are relevant to the research question and hypothesis proposed. Other than that, this chapter will also include the discussion of descriptive analysis, scale measurements, and inferential analyses.

Chapter 5: Discussion and Conclusion

In this chapter, a summary and conclusion of the whole study will be presented, as well as discussion of major findings, implications, limitations, and recommendations of the study.

1.7 Conclusion

This chapter one introduced the research background and problem. Following by provided the general and specific research purpose, as well as the significance of the study.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In this chapter, it will provide the theory, independent variables, dependent variables, and the research framework. The theory is Theory of Planned Behaviour (TPB). The independent variables are performance expectancy, price value, environmental concern, perceived risk, and social influence. The dependent variable is intention to purchase electric vehicles among young adults. Moreover, conceptual framework will also be developed.

2.1 Theory

2.1.1 Theory of Planned Behaviour (TPB)

The electric vehicle market has continued to attract the attention of researchers who want to understand the factors behind young adults' intentions to purchase eco-friendly vehicles. In this study, will be expanded the Theory of Planned Behaviour (TPB) by incorporating additional variables that can be used to examine the factors influencing Malaysian young adults' purchase intentions towards electric vehicles. Yeğin and Ikram (2022) stated that TPB can identify a consumer's purchasing intentions and brand preferences. There are three factors which are attitude, subjective norm, and perceived behavioural control influencing behavioural intention. The attitude is an individual's evaluation of the behaviour in question, usually judged as positive or negative. The subjective norm is the influence of others on the individual's behaviour. Perceived behavioural control is when consumers conducting the behaviour, how easy they perceive or difficulty, which can influence their intention and behaviour (Ajzen, 1991). The TPB is a widely

used model. This can be helpful on intentions to purchase electric vehicles. By understanding their behavioural intention, it can help to address these barriers such as psychological barriers, limited charging infrastructure, short-term battery life, costs, knowledge gaps, fear, and so on (Yeğin and Ikram, 2022). Sang and Bekhet (2015) found that environmental concern and demographic has a significant impact on the purchase intention of electric vehicles. This indicates that it is important to include environmental concern into the study and focus on the specific demographic. In addition, Ng et al. (2018) explored the TPB framework on members of car communities in Hong Kong and identified psychological factors that have a significant influence, such as the perceived performance of electric vehicles which better explained purchase intention towards electric vehicles.

Moreover, in the recent research, the TPB model has been expanded. According to Li et al. (2020), an expanded TPB was used to study the relationship between policy mix characteristics and psychological factors. They found that consumers can be influenced by both of the purchase intentions. Dutta et al. (2021) also showed that the modified TPB model had higher predictive power compared with the traditional TPB to examine the barriers influencing consumers' intention to purchase electric vehicles. Furthermore, Hamzah et al. (2021) integrated the TPB to investigate antecedents of Malaysians' purchase intention of electric vehicles. As a result, it shows with a new and fresh perspective for future research in developing economies. Other than that, Yadav and Pathak (2016) highlighted that TPB can effectively predict young consumers' purchase intention of green products.

However, Hasan (2021) argued that TPB's predictive power is limited because of its assumptions of rational decision-making and insufficient determinants. Not only that, Asadi et al. (2021) stated that TPB only emphasized self-interest factors. However, the intention to purchase an electric vehicle involves not only innovation adoption behaviour, which is based on rational self-interest, but also pro-environmental behaviour (Rezvani et al., 2015). Based on previous studies, extended TPB has been used to

explain the relationships but has neglected variables such as, price value, perceived risk, and environmental. These variables are considered critical factors of purchase intention of electric vehicles (Vafaei-Zadeh et al., 2022).

The traditional TPB focuses on attitudes, subjective norms, and perceived behavioural control as the primary determinants of intention to purchase. Zong et al. (2023) argued that these traditional TPB are not strong enough to explain consumers' purchase intention. Yazdanpanah and Forouzani (2015) stated that the TPB model is highly flexible and continues to evolve, with several extensions formulated to enhance its predictive power. Ajzen (1991) pointed out that it allows to incorporate more variables into the TPB model that can enhance the model's explanation of behaviour if there is a significant influence. Therefore, this study will expand the TPB framework by incorporating by adding variables of performance expectancy, price value, environmental concern, perceived risk, and social influence.

2.2 Independent Variables

2.2.1 Performance Expectancy (PE)

In the TPB, performance expectancy is considered closely related to attitudes toward a behaviour. This is because attitudes are behaviour evaluations that can be positive or negative. When consumers repeatedly perform a behaviour, it can become bound to strong intentions that can also be influenced by their expectations of positive results. Performance expectancy is defined as "expectation of performance." It means a person believes or thinks that technology can facilitate their daily task performance and achieve performance gains in an effective and efficient ways, as well as provide benefits to them. In this context, performance expectancy is regarded as the most significant predictor of behavioural intention in understanding consumer intention to purchase new technologies (Venkatesh et al., 2012). Jain et al.

(2022) stated that performance expectancy is consumers' expectations about how good electric vehicles performance is, which is influenced from attributes, such as reliability, performance, and top speed. Comparing to conventional vehicles, the electric vehicle has more advantages which can provide faster acceleration, noise reduction, and a smoother driving experience (Skippon, 2014). There is much research that has proved that performance expectancy plays a crucial role and can significantly influence the intention to purchase electric vehicles. In the research from Jain et al. (2022) discovered that although travel range is often considered the biggest disadvantages of electric vehicles, however, this did not strongly hinder consumers' positive perceptions of the performance benefits of electric vehicles. Therefore, it has a greater influence their purchase intentions. Zhang et al. (2022) also conducted a study which showed that performance metrics had a greater influence on consumers' confidence and value perceptions of electric vehicles. According to Gunawan et al. (2022), attitude towards use was the most influential factor, which was performance expectancy can influence the purchase intention. When consumers perceived high performance of the electric vehicles, they tend to form an intention to purchase it (Jain et al., 2022).

2.2.2 Price Value (PV)

Price Value is defined as consumers' expectations around cost management and the relationship that broadly influences consumers' purchase intention of a product, which is cost-benefit (Wang et al., 2023). In simple terms, price value is to be described as how customers control their expectations and expenses, as well as how they view a product that can provide cost-benefit to them. When the perceived benefits of a new technology and the cost to acquire it are balanced, it can influence the consumers' intention to purchase new technology (Vafaei-Zadeh, 2022). Because consumers will evaluate the costs and perceived benefits or values. If the benefits or value exceed expectations, it will increase their satisfaction level. Therefore, consumers who believe that

a product is more about having a price advantage, they tend to have a positive attitude towards it (Venkatesh, 2012).

In the research from Khazaei (2019) stated that price value can influences potential consumers have intention to purchase an electric vehicle. Currently, conventional vehicles are more affordable than electric vehicles. Therefore, governments are offering financial incentives such as tax reductions and subsidies to make electric vehicles more attractive to consumers. Additionally, it has a more lower running costs, such as less expensive than petrol or diesel. It can help to lower operating expenses and requires less maintenance than conventional vehicles (Alanazi, 2023). The higher the expected reduction in long-term costs, the higher the perceived price value. This will enhance consumers to save money when they understand that using an electric vehicle can reflect high perceived price value. Therefore, they may think that purchasing an electric vehicle is significant and appropriate, influencing their attitude toward buying the vehicle (Vafaei-Zadeh et al., 2022). According to Gunawan et al. (2022) suggested that consumers who perceive a correlation between the price and quality of electric vehicles are more likely to have an intention to purchase it and show a greater interest in using them.

2.2.3 Environmental Concern (EC)

Due to the large amounts affected by the greenhouse gas emissions and resulting environmental deterioration in recent years, people are starting to purchase the green products, participate in environmental protection activities, as well as changing to a low-carbon lifestyle to reduce environmental deterioration (Wang et al., 2017). According to Wu et al. (2019), environmental concern can be defined as how people aware of environmental problems is based on their attitudes, recognition, and how they respond to environmental issues. Environmental concern has been confirmed as an important factor towards green product behavioural intentions. The importance of environmental concern in predicting the intention of

purchasing electric vehicles has been highlighted by many studies. For instance, the author found that environmental concern had more public acceptance and a greater influence on Autonomous Electric Vehicles (AEVs) in China. The results indicate that consumers who have a higher level of environmental concern are more likely to accept and support the intention to purchase electric vehicles, and this also indicates a significant influence of environmental concern for encouraging environmentally sustainable technologies. Therefore, consumers who have a strong concern and awareness for the environment tend to have a positive attitude towards electric vehicles due to it can reduce environmental issues like air pollution and climate change. However, Karunanayake and Wanninayake (2015) found that environmental concern may not influence young adults' purchase intention. Another research study conducted in Zhejiang Province, China, had identified environmental concern is a significant predictor that predict the intention to purchase electric vehicles. The study showed that consumers who are more concerned about environmental problems are more likely to purchase electric vehicles (Xu et al., 2019).

2.2.4 Perceived Risk (PR)

Perceived risk is considered as a barrier variable that can reduce consumers' confidence regarding acceptance of electric vehicles (Jaiswal et al., 2021). According to Wang et al. (2023), perceived risk is defined as some potential uncertainties or risk outcomes that cannot be forecast when consumers are purchasing a particular good or service. There are five categories of risk from the study, which are time risk, economic risk, performance risk, psychological risk, as well as physical risk. They discovered that this risk could influence consumers' intentions to purchase electric vehicles. This is because time risk can be inconvenient and needs extra time to charge electric vehicles due to the limited availability of charging infrastructure. Economic risk is related with high cost of purchasing electric vehicles and replacing their batteries, which can impact their total expenses. Performance risk is related to

uncertainties in things happening in the function of electric vehicles, such as charging methods, acceleration speed, and travel range. Psychological and physical risks will be involving safety and reliability concerns because of the technology's electric vehicles immaturity so far now.

In addition, Vafaei-Zadeh et al. (2022) stated that risk usually will happen when coming consumers are unfamiliar with electric vehicles due to worry about high upfront costs and the reliability; thus, improving their understanding of electric vehicles can help to reduce their perceived risk. While Featherman et al. (2021) argued that some consumers see risk as a bad thing, while some consumers see risk as a good thing due to helping them process slowly and take more time to take into consideration when purchasing a product. According to Zang et al. (2022) discovered that when there are fewer consumers with less understanding about electric vehicles, it will influence the higher prejudice, as well as influence their purchasing intention. When consumers are making decisions and can influenced by risk. So, they will consider the risks to find the optimal solution before making the final decision. Research from the Kamal et al. (2020) stated that perceived risk usually will influence the intention to purchase due to the changes, postpone, or cancellation of the purchase order.

2.2.5 Social Influence (SI)

Social influence can be defined as the degree to which individuals perceive those important others, such as friends, family, or colleagues, believe they should use a certain technology or intend to conduct behaviour (Venkatesh et al., 2012). Social influence is related to the subjective norms and social pressure that influence consumers' intentions to conduct behaviours. Social influence is also considered one of the strongest predictors that can strongly influence the intention to purchase electric vehicles because can shaping individual's perception and attitudes when making purchasing decisions. There are several empirical studies that have found significant influence on

the intention to purchase an electric vehicle. According to Wang and Zhou (2019), social influence has a strong influence on the intention to purchase electric vehicle. Because consumers are more likely to consider purchasing electric vehicles if they perceive and believe that important people in their lives support their decision. Other than that, according to Khazaei (2019), found that there is a relationship between social influence and the intention to purchase electric vehicles. Because individuals often seek advice from their social network and approval when making decisions to purchase something. Moreover, Yegin and Ikram (2022) mentioned social influence can enhance consumers' knowledge and positive perceptions towards electric vehicles. The author stated that young consumers who are more likely to be influenced by their peer pressure and societal trends were found to be particularly strong in having an intention to purchase electric vehicles.

