THE ACCEPTABILITY OF PUBLIC TOWARDS GREEN TRANSPORTATION

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APPROVAL

I hereby acknowledge that this project paper has been accepted as part of fulfilment for the degree of Bachelor High Technology Management (Marketing) with Honor

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This thesis is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology Management (High Technology Marketing) with Honors

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DECLARATION OF ORIGINAL WORK

I hereby declare that all the work of this thesis entitled the acceptability of public towards green transportation is original done by myself and no portion of the work encompassed in this research project proposal has been submittedin support of any application for any other degree or qualification of this or any other institue or university of learning.

Signature : *NurulShahirahRasip*

Name : NURUL SHAHIRAH BINTI RASIP

Date : **15 JANUARY 2022**

DEDICATION

I would like to appreciate the dedication of my beloved family members who educated me and motive me to learn until degree level. And also, I express a deep sense of gratitude to my lecturer whom also my supervisor for my final year project, Datin Dr. Suraya Binti Ahmad and my fellow friends. They have provided me fully support and advice throughout this research. Without their blessing and encouragement, this research is impossible to complete within short period of time

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First and foremost, I would like to express my gratitude to God for giving me good health, strength, and the opportunity to gain my knowledge successfully to complete this Final Year Project (FYP) within a given time. I would like to thanks my parents for their support and patient in waiting for me to finish my degree. I also express my sincere thanks to my friends for giving timely pieces of advice to this research project. They are sharing a lot of knowledge related to proceed this research project. It helps