2.3 Dependent Variables

2.3.1 Purchase Intention (PI)

According to Ninh (2021), purchase intention can be defined as actual purchase behaviour, and it is a significant indicator. There are many factors that can influence this intention, such as the range of charging infrastructure, electric vehicle performance, and the price considerations. Xu et al. (2019) stated that a person's intention can strongly influence another person's actions. Thus, understanding a person's intention can help to predict their consequent behaviours. There are many studies that have examined to test consumer's actual behaviour through their intention (Zhuang et al., 2021). Rizwan et al. (2014) argued that it is very challenging and difficult to measure, count, and predict consumer behaviour due to the different situations with the uncertain things occurring. According to Gogoi (2013), purchase intention can help to understand the consumers' purchase process and it is an effective tool. However, consumers can be influenced by the factors of price, value, internal, or external during the purchase process. While Griskevicius et al. (2010)

highlighted that during the purchase process, some of the consumers will take into consideration into different factors such as performance, social influence, cost, environmental, and "lifestyle-image". This indicates that purchase intention views as a crucial dependent variable in understanding consumer behaviour towards purchasing electric vehicles.

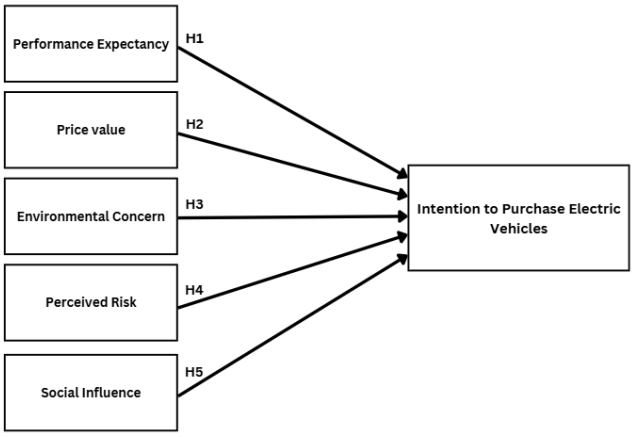
The TPB can help to explain the reason behind and why consumers have the intention to purchase something (Li et al., 2022). Besides that, this also indicates how likely a consumer is to purchase an electric vehicle. If a consumer has a positive attitudes and favourable mindset with which to make a transaction with the seller, then they will take into consideration when purchasing a product or service (Gunawardane & Thilina, 2019). However, Li et al. (2022) argued that if the consumer's close friends, family, or colleagues have a negative perception towards a product, it will influence the consumer less likely to purchase it. Because the subjective norm is an opinion that can deliver a message to another person either encourage or discourage way and influence their intention to purchase which similar to social influence. Samarasinghe et al. (2023) found that social influence can have a strong influence on purchase intention. This happened when consumers felt their social circle adopting environmentally friendly technologies. Young adults may feel motivated to purchase electric vehicles if they feel that doing so will reflect positively on their social image or influenced by their friends and family.

Furthermore, perceived risk can influence consumers' purchase intention (Pelaez et al., 2019). According to Li et al. (2022), consumers who have a high willingness to bear the risk are likely to have the intention to purchase the innovative products, while those with a low willingness to bear the risk will avoid it and tend to purchase the products which they are familiar with. Moreover, according to Costa et al. (2021), it is important to include that consumers who have high concern about the environment they tend to easily be influenced by the green product. Consumers who have more knowledge about environmental issues tend to view green products favourably and intend to purchase it. Moreover, it can improve the companies that are producing

green or eco-friendly products more favourable by the consumers. This indicates that the companies that are producing electric vehicles can become favourable to the consumers who tend to have high concern about the environment. Not only that, according to Degirmenci and Breitner (2017), electric vehicle's environmental performance is viewed as a significant predictor of attitude leading intention to purchase compared to price. This means that consumers who tend to be more environmentally conscious are likely to purchase electric vehicles to reduce pollution. On the other hand, performance expectancy also can influence electric vehicle purchase intention. This is because where drivers believe and confident in the performance of electric vehicles and tend to show a higher level of purchase intention (Samarasinghe et al., 2023). Therefore, the purchase intention of young adults in Malaysia may view electric vehicles as an alternative to conventional vehicles in terms of long-term efficiency performance. Next, according to Asadi et al. (2022), price value is a primary driver of purchase intention. Consumers who view electric vehicles as value for money offerings and can provide cost-benefit to them are more likely to purchase it. Price value can play as a signal of judgment and important antecedent of purchase intention. If the higher the consumers' view of the product as cost-benefit to them, the stronger the consumer purchase intention (Zhuang et al., 2021).

2.4 Proposed Conceptual Framework

Figure 2.1 Proposed Conceptual Framework



Source: Developed for the research

Figure 2.1 is the proposed conceptual framework developed to explore Malaysianyoung adults' intention to purchase electric vehicles. The intention to purchaseelectric vehicles is dependent on the performance expectancy, price value,environmental concern, perceived risk, and social influence.

2.5 Hypotheses Developments

H1: Performance Expectancy has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.
H2: Price Value has significant a relationship on intention to purchase electric vehicles among Malaysian young adults.
H3: Environmental concern has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.
H4: Perceived risk has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.
H5: Social influence has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.

2.6 Conclusion

In conclusion, chapter 2 reviewed the definition of each independent variable and the dependent variable using the past studies. It also explained how TPB framework influences the variables by using relevant research materials and the relationship between the variables, and proposed a conceptual framework, as well as hypotheses of this research being carried out.

CHAPTER 3: METHODOLOGY

3.0 Introduction

This chapter will describe in detail the research method and techniques in this study. It includes research design, sampling design, data collection methods, proposed data analysis tools, and instruments used for this research.

3.1 Research Design

Research design is a process that is adopted by a researcher to answer questions in a valid way. It is required to be accurate and objective. It is the type of analysis that needs to be determined and carried out to get the desired results. The results, good or bad, that are received will depend on the research questions. The results of research will become weak if the design is poor. Research design is a framework of methods that research wants to combine different components in reasonably. So, the research problem can be handled efficiently. It is a process on how to process, collect, measure, and analyze data (Khanday & Khanam, 2019). This research will be using a quantitative method, descriptive research and causal research.

3.1.1 Quantitative research

In quantitative research, the collection of numerical data and the application of statistical, mathematical, or computational techniques is structured to study the phenomenon. In simple terms, when answering the survey questionnaire such as who, what, how much, when, where, how many, and how. The results which numerical data can measure and evaluate from a population and

theoretical framework using statistical techniques with hypothesis testing. It needs to quantify and analyze variables to get results (Apuke, 2017).

3.1.2 Causal Research

Causal research is to identify cause-effect relationships between independent and dependent variables
(Lawrence, 2023). This study will identify the independent variables (performance expectancy, price value, environmental concern, perceived risk, and social influence) and the dependent variable of the causal effect on purchase intention of electric vehicles.

3.2 Data Collection Methods

3.2.1 Primary Data

Information that is collected on the variables of a research topic by researchers themselves or under their direct supervision and guidance is known as primary data. The data collected must be original, authentic, reliable, objective, valid, and previously unpublished. It is very costly and time-consuming when collecting the primary data (Ganesha & Aithal, 2022). This research will use an internet survey to collect data, which is a widely used method to reach more respondents efficiently. This method is also able to reduce cost and time. The survey of the first section is designed to collect information related to the demographic details. The demographic questions are about the respondents' general information, such as gender, age, income, and so on. The second section is about the independent variables and dependent variables of the research.

3.2.2 Secondary Data

Secondary data is the information that is gathered by someone other than the current user or used for a purpose different from the original one. For example, the data, such as journal articles, internet, databases, textbooks, and case studies, are collected from the existing sources for another main research objective is also known as secondary data (Pederson et al., 2020). In this research, the secondary data will be collected from previous journals through the library database provided by UTAR. Moreover, other reliable online sources will be used in this study too. By having secondary data can give researchers have a better understanding of the factors that influence Malaysian young adults' purchase intention on electric vehicles.

3.3 Sampling Design

3.3.1 Target population

In this study, the target respondents are young adults in Malaysia who are aged 18 to 40 and are interested in purchasing electric vehicles.

3.3.2 Sampling Frame and Sampling Location

A sampling frame is a collection of source materials from which a sample is drawn. In this research, respondents are aged 18 to 40 in the Malaysia only, regardless of location or target area. The sampling frame for this research will also include students and young adults in Malaysia who are studying or working and are interested in EVs.

3.3.3 Sampling Elements

The target respondents for this research project are young adults Malaysian in the 18 to 40 age group. They may be from different ages, genders, and education backgrounds, and different incomes but they have purchase intention towards electric vehicles in Malaysia.

3.3.4 Sampling Technique

There are two ways to collect data by using sampling techniques, which are probability sampling and non-probability sampling. The selected sampling technique in this research is non-probability sampling. Non-probability sampling is a method in which samples in research procedures are obtained where not all individuals in the community have an equal chance of being selected (Zikmund et al., 2013). This sampling method is a very quick, simple, and cost-effective to collect data (Vehovar et al., 2016).

Convenience sampling is the most used non-probability sampling method. According to Obilor & Isaac (2023), convenience sampling is one of the advantage methods where a sample is selected from a segment of the population that is nearby, readily accessible, or conveniently accessible. The sample is selected based on the researcher's convenience because respondents are available at the right time and location. This method is very saving times and resources.

3.3.5 Sampling Size

Sample size is helping to determine an appropriate number of participants that should be included in the research. It may fail to detect an important effect if the sample size is too small, while too large sample size can become a waste of resources (Singn & Masuku, 2014). Luanglath (2014) stated that a

guideline on selecting sample size of the behavioral research created by Roscoe, the sample size should be ranging from 30 to 500. Therefore, 200 respondents will be the sample size in this study. As a result, a total of 203 sets of responses were received. However, 23 sets of respondents, who are 41 above age group are cleaned from the survey due to the initial focus being young adults who are aged 18 to 40. Therefore, a total of 180 sets of respondents will be usable and analysed for actual data analysis.

3.4 Research Instruments

3.4.1 Questionnaire Design

The questionnaire of this study is conducted by using Google Form in English language to distribute to the respondents. There are two sections in this questionnaire, which is divided into two sections, A and B. Part A consists of demographic information about the target respondents, such as gender, age, marital status, education background, monthly income, and number of private cars. Part B focused on 5 independent variables and 1 dependent variable. It is designed based on the Five Point Likert Scale rating. Respondents are requested to select from the range of 1 (Strongly Disagree) to 5 (Strongly Agree) based on their understanding.

3.4.2 Pilot Test

According to Johanson and Brooks (2010), the feasible lower limit for a pilot test is 30 potential respondents. In this study, the pilot test will be conducted as a trial run of the questionnaires for each variable by using SPSS Cronbach's Alpha to test for the internal consistency. Therefore, 30 sets of survey questionnaires that were distributed to respondents and table 3.1 below shows

the pilot test result, which all the variables are above 0.7 and considered reliable.

Table 3.1: Pilot Test Result

Construct	Cronbach's Alpha
Performance Expectancy	0.811
Price Value	0.809
Environmental Concern	0.747
Perceived Risk	0.739
Social Influence	0.881
Purchase Intention	0.730

Source: Developed for the research

3.5 Construct Measurement

3.5.1 Measurement Scale

To evaluate the validity and reliability of a statistical analysis, the scale measurement method is conducted. This research will use three measurement scales, which are nominal scale, ordinal scale, and interval scale.

3.5.1.1 Nominal Scale

Nominal scale, the simplest level of measurement, used to assign values to items for identification or classification purposes (Zikmund et al., 2013). In this study, the nominal scale plays a role to help arrange the respondents into

several categories. The questionnaire in Section A of this study will use a nominal scale.

3.5.1.2 Ordinal Scale

An Ordinal scale plays a role that helps to arrange items into a ranking order. For instance, it will rank the items from highest to lowest and from first to last. This is a measurement scale that uses ordered variables, such as strongly dissatisfied to strongly satisfied (Stephanie, 2020). In this study, the questionnaire of the Section A part will be using the ordinal scale, such as age group and income.

3.5.1.3 Interval Scale

Interval scale is a numeric scale that help to separates the organized group into units of equal intervals and ranks the items based on their scales (Zikmund et al., 2013). In this study, the questionnaire of the Section B part will use interval scale, which is a 5-point Likert scale with a value from "Strongly Disagree" to "Strongly Agree."

3.5.2 Origin of Construct

Table 3.2: Measurement Instrument and Measurement Scale

Construct	Measurement Items	Scale	Source
Performance Expectancy (PE)	PE1: I believe that electric vehicle is useful in my daily life. PE2: I believe that electric vehicle would help me travel quickly. PE3: I believe that electric vehicle can increase my productivity. PE4: I believe that electric vehicle can increase my flexibility in my daily life. PE5: I believe that electric vehicle is useful to reduce my household expenditures on transportation.	1 = Strongly Disagree, 5 = Strongly Agree	Jain et al. (2022); Wang et al. (2018)
Price Value (PV)	PV1: I think electric vehicles provide value for money. PV2: I think electric vehicles are reasonably priced. PV3: I think electric vehicles are economical in the long run.	1 = Strongly Disagree, 5 = Strongly Agree	Venkatesh et al., (2012)

	PV4: I think the price paid will match the quality of the electric vehicle I get.		
Environmental Concern (EC)	EC1: I believe that electric vehicles are helpful to environmental protection. EC2: I have a high level of environmental awareness. EC3: I am willing to pay more for environmentally friendly products. EC4: I believe our consumption habits should be responsible for the environment. EC5: I think driving electric vehicles can reduce environmental pollution.		Krupa et al. (2014)

Perceived Risk (PR)	PR1: I worry about incurring financial losses with electric vehicles because of their high maintenance costs and low resale value. PR2: I can't feel 100% safe when I am driving an electric vehicle on the road. PR3: I think using electric vehicles could lead to time loss (e.g. limited driving range and long-time recharging). PR4: I worry electric vehicles cannot perform as well as traditional gasoline vehicles. PR5: I worry that driving an electric vehicle may not be convenient for me.	1 = Strongly Disagree, 5 = Strongly Agree	Li et al. (2017); Wang et al. (2018)

Social Influence (SI)	SI1: Driving an electric vehicle would be a status symbol for me. SI2: Driving an electric vehicle can attracts other's attention, which is important to me. SI3: An electric vehicle would reflect my personality. SI4: Electric vehicles become a positive image in society. SI5: Driving an electric vehicle can make a good impression about me on the other people.	1 = Strongly Disagree, 5 = Strongly Agree	Venkatesh et al. (2012); Jain et al. (2022); Kapser et al. (2020)

Purchase Intention (PI)	PI1: I am willing to purchase an electric vehicle in the future. PI2: I am planning to purchase an electric vehicle in the future. PI3: I will prefer to purchase an electric vehicle rather than traditional vehicle if I need to purchase in the future. PI4: I prefer the advantages of using electric vehicles compared to the traditional gasoline vehicles. PI5: I intend to adopt electric vehicle due to it provides environmentally friendly.	1 = Strongly Disagree, 5 = Strongly Agree	Zhang et al., (2021); Han et al., (2017); Castillo et al., (2023)

Source: Develop for the research

3.6 Data Processing

3.6.1 Data Checking

A pilot test is used to conducted before the final questionnaire to be distributed. It is important to collect feedback from respondents and to improve it.

3.6.2 Data Editing

Data editing is an important step to check and correct errors, inconsistencies, and omissions in collected data. The edited data is to ensure the quality of data, validity of research findings, and credibility of research. To ensure the accuracy of the result, inaccurate data will be removed (Kumar, 2022).

3.6.3 Data Coding

Data coding is the process of arranging and categorizing non-numeric information and assigning numeric numbers to these categories. This method is very common to a wide range of statistical software and allows for data conversions as well as measurement comparisons (CESSDA, 2023). The questionnaires that are in the category scales will assign number codes.

3.6.4 Data Transcribing

The final step is transferring data collected into SPSS.

3.7 Data Analysis

To study the factors influencing Malaysian young adults' purchase intention towards electric vehicles, data analysis will be processed of interpreting data using SPSS Statistics to analyze survey data for business decision-making. There are two types of statistical techniques, which are descriptive statistics and inferential statistics.

3.7.1 Descriptive Analysis

In this research, descriptive analysis is referred to as the characteristics of the population to answer the following questions of who, where, what, when, and how for overall explanation (Siedlecki, 2020). Descriptive statistics is to provide a straightforward summary of the sample being studied without drawing any inferences based on probability theory. There are tools such as frequency distribution tables, percentages, and measures of central tendency to summarize data. Descriptive statistics is valuable because it helps to summarize data in the form of simple quantitative measures, for example, percentages, means, histograms, or box plots (Kaliyadan & Kulkarni, 2019). According to Trochim (2020), it explains that descriptive analysis allows researchers to measure a big number of respondents using various measurements because it can simplify extensive data sets into a more user-friendly manner for researchers. Hence, the demographic section in section A, which includes gender, age, income level, marital status, number of private cars, and education background, will be used to compute.

3.7.2 Inferential Analysis

3.7.2.1 Pearson Correlation Coefficient

Pearson correlation is used to determined strength, significance, and direction between all variables. The two-tailed significance level is used to evaluate the null hypothesis. The coefficient ranges from -1.0 to 1.0., where -1.0 signifies a perfect negative linear relation while 1.0 signifies a perfect positive linear relationship, and 0 signifies no linear relationship (Sekaran & Bougie, 2010). In this study, this approach is used to explore the relationship between the independent variables and dependent variables.

3.7.2.2 Multiple Linear Regression Analysis

According to Uyanık & Güler (2013) stated that analysis is a statistical technique used to examine the relationship between dependent variables with multiple independent variables. This method allows researchers to determine which independent variables among performance expectancy, price value, environmental concern, perceived risk, and social influence have the highest significant impact on the dependent variable (purchase intention). A Higher β value means the independent variable has a higher influence on the dependent variable.

The multiple linear regression analysis model is formulated as in the following:

$$y = \beta_0 + \beta_1 x_1 + \ldots + \beta_n x_n + \varepsilon$$

y = dependent variable

x_i = independent variable

β_i = parameter

ε = error

The multiple linear regression equation in this research is shown as below:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \varepsilon$$

y = Purchase Intention

x_1 = Performance Expectancy

x_2 = Price Value

x_3 = Environmental Concern

x_4 = Perceived Risk

x_5 = Social Influence

β_0 = intercept constant value, and β_1 , β_2 , β_3 , β_4 , β_5 are the coefficients of related independent variables related to the dependent variable)

β_1 , β_2 , β_3 , β_4 , β_5 = slope of coefficient

ε = error

3.7.3 Scale Measurement – Reliability Test

Figure 3.1: Rules of Thumb of Cronbach's Alpha

Alpha Coefficient Range	Reliability Assessment
< 0.6	Poor
0.6 to < 0.7	Acceptable for exploratory research
0.7 to < 0.8	Good
0.8 to < 0.9	Excellent
0.9 to 0.95	Somewhat high
≥ 0.95	Too high; indicators are redundant

Source: Hair Jr, J., Page, M., & Brunsveld, N. (2019). *Essentials of business research methods. Routledge*

A reliability test is used to investigate the sign of internal consistency, ensuring that the tool used accurately tests the idea and maintains the measure's integrity (Zikmund et al., 2013). Cronbach's Alpha is used to evaluate and determine the internal consistency of data in this research. Cronbach's Alpha can help to measure internal consistency for reliability testing and is a specific as well as widely used in social and organizational sciences. For example, the degree of internal consistency of a questionnaire, or the correlation between the items in a measurement instrument. A higher Cronbach's Alpha value indicates greater internal consistency and reliability. This method can ensure the measurement instrument give consistent results across contexts and increase the reliability of the study (Bonett & Wright, 2015). All variables with alpha values greater than 0.7 are considered to have high reliability. Conversely, all variables with alpha values lower than 0.7 are considered to have low dependability (Hair et al., 2019).

3.8 Conclusion

This chapter covers a range of proposed research methods such as research design, sampling design, data collection method, construct measurement, data processing

and so on. The data will be analysed by using SPSS software and the result of the statistical analysis will discuss in following chapter.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

In this chapter, the data collected from the questionnaire and the outcome of SPSS software will be analysed. The data will be described by using a table, pie chart as well as data will be discussed. This will include elements: descriptive analysis, scale measurement, reliability analysis, and inferential analysis.

4.1 Descriptive Analysis

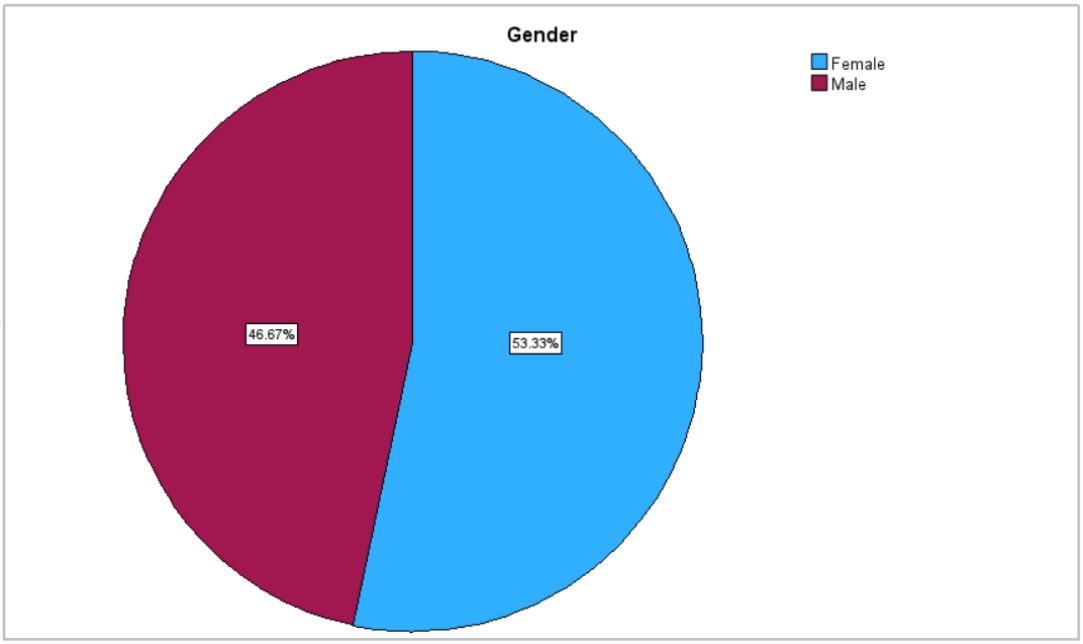
A total of 203 of sets questionnaire survey respondents have been received. However, 23 sets of questionnaire survey respondents have been cleaned from the data due to the 41 above age group are not sampling size in this study. Therefore, only 180 sets of questionnaires survey are respondents usable and analysable.

4.1.1 Respondent's Demographic Information

There are six questions about the respondent's demographic profile, such as gender, age group, marital status, monthly income, education background, and number of private cars.

4.1.1.1 Gender

Figure 4.1: Gender



Source: Developed for the research

Table 4.1: Gender

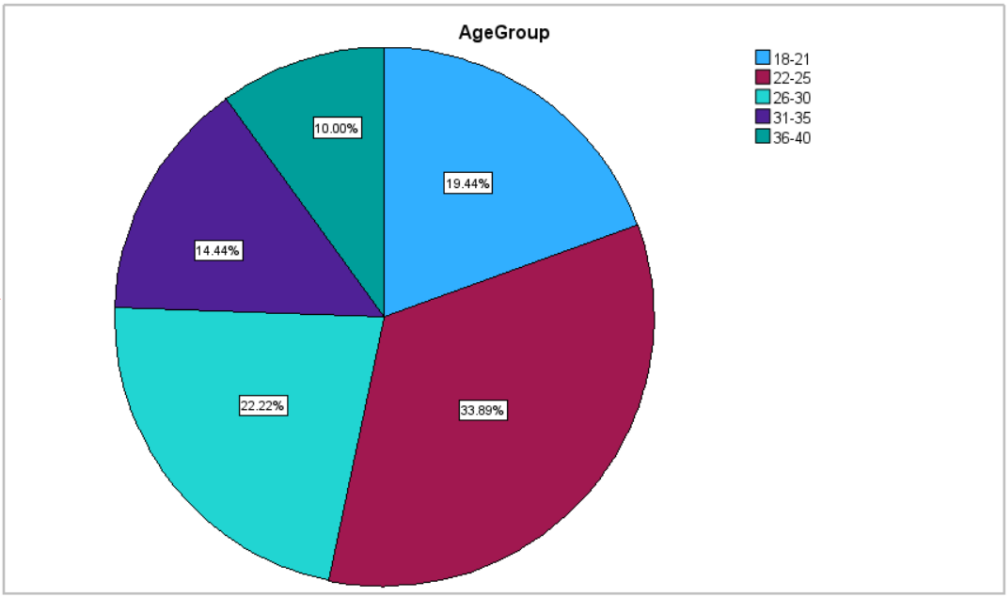
Gender	Frequency	Percent (%)
Female	96	53.3
Male	84	46.7
Total	180	100.0

Source: Developed for the research

Figure 4.1 and table 4.1 show the demographic information of respondents. There are 96 female respondents, which is 53.3%, and 84 male respondents, which is 46.7%, in this study. Female respondents are slightly more than male respondents.

4.1.1.2 Age Group

Figure 4.2: Age Group



Source: Developed for the research

Table 4.2: Age Group

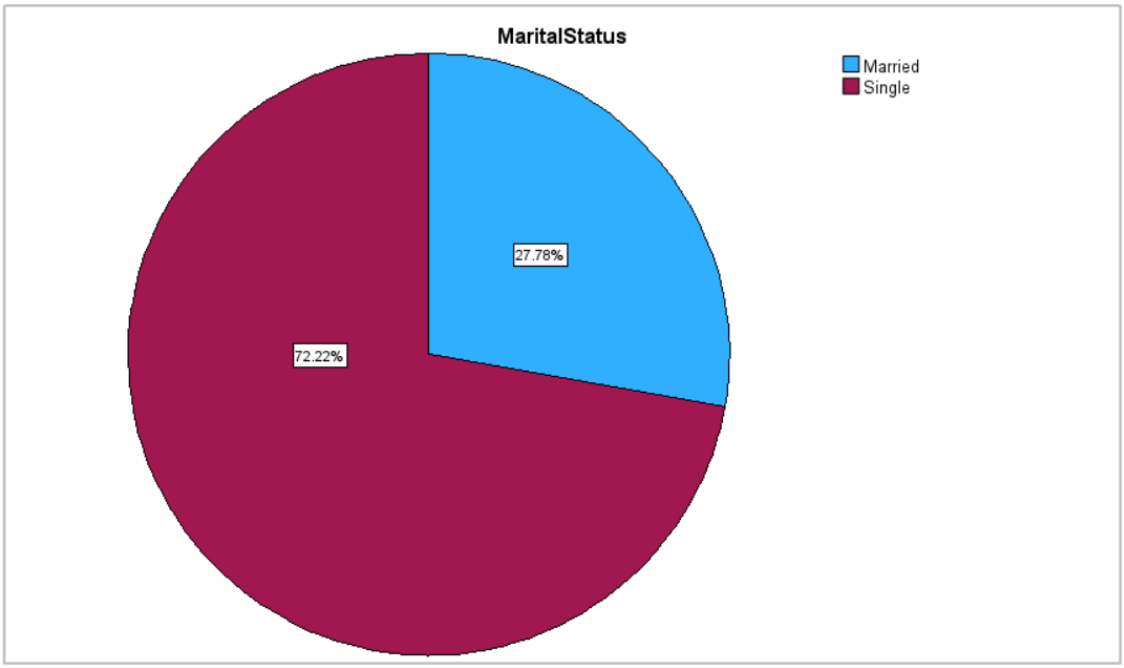
Age Group	Frequency	Percent (%)
18-21	35	19.4
22-25	61	33.9
26-30	40	22.2
31-35	26	14.4
36-40	18	10.0
Total	180	100.0

Source: Developed for the research

Based on figure 4.2 and table 4.2, majority of respondents are in the 22-25 age group, which is 61 respondents (33.9%). Next, there are 40 respondents (22.2%) who fall within the 26-30 age group. Other than that, there are 35 respondents (19.4%) who fall within the 18-21 age group, followed by 26 respondents (14.4%) who fall within the 31-35, and 18 respondents (10.0%) who fall within the 36-40.

4.1.1.3 Marital Status

Figure 4.3: Marital Status



Source: Developed for research

Table 4.3: Marital Status

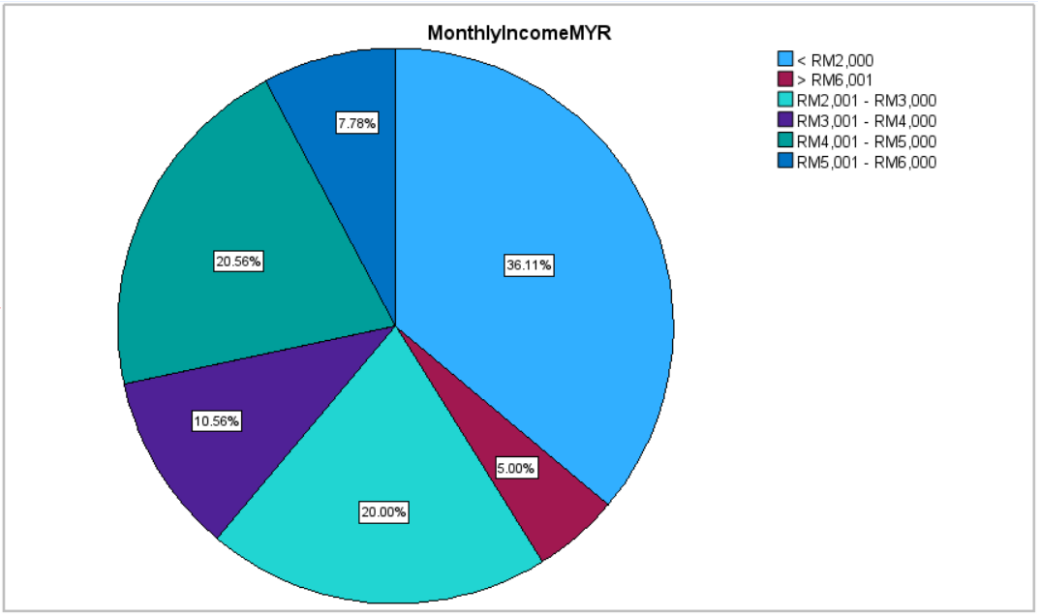
Marital Status	Frequency	Percent (%)
Married	50	27.8
Single	130	72.2
Total	180	100.0

Source: Developed for research

Based on figure 4.3 and table 4.3 of marital status, there are 50 respondents who are married, which is 27.8%, and there are 130 respondents who are single, which is 72.2%.

4.1.1.4 Monthly Income (MYR)

Figure 4.4: Monthly Income (MYR)



Source: Developed for research

Table 4.4: Monthly Income (MYR)

Monthly Income (MYR)	Frequency	Percent (%)
< RM2,000	65	36.1
RM2,001 – RM3,000	36	20.0
RM3,001 – RM4,000	19	10.6
RM4,001 – RM5,000	37	20.6
RM5,001 – RM6,000	14	7.8
> RM6,001	9	5.0
Total	180	100.0

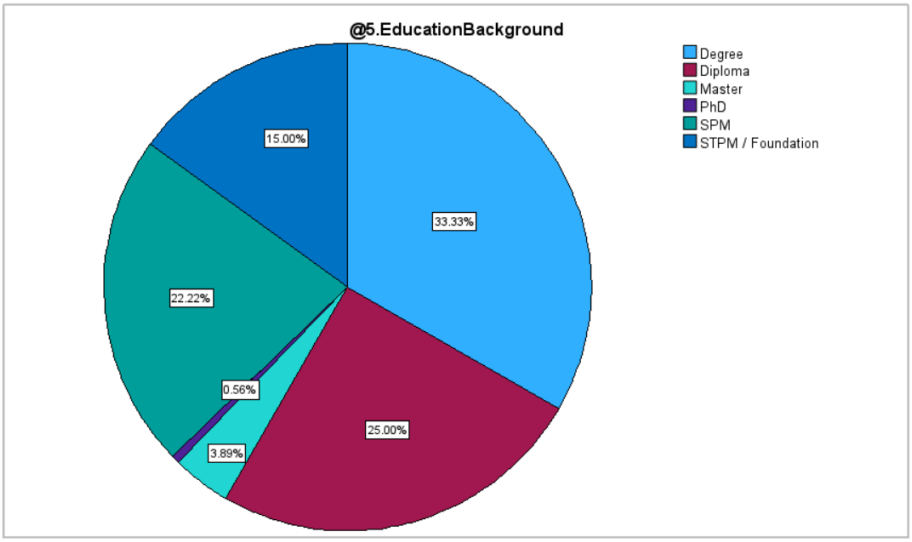
Source: Developed for research

Based on figure 4.4 and table 4.4 of monthly income in MYR, initially, there are 65 respondents (36.1%) who are less than RM2000. Secondly, 36 respondents (20%) have between RM2,001 and RM3,000. Thirdly, there are 19 respondents (10.6%) who make between RM3,001 and RM4,000. Furthermore, 37 respondents (20.6%) who make between RM4,001 and

RM5,000. In addition, 14 respondents (7.8%) who make between RM5,001-RM6,000. Finally, 9 respondents (5%) have RM6,001 above.

4.1.1.5 Education Background

Figure 4.5: Education Background



Source: Developed for research

Table 4.5 Education Background

Education Background	Frequency	Percent (%)
Degree	60	33.3
Diploma	45	25.0
Master	7	3.9
PhD	1	0.6
SPM	40	22.2
STPM/Foundation	27	15.0
Total	180	100.0

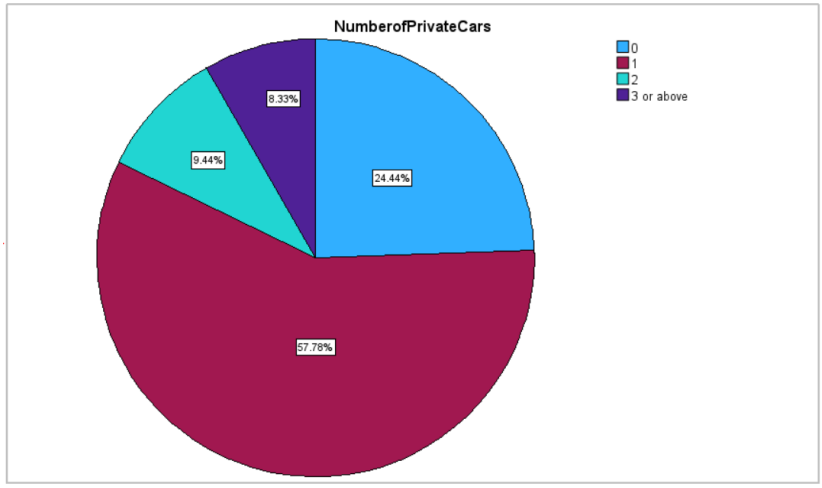
Source: Developed for research

Based on figure 4.5 and table 4.5 of education background, there are 60 respondents (33.3%) in the group of people with bachelor's degree. Secondly, there are 45 respondents (25%) in the group of people with diploma. In

addition, there are 7 respondents (3.9%) are at the master level. Moreover, there is 1 respondent (0.6%) is PhD. Subsequently, 40 respondents (22.2%) are from SPM. Finally, 27 respondents (15%) are from STPM or Foundation.

4.1.1.6 Number of Private Cars

Figure 4.6: Number of Private Cars



Source: Developed for research

Table 4.6: Number of Private Cars

Number of Private Cars	Frequency	Percent
0	44	24.4
1	104	57.8
2	17	9.4
3 or above	15	8.3
Total	180	100.0

Source: Developed for research

Based on figure 4.6 and table 4.6 of the number of private cars, there are 44 respondents (24.4%) who have 0 private cars. Next, the majority respondents, which are 104 (57.8%), have 1 private cars. In addition, there are 17

respondents (9.4%) have 2 private cars. Finally, there are 15 respondents (8.3%) who have 3 or above private cars.

4.1.2 Central Tendencies Measurement of Construct

4.1.2.1 Performance Expectancy (PE)

Table 4.7: Central Tendencies Measurement of Performance Expectancy

Questions	Statement	Sample Size, N	Mean	Standard Deviation
PE1	I believe that electric vehicle is useful in my daily life.	180	3.73	1.344
PE2	I believe that electric vehicle would help me travel quickly.	180	3.76	1.279
PE3	I believe that electric vehicle can increase my productivity.	180	3.64	1.336
PE4	I believe that electric vehicle can increase my flexibility in my daily life.	180	3.65	1.318
PE5	I believe that electric vehicle is useful to reduce my household expenditures on transportation	180	3.91	1.330

Source: Developed for research

First, statements related to performance expectancy are analysed. The table 4.7 above shows that PE5 holds the highest mean value of 3.91. This indicated that most of the respondents strongly agree that electric vehicles can reduce household transportation costs. The second highest mean is PE2, which is 3.76. The third highest mean is PE1, which has a mean value of 3.73. The

fourth highest mean is PE4, which has a mean value of 3.65. The smallest mean is PE3, which has a mean value of 3.64, which indicates that there is less agreement that electric vehicles help them travel quickly. Next, PE1 has the highest standard deviation which, is 1.344, and the lowest is PE2 with 1.279. While PE3, PE5, and PE4 are 1.336, 1.330, and 1.318 respectively.

4.1.2.2 Price Value (PV)

Table 4.8: Central Tendencies Measurement of Price Value

Questions	Statement	Sample Size, N	Mean	Standard Deviation
PV1	I think electric vehicles provide value for money.	180	3.85	1.096
PV2	I think electric vehicles are reasonably priced.	180	4.12	1.006
PV3	I think electric vehicles are economical in the long run	180	4.26	1.052
PV4	I think the price paid will match the quality of the electric vehicle I get	180	3.99	1.136

Source: Developed for research

First, statements related to price value are analysed. The table 4.8 above shows that PV3 holds the highest mean value of 4.26. This indicated that most

of the respondents strongly agree that electric vehicles are economical in the long run. The second highest mean is PV2, which is 4.12. The third highest mean is PV4, which has a mean value of 3.99. The lowest mean is PV1, which is 3.85, which indicates that less agreement of people think that electric vehicles provide value for money. Next, PV4 has the highest standard deviation, which is 1.136, and the lowest is PV2 with 1.006. While PV1 and PV3 are 1.096 and 1.052, respectively.

4.1.2.3 Environmental Concern (EC)

Table 4.9: Central Tendencies Measurement of Environmental Concern

Questions	Statement	Sample Size, N	Mean	Standard Deviation
EC1	I believe that electric vehicles are helpful to environmental protection.	180	4.03	1.141
EC2	I have a high level of environmental awareness.	180	3.82	1.226
EC3	I am willing to pay more for environmentally friendly products.	180	3.98	1.108
EC4	I believe our consumption habits should be responsible for the environment.	180	3.72	1.191
EC5	I think driving electric vehicles can reduce environmental pollution	180	4.23	1.056

Source: Developed for research

First, statements related to environmental concern are analysed. The table 4.9 above shows that EC5 holds the highest mean value of 4.23. This indicated that most of the respondents strongly agree that electric vehicles can reduce environmental pollution. The second highest mean is EC1, which is 4.03. The third highest mean is EC3, which has a mean value of 3.98. The fourth mean is EC2, which is 3.82. The lowest mean is EC4, which is 3.72, which indicates

that less agreement of people believes their consumption habits should be responsible for the environment. Next, EC2 has the highest standard deviation, which is 1.226, and the lowest is EC5 with 1.056. While EC4, EC1, and EC3 are 1.191, 1.141, and 1.108, respectively.

4.1.2.4 Perceived Risk (PR)

Table 4.10: Central Tendencies Measurement of Perceived Risk

Questions	Statement	Sample Size, N	Mean	Standard Deviation
PR1	I worry about incurring financial losses with electric vehicles because of their high maintenance costs and low resale value.	180	3.96	1.188
PR2	I can't feel 100% safe when I am driving an electric vehicle on the road.	180	3.94	1.176
PR3	I think using electric vehicles could lead to time loss (e.g. limited driving range and long-time recharging).	180	4.11	1.118
PR4	I worry electric vehicles cannot perform as well as traditional gasoline vehicles.	180	3.93	1.132
PR5	I worry that driving an electric vehicle may not be convenient for me.	180	4.00	1.143

Source: Developed for research

First, statements related to perceived risk are analysed. The table 4.10 above shows that PR3 holds the highest mean value of 4.11. This indicated that most of the respondents strongly agree that electric vehicles can lead to time loss. The second highest mean is PR5, which is 4.00. The third highest mean is PR1, which has a mean value of 3.96. The fourth mean is PR2, which is 3.94.

The lowest mean is PR4, which is 3.93, which indicates that there is less agreement of worry that electric vehicles cannot perform as well as traditional gasoline vehicles. Next, PR1 has the highest standard deviation, which is 1.188, and the lowest is PR3 with 1.118. While PR2, PR5, PR4 are 1.176, 1.143, and 1.132 respectively.

4.1.2.5 Social Influence (SI)

Table 4.11: Central Tendencies Measurement of Social Influence

Questions	Statement	Sample Size, N	Mean	Standard Deviation
SI1	Driving an electric vehicle would be a status symbol for me.	180	3.79	1.290
SI2	Driving an electric vehicle can attract other's attention, which is important to me.	180	3.68	1.360
SI3	An electric vehicle would reflect my personality.	180	3.67	1.223
SI4	Electric vehicles become a positive image in society.	180	3.71	1.298
SI5	Driving an electric vehicle can make a good impression about me on the other people.	180	3.84	1.324

Source: Developed for research

First, statements related to social influence are analysed. The table 4.11 above shows that SI5 holds the highest mean value of 3.84. This indicated that most of the respondents strongly agree that driving electric vehicles can make a good impression about me on the other people. The second highest mean is SI1, which is 3.79. The third highest mean is SI4 which has a mean value of 3.71. The fourth mean is SI2, which is 3.68. The lowest mean is SI3, which is

3.67, which indicates that less agreement that an electric vehicle would reflect my personality. Next, SI2 has the highest standard deviation, which is 1.360, and the lowest is SI3 with 1.223. While SI5, SI4, SI1 are 1.324, 1.298, and 1.290 respectively.

4.1.2.6 Purchase Intention (PI)

Table 4.12: Central Tendencies Measurement of Purchase Intention

Questions	Statement	Sample Size, N	Mean	Standard Deviation
PI1	I am willing to purchase an electric vehicle in the future.	180	3.64	1.364
PI2	I am planning to purchase an electric vehicle in the future.	180	3.61	1.184
PI3	I will prefer to purchase an electric vehicle rather than traditional vehicle if I need to purchase in the future.	180	3.67	1.358
PI4	I prefer the advantages of using electric vehicles compared to the traditional gasoline vehicles.	180	3.74	1.273
PI5	I intend to adopt electric vehicle due to it provides environmentally friendly.	180	3.70	1.337

Source: Developed for research

First, statement related to purchase intention are analysed. The table 4.12 above shows that PI4 holds the highest mean value of 3.74. This indicated that most of the respondents strongly agree that they intend to adopt electric vehicle due to it provides environmentally friendly. The second highest mean

is PI5, which is 3.70. The third highest mean is PI3 which is, 3.67. Next is PI1, which has a mean value of 3.64. The lowest mean is PI2, which is 3.61, which indicates that less agreement that they are planning to purchase an electric vehicle in the future. Next, PI1 has the highest standard deviation, which is 1.364, and the lowest is PI2 with 1.184. While PI3, PI5, PI4 are 1.358, 1.337, and 1.273 respectively.

4.2 Scale Measurement

4.2.1 Reliability Measurement

Table 4.13: Reliability Analysis

Construct	Cronbach's Alpha	Number of Items
Performance Expectancy	0.820	5
Price Value	0.844	4
Environmental Concern	0.830	5
Perceived Risk	0.860	5
Social Influence	0.773	5
Purchase Intention	0.801	5

Source: Developed for research

Table 4.13 shows the reliability analysis result. Performance expectancy with a Cronbach's Alpha value of 0.820, price value with 0.844, environmental concern with 0.830, perceived risk with 0.860, and purchase intention with 0.801 which is considered as good and reliable due to between in the 0.8 to 0.9 range. Next, social influence with 0.773 which is considered under the acceptable range due to between the 0.7 to 0.8 range.

4.3 Inferential Analysis

4.3.1 Pearson Correlation Analysis

Table 4.14: Pearson Correlation Analysis

		PE	PV	EC	PR	SI	PI
PE	Pearson Correlation	1	.703**	.654**	.706**	.752**	.853**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	<.001
	N	180	180	180	180	180	180
PV	Pearson Correlation	.703**	1	.782**	.766**	.659**	.661**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001
	N	180	180	180	180	180	180
EC	Pearson Correlation	.654**	.782**	1	.769**	.686**	.677**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001
	N	180	180	180	180	180	180
PR	Pearson Correlation	.706**	.766**	.769**	1	.653**	.673**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001
	N	180	180	180	180	180	180
SI	Pearson Correlation	.752**	.659**	.686**	.653**	1	.859**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001
	N	180	180	180	180	180	180
PI	Pearson Correlation	.853**	.661**	.677**	.673**	.859**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	
	N	180	180	180	180	180	180

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Developed for research

Table 4.14 shows the Pearson correlation coefficient with the variables are significant at the level of 0.01 (two-tailed), which indicates that the correlation of all these variables is statistically significant to dependent variables (PI). This table shows that all the independent variables, which are PE, PV, EC, PR, and SI have a positive correlation relationship with PI. SI has the highest correlation on PI, with correlation coefficient of 0.859, followed by PE (0.853), EC (0.677), and PR (0.673). While PV has a correlation coefficient value of 0.661, which has the lowest influence on PI among all the independent variables.

4.3.2 Multiple Linear Regression Analysis

Table 4.15: Model Summary of Multiple Linear Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.916[a]	.838	.834	0.39691

a. Predictors: (Constant), SI, PR, PV, PE, EC

Source: Developed for research

Table 4.15 shows that the value of R is 0.916, R square is 0.838, and adjusted R square is 0.834. This shows that SI, PR, PV, PE, and EC (IVs) may contribute 83.4% of the model towards PI (DV).

Table 4.16: ANOVA Test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	142.249	5	28.450	180.589	<.001[b]
Residual	27.412	174	.158		
Total	169.661	179			

a. Dependent Variable: PI

b. Predictors: (Constant), SI, PR, PV, PE, EC

Source: Developed for research

Table 4.16 shows the ANOVA test results. It demonstrates that the F-value is 180.589 and a significant value is less than 0.01 ($F = 180.589$, $p < .001$), which indicates that the independent variables of SI, PR, PV, PE, and EC have a significant impact on PI.

Table 4.17: Coefficients

	Unstandardized coefficients		Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**		
(Constant)	-.016	.148		-.105	.916
PE	.458	.051	.474	9.007	<.001
PV	-.056	.062	-.051	-.906	.366
EC	.073	.062	.066	1.180	.240
PR	.010	.058	.010	.174	.862
SI	.501	.052	.484	9.615	<.001

a. Dependent Variable: PI

Source: Developed for research

Table 4.17 shows the coefficients analysis results. When the p-value < 0.05, it indicates at a significant level. PE and SI have p-values of <.001. While PV has 0.366, EC at 0.240, and PR at 0.862, which exceeded. This can be concluded that the hypotheses for PE and SI are not rejected, and this means that have a significant influence on PI. In contrast, PV, EC, and PR can be concluded that hypotheses are rejected because p-values are greater than 0.05, meaning they do not significantly influence PI.

The beta values represent the influence on the PI, in which a higher beta value has a higher influence. Based on table 4.17, SI has the highest beta value at 0.484, followed by PE at 0.474, PV at -0.051, EC at 0.066, and PR at 0.010. As a result, SI has the greatest influence on PI, while PV, EC, and PR have the least influence.

The equation of the multiple regression can be formed as below:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5$$

Whereas:

y = Purchase Intention

x_1 = Performance Expectancy (PE)

x_2 = Price Value (PV)

x_3 = Environmental Concern (EC)

x_4 = Perceived Risk (PR)

x_5 = Social Influence (SI)

β_0 = intercept constant value, and β_1 , β_2 , β_3 , β_4 , β_5 are the coefficients of related independent variables related to the dependent variable

β_1 , β_2 , β_3 , β_4 , β_5 = slope of coefficient

Purchase Intention

= (-0.016) + 0.458 (PE) + - 0.056 (PV) + 0.073 (EC) + 0.010 (PR) + 0.501 (SI)

4.4 Conclusion

In this chapter, it has included and discussed the data analysis for the study. The demographic information of respondents is analysed by using descriptive analysis. Other than that, statistical measures used in this research are multiple linear regression, Pearson correlation and Cronbach's alpha.

CHAPTER 5:
DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

In this chapter, the findings of this research will be discussed. Other than that, the practical and theoretical implications are also to be emphasized. Moreover, there are some limitations, and recommendations will also be delivered in this chapter.

5.1 Discussion of Major Findings

Table 5.1: Summary Major Findings on Hypothesis Testing

Hypothesis	**Significant Value (Sig.)**	**Supported /Rejected**
H1: Performance expectancy has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.	Sig = <0.001 ($p < 0.05$)	Supported
H2: Price value has a significant relationship on intention to purchase electric vehicles among Malaysia young adults.	Sig = 0.366 ($p > 0.05$)	Rejected
H3: Environmental concern has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.	Sig = 0.240 ($p > 0.05$)	Rejected
H4: Perceived Risk has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.	Sig = 0.862 ($p > 0.05$)	Rejected
H5: Social influence has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.	Sig = < 0.001 ($p < 0.05$)	Supported

Source: Developed for research

The purpose of this research is to understand the factors that influence the purchase intention of electric vehicles among young adults in Malaysia. Above table 5.1 presents the summary of the major findings from the hypotheses testing in this study, and the following subsection will discuss each of the findings in detail.

H1: Performance expectancy has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.

Based on the result of the analysis, the performance expectancy has a significant relationship on intention to purchase electric vehicles among Malaysian young adults. The hypotheses testing is examined through 0.05 p-value, and the performance expectancy is less than 0.001 p-value. This are stand by some studies of Venkatesh et al. (2012) and Jain et al. (2022), consumers are more likely to have the intention to purchase new technologies when they expect high performance benefits. This can be seen as performance expectancy is a critical factor of the purchase of technology. According to Wang et al. (2018) stated that when consumers perceived a high benefits performance of electric vehicles and found more attractive, they tend to have intention to purchase them and easily accepted. On the other hand, the electric vehicles performance factors, such as efficient, reliability, speed (Jain et al. 2022), and driving range (Kapser & Abdelrahman, 2020), likely attract and influence young adults, which can increase their purchasing intention. These perceived benefits can reflect consumer decision-making and reinforce customers' purchase intentions towards electric vehicles (Zhou et al., 2021). Thus, it is suggested that automotive manufacturers should improve electric vehicle characteristics (Castillo et al., 2021). As a result, H1 of this study is supported due to the performance expectancy significantly influencing the intention to purchase electric vehicles among Malaysian young adults.

H2: Price value has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.

Based on the result of the analysis, the price value has no significant relationship on intention to purchase electric vehicles among Malaysian young adults. The hypotheses testing is examined through 0.05 p-value, and the price value is 0.366 p-value, which is exceeded. While previous research shows that consumers who perceived price value and view the benefits of a product as outweighing the costs can have a significant relationship and increase intention to purchase electric vehicles, as well as the Malaysia government also provides incentives and subsidies that add to this appeal, which makes it more affordable and attractive choice. According to Wang et al. (2023), financial incentives can make more people likely to purchase. However, Ivanova and Moreira (2023) found no relationship between price factors and electric vehicles purchase intention. Because consumers lack information about operating costs, maintenance costs, and the resale market. Dong et al. (2020) stated the price factors do not significantly influence electric vehicles purchase intention, although the government has provided subsidies as part of its electric vehicles related policies. The reason being consumers may focus more on the electric vehicles' performance rather than price considerations. As a result, H2 of this study is not supported because there is no significant influence price value on the intention to purchase electric vehicles among Malaysian young adults.

H3: Environmental concern has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.

Based on the result of the analysis, the environmental concern has no significant on intention to purchase electric vehicles among Malaysian young adults. The hypotheses testing is examined through 0.05 p-value, and the environmental concern is 0.240 p-value, which is exceeded. Although previous studies such as Wu et al. (2019) and Xu et al. (2019) as discussed in chapter 2, recognize that environmental concern has influenced electric vehicle purchase intention. However, recent research by White et al. (2019) discovered that environmental concern has no significant relationship with electric vehicles purchase intention. The reason being that environmental concern alone may not predict sustainable behaviours. It suggested that environmental concern tends to be more impactful to consumers who have strong personal values, mindfulness, and a sense of connection to nature. There

is not enough to motivate purchase intention behaviour linked to environmental concern without these personal influences. Other than that, according to Lampo and Silva (2023), suggested that environmental concern may not be a primary factor influencing consumers' purchase decisions. Consumers might be environmentally aware; however, it does not necessarily translate into action when it comes to intention to purchase electric vehicles. They might consider environmental benefits as "nice to have" rather than necessary. This means that consumers do not see environmental concern as their main factor for purchasing; instead, they just appreciate the eco-friendly aspect of electric vehicles. Thus, H3 of this study is not supported due to there is no significant influence environmental concern on the intention to purchase electric vehicles among Malaysian young adults.

H4: Perceived risk has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.

Based on the result of the analysis, perceived risk has no significant on intention to purchase electric vehicles among Malaysian young adults. The hypotheses testing is examined through 0.05 p-value, and the perceived risk is 0.862 p-value, which is exceeded. Although previous studies such as Jaiswal et al. (2021) and Zadeh et al. (2022) found that perceived risk is one of the significant factors that have relationship with the purchase intention of electric vehicles. However, the study from Astuti & Susanto (2024) found that there is no relationship between the perceived risk and purchase intentions towards electric vehicles. This is because consumers' concerns about the risks of electric vehicles are not strong enough to hinder their intention to purchase electric vehicles. While there may be some concerns or uncertainties raised by consumers, but these are not strong enough to hinder their purchase intentions. This indicates that when the consumers' perceived benefits are strong enough, they will tend to remain interested in purchasing an electric vehicle. Moreover, Lin and Wu (2017) found that usage cost and charging infrastructure may not heavily influence consumers purchase intention. If consumers have a lack of understanding of the electric vehicles' costs, it can reduce purchase intention. Additionally, the researchers also found that many people actually are preferred to have a home charging. This indicates that concerns of the

limited public charging infrastructure may also play a smaller role. Instead, they may focus on other factors such as performance and status. As a result, H4 of this study is not supported due to perceived risk not significantly influencing on intention to purchase electric vehicles among Malaysian young adults.

H5: Social influence has a significant relationship on intention to purchase electric vehicles among Malaysian young adults.

Based on the result of the analysis, the social influence has a significant relationship on intention to purchase electric vehicles among Malaysian young adults. The hypotheses testing is examined through 0.05 p-value, and the social influence is less than 0.001 p-value. Previous research done by Wang and Zhou (2019) shows that social influence has a significant relationship to intention to purchase electric vehicles and it can heavily influence young adults' decisions when they are making purchase decision on the new technologies through friends, family, or societal expectations. Moreover, these findings also align with Khazaei (2019), there is more likely that young consumers will follow peer trends, opinions, and recommendations from collectivist societies when considering high involvement purchases like electric vehicles. This indicates that Malaysian young consumers often follow the behaviour of their peers; they consider and care about the perceived social influence of their identity and impression and are more likely to purchase electric vehicles. As a result, H5 of this study is supported due to social influence is significantly influence on intention to purchase electric vehicles among Malaysian young adults.

5.3 Implication of the Study

5.3.1 Theoretical Implications

This study has expanded the Theory of Planned Behaviour framework (TPB) that incorporate additional variables by understanding what specific factors influence Malaysian young adults' intention to purchase electric vehicles from the original construct. This research has identified that the expanded additional construct can enhance the traditional TPB predictive of behavioural power. All of these play a role to provide a more comprehensive perspective on the behaviour. Firstly, the performance expectancy is a significant factor that can enhance the traditional TPB constructs and have shown that Malaysian young adults are more likely to purchase electric vehicle when they have a positive evaluation of performance benefits to them. Secondly, price value can influence young adults' intention to purchase electric vehicles such as how a product can bring cost-benefit to them. Next, the social influence is another strong significant factor which is subjective norms component of TPB. It highlights that Malaysian young adults are more easily influenced by their peers when making purchase decisions which significantly influence their behavioural intention. While perceived risk and environmental concern are other expanded TPB components. Perceived risk has shown the concern did not hinder young adults' confidence to purchase them. On the other hand, environmental concern has shown a weaker influence in this study. This indicates that Malaysian young adults are more focused on the performance rather than environmental benefits when deciding to purchase electric vehicles.

5.3.2 Managerial Implications

In this study, the findings can provide useful information for marketers who try to promote electric vehicle products and build their brand awareness. Since Malaysian young adults have a high intention to purchase electric vehicles, it is important to understand how to shape an effective marketing strategies and support infrastructure investments in the electric vehicle industry. By identifying and recognizing the specific factors that influence their purchase decisions, it can allow marketers, policymakers, governments

and manufacturers to design their approaches and strategies, respectively. Additionally, companies could position electric vehicles as practical, trendy, and forward-looking options by understanding young adults' purchase intentions, such as performance expectancy and social influence. Therefore, this can help to boost the market purchase rate and come out with electric vehicles as favourable options for Malaysian consumers.

Other than that, this finding also can provide guidance for understanding elements that influence young adult purchase decisions, such as performance benefits of electric vehicles. Next, this can help young adults to make informed purchase decisions by emphasizing electric vehicles' societal trends and the modern appeal.

Moreover, although electric vehicles can help to reduce environmental concern, however, it is not a significant factor for Malaysian young adults to purchase. Therefore, manufacturers and marketers should focus on practical and economic advantages in their campaigns over environmental appeals. It should not be the main focus although eco-friendliness can still be a supporting message. Instead, it is suggested that should highlight long-term financial savings, performance features, and modern status symbol characteristics of electric vehicles. This may better resonate with Malaysian young adults.

Lastly, this study has important potential economic impact of supporting electric vehicles adoption in Malaysia. There will be more opportunities for job creation, like manufacturing, sales, and charging infrastructure, when demand is growing. This growth will not only strengthen the automotive industry but also create local sources of income and encourage innovation. By understanding young adults' purchase intentions, Malaysia can create a more strategic idea to promote electric vehicles and build a strong environmentally conscious market that can contribute to economic development in the country.

5.4 Limitations of the Study

In this study, it is mainly focused on a narrow scope demographic. The focused specific group, which is Malaysian young adults. This is because it does not include other groups, such as older adults' perspectives and purchase intention towards electric vehicles. Therefore, it may not consider the broader population and did not fully reflect purchase intention behaviour towards electric vehicles. The narrow focus scope restricts the findings and makes it challenging to draw conclusions that represent the entire Malaysian market.

Secondly, the limitation of this study is using a single language of the questionnaire, which is English. This is because not everyone is familiar with English, and there are three major ethnic groups that speak different languages in Malaysia, such as English, Malay, and Mandarin. Some respondents might have faced challenges in fully understanding the questions. Therefore, it limits the comprehensiveness and accuracy of the information, misinterpretations, and superficial responses.

Thirdly, in this study, an online questionnaire is being used. This approach is convenient; however, it limits the direct connection and contact with the participants, which reduces the opportunity to physically interact with participants to help them explain any questions they did not understand. This can affect the accurate answer. Next, it is that not every participant that receives questionnaire will respond due to some of the participants tend to ignore it because of a lack of interest or it being time-consuming.

5.5 Recommendation

Firstly, it is recommended to expand the scope. To have a more broadened perspective and purchase intention towards electric vehicles, future research can consider expanding broadly to populations such as older adults, diverse regions, and diverse cultures. A wider demographic can provide more understanding of purchase intentions towards electric vehicles.

Secondly, it is recommended to provide a multi-language questionnaire. The future researchers should consider providing the questionnaire in multiple languages such as Mandarin, Malay, and English to ensure more accurate responses. This approach is suitable in Malaysia's linguistic diversity, and respondents also feel comfortable choosing the language they are familiar with it. Hence, this can reduce misinterpretations and superficial responses.

Thirdly, it is recommended to use qualitative method. The future researchers can consider using face-to-face interviews or focus groups to have a better physical interaction with participants such as using open-ended discussion. This can help to gather more real-time clarification of questions, meaningful responses, and deeper insights. This approach can encourage participants to be more actively engaged in the questionnaire and reduce the risk of superficial responses and get more reliability responses.

5.6 Conclusion

As a conclusion, the research study has shown the main objective, which is to understand the factors that influence the purchase intention towards electric vehicles among Malaysian young adults. Two out of five independent variables that have a significant relationship with purchase intention of Malaysian young adults and the other three variables show no significant relationship. This chapter summarizes the findings that have been made via the previous chapters and how they can be applied to the future of the businesses. Lastly, some useful recommendations are also included in this chapter and carry out the future study on this topic.

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APPENDICES

Appendix A: Questionnaire

The Factors of Influencing the Purchase Intention of Electric Vehicles among Young Malaysian Adults.

I am a Faculty of Accountancy and Management student from Universiti Tunku Abdul Rahman (Sungai Long Campus) to conduct my final year research project.

This research project explores the factors influencing the purchase intention of electric vehicles among young Malaysian adults.

I kindly invite you to consider participating in this study. Before you decide whether to join, it is important that you fully understand the study's purpose and procedures. Please take a moment to read the following information.

The questionnaire contains two sections and will take up less than 10 minutes to complete. The information collected in this survey will strictly remain private and confidential as protected by the Malaysia Personal Data Protection Act 2010.

Thank you for your participation in this research.

Yours sincerely,
Name: Lew Hui Ching
Student ID: 20UKB05524
Contact Details: 2005524@1utar.my

Section A: Demographic Profile
INSTRUCTIONS: The following questions refer to the respondent's demographic profile. Please tick the option that can best describe your demographic profile.

1. Gender *

- ◯ Male
- ◯ Female

2. Age Group *

- ◯ 18-21
- ◯ 22-25
- ◯ 26-30
- ◯ 31-35
- ◯ 36-40

3. Marital Status *

- ◯ Single
- ◯ Married

4. Monthly Income (MYR) *

- ◯ < RM2,000
- ◯ RM2,001 - RM3,000
- ◯ RM3,001 - RM4,000
- ◯ RM4,001 - RM5,000
- ◯ RM5,001 - RM6,000
- ◯ > RM6,001

5. Education Background *

- ◯ SPM
- ◯ STPM / Foundation
- ◯ Diploma
- ◯ Degree
- ◯ Master
- ◯ PhD
- ◯ Other: _____

6. Number of Private Cars *

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3 or above

Section B

In this section, the following are related to the external factors that will lead to the purchase intention of electric vehicles (EVs).

Please use the following scale to indicate how much you agree or disagree with the following statements.

Please tick appropriate response box according to the best of your knowledge, using the scale
below:
1 (strongly disagree), 2 Disagree (D), 3 Neutral (N), 4 Agree (A), 5 (strongly agree).

1- Strong Disagree (SD)
2- Disagree (D)
3- Neutral (N)
4- Agree (A)
5- Strongly Agree (SA)

A. Performance Expectancy *

	SD (1)	D (2)	N (3)	A (4)	SA (5)
I believe that electric vehicle is useful in my daily life.	○	○	○	○	○
I believe that electric vehicle would help me travel quickly.	○	○	○	○	○
I believe that electric vehicle can increase my productivity.	○	○	○	○	○
I believe that electric vehicle can increase my flexibility in my daily life.	○	○	○	○	○
I believe that electric vehicle is useful to reduce my household expenditures on transportation.	○	○	○	○	○

B. Price Value *

	SD (1)	D (2)	N (3)	A (4)	SA (5)
I think electric vehicles provide value for money.	○	○	○	○	○
I think electric vehicles are reasonably priced.	○	○	○	○	○
I think electric vehicles are economical in the long run.	○	○	○	○	○
I think the price paid will match the quality of the electric vehicle I get.	○	○	○	○	○

C. Environmental Concern *

	SD (1)	D (2)	N (3)	A (4)	SA (5)
I believe that electric vehicles are helpful to environmental protection.	○	○	○	○	○
I have a high level of environmental awareness.	○	○	○	○	○
I am willing to pay more for environmentally friendly products.	○	○	○	○	○
I believe our consumption habits should be responsible for the environment.	○	○	○	○	○
I think driving electric vehicles can reduce environmental pollution.	○	○	○	○	○

D. Perceived Risk *

	SD (1)	D (2)	N (3)	A (4)	SA (5)
I worry about incurring financial losses with electric vehicles because of their high maintenance costs and low resale value.	○	○	○	○	○
I cant' feel 100% safe when I am driving an electric vehicle on the road.	○	○	○	○	○
I think using electric vehicles could lead to time loss (e.g. limited driving range and long-time recharging).	○	○	○	○	○
I worry electric vehicles cannot perform as well as traditional gasoline vehicles.	○	○	○	○	○
I worry that driving an electric vehicle may not be convenient for me.	○	○	○	○	○

E. Social Influence *

	SD (1)	D (2)	N (3)	A (4)	SA (5)
Driving an electric vehicle would be a status symbol for me.	○	○	○	○	○
Driving an electric vehicle can attract other's attention, which is important to me.	○	○	○	○	○
An electric vehicle would reflect my personality.	○	○	○	○	○
Electric vehicles become a positive image in society.	○	○	○	○	○
Driving an electric vehicle can make a good impression about me on the other people.	○	○	○	○	○

F. Purchase Intention *

	SD (1)	D (2)	N (3)	A (4)	SA (5)
I am willing to purchase an electric vehicle in the future	○	○	○	○	○
I am planning to purchase an electric vehicle in the future.	○	○	○	○	○
I will prefer to purchase an electric vehicle if I need to purchase one in the future.	○	○	○	○	○
I prefer the advantages of using electric vehicles compared to the traditional gasoline vehicles	○	○	○	○	○
I intend to adopt electric vehicle due to it provides environmentally friendly.	○	○	○	○	○

Appendix B: Ethical Approval Letter

UNIVERSITI TUNKU ABDUL RAHMAN DU012(A)
Wholly owned by UTAR Education Foundation Co. No. 578227-M

Re: U/SERC/78-352/2024

9 September 2024

Dr Fitriya Binti Abdul Rahim
Head, Department of International Business
Faculty of Accountancy and Management
Universiti Tunku Abdul Rahman
Jalan Sungai Long
Bandar Sungai Long
43000 Kajang, Selangor

Dear Dr Fitriya,

Ethical Approval For Research Project/Protocol

We refer to your application for ethical approval for your students' research project from Bachelor of International Business (Honours) programme enrolled in course UKMZ3016. We are pleased to inform you that the application has been approved under Expedited Review.

The details of the research projects are as follows:

No.	Research Title	Student's Name	Supervisor's Name	Approval Validity
1.	Strategic Approaches to Enhance Consumer Engagement and Traction Through Livestreaming Content: A Comparative Analysis of Effective Tactics and Best Practices	Adeline Kong Qing Qing	Pn Ezatul Emilia Binti Muhammad Arif	9 September 2024 – 8 September 2025
2.	Factors Influencing Customers Acceptance of Malaysian Traditional Bank's Digital Channels	Chan Huey Teng	Dr Tee Peck Ling	
3.	Relationship Marketing Affecting the Customer Experience in Using AI-Chatbot	Chan Pei Yee	Dr Yeong Wai Mun	
4.	Factors that Influence Employee Performance in the Workplace	Chen Kar Him	Dr Komathi a/p Munusamy	
5.	Social Media Advertising Format that Affect Consumer Behaviour in Malaysia	Cheong Yi Qian	Dr Fok Kuk Fai	
6.	Consumer Intentions to Switch Accommodations from Traditional Hotels to Airbnb	Chia Rong Wei	Dr Law Kian Aun	
7.	Engulfed by Recommendation Systems: Walking Away Empty-handed Becomes a Challenge	Chin Kai Ning	Pn Ezatul Emilia Binti Muhammad Arif	
8.	The Interrelations Between Artificial Intelligence (AI) Usage and Academic Performance	Chin Wie Jane	Dr Low Mei Peng	
9.	Factor Affecting University Students' Behavioural Intention to Use ChatGPT for Academic Purpose	Chock Yee Fai	Pn Farida Bhanu Binti Mohamed Yousoof	
10.	The Impact of ESG Initiatives on Green Product and Consumer Purchase Intentions	Choi Yoon Qi	Dr Foo Meow Yee	
11.	Factors Influencing Gender Entrepreneurial Intention Among Malaysian Undergraduate Students	Chong Chean You	Dr Kalaivani a/p Jayaraman	
12.	The Influence of Technological Infrastructure on the Success of Digital Reading Platforms Globally Among Students	Chong Li Xian	Dr Komathi a/p Munusamy	

No.	Research Title	Student's Name	Supervisor's Name	Approval Validity
13.	The Impact of Social Sustainability Awareness on Consumer Buying Behavior	Fang Yu Mei	Dr Komathi a/p Munusamy	9 September 2024 – 8 September 2025
14.	The Effect of Social Media Influencer Marketing on the Purchase Intention of Young Consumers in the Skincare Product Industry	Foh Zhi Hui	Ms Goh Poh Jin	
15.	University Student's Intention to Adopt Mobile Payments in Malaysia	Foo Yong Yi	Pn Farida Bhanu Binti Mohamed Yousoof	
16.	Modernisation and Transformation in SMEs: A Case Study Exploring Owner Perspectives on Process Transformation and Technological Adaptation	Grace Lim Wei Qi	Mr Lee Yoon Heng	
17.	Understanding the Influence of Greenwashing on Green Brand Equity and Green Purchase Intention Among Electric Vehicle Consumers in Klang Valley	Heng Xian Wei	Dr Tan Pei Meng	
18.	Adoption of Digital Marketing on SME Service Sector in Klang Valley	Jordan Wue Bin Hassan Wue	Ms Puvaneswari a/p Veloo	
19.	Exploring Determinants of Malaysian Purchase Intention for Electric Vehicles	Joyce Yap Jie Ni	Dr Malathi Nair a/p G Narayana Nair	
20.	Sustainable Shopper: Linking ESG with the Shopping Carts	Julia Look Hui Sian	Dr Abdullah Sallehhuddin Bin Abdullah Salim	
21.	Investigating Influential Factors on Female Consumers' Purchase Behavior or Organic Perfumes in Malaysia	Kang Karen	Dr Ooi Bee Chen	
22.	Factors Influencing Consumer Purchase Intention Towards Green Household Products	Kok ZiLi	Dr Ooi Bee Chen	
23.	Winning in Cross-border E-commerce: Factors That Influence Strategic Platform-based Product Selection Among Sellers	Lai Kah Shen	Pn Ezatul Emilia Binti Muhammad Arif	
24.	Employee Retention's Impact Factors Within the Retail Industry	Lee Yee Hong	Dr Foo Meow Yee	
25.	Factors Influencing the Employee Turnover Rate Among Fresh Graduate Employees	Leong Weng Kent	Dr Kalaivani a/p Jayaraman	
26.	The Factors Influencing the Purchase Intention of Electric Vehicles Among Malaysian Young Adults	Lew Hui Ching	Dr Foo Meow Yee	
27.	Exploring Factors Influencing Customer Loyalty in Malaysia's Traditional Coffee Shop (Kopitiam)	Lew Zhi Qing	Dr Malathi Nair a/p G Narayana Nair	
28.	Green Purchase Intention Towards Reusable Shopping Bag in Malaysia	Lim Khang Xian	Ms Tai Lit Cheng	
29.	What Type of E-commerce Advertising Method Impact Customer Purchase	Lim Qi Yi	Pn Ezatul Emilia Binti Muhammad Arif	
30.	Unlocking Cross-Border Growth: Exploring Digital Free Trade Zones' Impact on International Trade	Lim Ying Ze	Pn Ezatul Emilia Binti Muhammad Arif	
31.	Consumer Behavior Trends and Preferences in the Malaysia Car Spare Parts Market: A Case Study of Perodua Bezza	Loh Eng Kang	Dr Fok Kuk Fai	
32.	Impact of Sustainable Packaging on Consumer Buying Behaviour in Malaysia	Loh Yan Min	Dr Fok Kuk Fai	
33.	Explicating the Influence of Artificial Intelligence (AI) Literacy on Employee Performance	Loke Li Ying	Dr Low Mei Peng	
34.	Leveraging Artificial Intelligence (AI) Competencies for Organisational Performance	Loke Xin Yu	Dr Low Mei Peng	
35.	The Influence of Culture on Consumer's Intention to Purchase Personalized Products	Loo Ci Ting	Dr Choo Siew Ming	
36.	Exploring The Financial Benefits and Risks of Allocating Additional Income Towards Investment Opportunities	Loo Su Yu	Dr Choo Siew Ming	
37.	Factors Influencing Consumer's Purchase Behaviour Towards Organic Food Among Malaysian University Students in Klang Valley	Low Chan Guan	Dr Ooi Bee Chen	
38.	Adoption AI in Logistics Industry: Improved Efficiency and Fault Tolerance	Low Sam Yee	Mr Khairul Anuar Bin Rusli	

No.	Research Title	Student's Name	Supervisor's Name	Approval Validity
39.	Impact of Digital Marketing Strategy on Purchase Intention	Lum Jia Mei	Dr Komathi a/p Munusamy	9 September 2024 – 8 September 2025
40.	Unveiling the Elements of Employee Motivation for Thriving Workplaces in Malaysia	Michelle Tan Hui Shan	Dr Kalaivani a/p Jayaraman	
41.	Women's Entrepreneurship Success in the Technological Industry	Ooi Xin Yi	Dr Law Kian Aun	
42.	Social Media Strategies for Business Success Maximizing Impact through Navigating Channels and Engaging Audiences	Poon She Kei	Pn Ezatul Emilia Binti Muhammad Arif	
43.	Measuring the Impact of Organizational Factors on Turnover Intention of Fast-Food Industry Employees in Malaysia	Rachel Ong Pei Lyn	Ms Puvaneswari a/p Veloo	
44.	Impact of Transformational and Authentic Leadership on Innovation in Higher Education in Malaysia: The Contingent Role of Trust in Leader	Robin Wong Woon Ping	Ms Puvaneswari a/p Veloo	
45.	Social Media Influencers on Consumer Purchase Intention: The Sportswear Products	Sam Yu Xiang	Dr Sia Bee Chuan	
46.	The Influence of Customer Relationship Management on Customer Loyalty in Insurance Sector	Seah Chee Keong	Dr Komathi a/p Munusamy	
47.	Impact of Social Media Influencers (SMIs) on Purchase Intention of Young Adults in Malaysia	Seow Gin See	Dr Foo Meow Yee	
48.	Understanding University Student's Behavioral Intention in using 'Smart Technology'	Sin Chee Leong	Ms Goh Poh Jin	
49.	The Challenge of Consumer Adoption of Battery Electric Vehicle (BEV) in Malaysia	Siow Huang Ming	Dr Sia Bee Chuan	
50.	Customer Motivation in Choosing Preferred Courier Service	Syamini Syazwani Devi A/P Muraleidaran	Dr Komathi a/p Munusamy	
51.	Digital Platform: Do Data Privacy Concerns and Transparency Affect User's Trust and Loyalty?	Tai Buo Ting	Pn Ezatul Emilia Binti Muhammad Arif	
52.	A Study of the Impact of Flexible Work Arrangement on Employees' Turnover Intention Among Generation Z in Klang Valley	Teh Jia Chuen	Dr Lee Siew Peng	
53.	The Role of E-training, E-compensation and E-recruitment in Enhancing Employee Productivity in International Companies in Malaysia	Teo Wen Ping	Dr Omar Hamdan Mohammad Alkharabsheh	
54.	Factors Influencing the Sustainable Tourism Intentions Among Generation Z in Malaysia	Tey Xin Tong	Dr Tiong Kui Ming	
55.	Motivation Factors Impact the Employee Performance in the Retail Industry in Malaysia	Thiang Zhen Wu	Dr Law Kian Aun	
56.	Factors Motivating Malaysian Consumers' Intention Using QR Code Payment when Purchasing Movie Tickets	Wang Kean Seng	Pn Faridah Hanum Binti Amran	
57.	Entrepreneurial Orientation Relationship with Firm Performance Among F&B Industry: Perspective of Malaysian SME	Wong Chean Huai	Mr Mahendra Kumar a/l Chelliah	
58.	Resilience of Global Challenges: A Study of Manufacturing Resilience in Malaysian Manufacturing Industry	Wong Jin Mun	Dr Law Kian Aun	
59.	Impact of Customer Service Automation on the Performance of Customer Relationship Management in the Retail Sector	Yap Pui Man	Dr Law Kian Aun	
60.	The Influence of Social Media Marketing on Purchase Intention of Sportswear Among Malaysian Youth	Yap Seng Fui	Ms Cheah Lee Fong	
61.	Impact of Social Media Marketing on Consumer Purchase Intention in Food and Beverage Industry in Malaysia	Yee Kar Hung	Dr Sia Bee Chuan	
62.	Exploring the Relationship Between Organizational Culture and Customer Retention in E-commerce: A Study of Online Shoppers	Yeoh Chin Hui	Dr Choo Siew Ming	
63.	Factors Affecting Patient Satisfaction on Service Quality: An Investigation of Government Hospital in Klang Valley	Yoong Pooi Lim	Dr Tey Sheik Kyin	

No.	Research Title	Student's Name	Supervisor's Name	Approval Validity
64.	The Connection Between Gig-Economy Employees and Personal Well-Being	Yu Kay Ciek	Dr Law Kian Aun	9 September 2024 – 8 September 2025
65.	Role of Brand Communities in Building Brand Loyalty	Yuvarani a/p Suresh	Dr Komathi a/p Munusamy	

The conduct of this research is subject to the following:

(1) The participants' informed consent be obtained prior to the commencement of the research;

(2) Confidentiality of participants' personal data must be maintained; and

(3) Compliance with procedures set out in related policies of UTAR such as the UTAR Research Ethics and Code of Conduct, Code of Practice for Research Involving Humans and other related policies/guidelines.

(4) Written consent be obtained from the institution(s)/company(ies) in which the physical or/and online survey will be carried out, prior to the commencement of the research.

Should the students collect personal data of participants in their studies, please have the participants sign the attached Personal Data Protection Statement for records.

Thank you.

Yours sincerely,

Professor Ts Dr Faidz bin Abd Rahman
Chairman
UTAR Scientific and Ethical Review Committee

c.c Dean, Faculty of Accountancy and Management
Director, Institute of Postgraduate Studies and Research

Appendix C: SPSS Output

1. Reliability Test

Independent variable: Performance Expectancy

Reliability Statistics

Cronbach's Alpha	N of Items
.820	5

Independent variable: Price Value

Reliability Statistics

Cronbach's Alpha	N of Items
.844	4

Independent variable: Environmental Concern

Reliability Statistics

Cronbach's Alpha	N of Items
.830	5

Independent variable: Perceived Risk

Reliability Statistics

Cronbach's Alpha	N of Items
.860	5

Independent variable: Social Influence

Reliability Statistics

Cronbach's Alpha	N of Items
.773	5

Dependent variable: Purchase Intention

Reliability Statistics

Cronbach's Alpha	N of Items
.801	5

2. Pearson Correlation Analysis

Correlation

Correlations

		PE	PV	EC	PR	SI	PI
PE	Pearson Correlation	1	.703**	.654**	.706**	.752**	.853**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	<.001
	N	180	180	180	180	180	180
PV	Pearson Correlation	.703**	1	.782**	.766**	.659**	.661**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001
	N	180	180	180	180	180	180
EC	Pearson Correlation	.654**	.782**	1	.769**	.686**	.677**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001
	N	180	180	180	180	180	180
PR	Pearson Correlation	.706**	.766**	.769**	1	.653**	.673**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001
	N	180	180	180	180	180	180
SI	Pearson Correlation	.752**	.659**	.686**	.653**	1	.859**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001
	N	180	180	180	180	180	180
PI	Pearson Correlation	.853**	.661**	.677**	.673**	.859**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	
	N	180	180	180	180	180	180

**. Correlation is significant at the 0.01 level (2-tailed).

3. Multiple Linear Regression Analysis

Model Summary of Multiple Linear Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.916[a]	.838	.834	.39691

a. Predictors: (Constant), SI, PR, PV, PE, EC

Anova Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	142.249	5	28.450	180.589	<.001[b]
	Residual	27.412	174	.158		
	Total	169.661	179			

a. Dependent Variable: PI

b. Predictors: (Constant), SI, PR, PV, PE, EC

Coefficients

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-.016	.148		-.105	.916
	PE	.458	.051	.474	9.007	<.001
	PV	-.056	.062	-.051	-.906	.366
	EC	.073	.062	.066	1.180	.240
	PR	.010	.058	.010	.174	.862
	SI	.501	.052	.484	9.615	<.001

a. Dependent Variable: PI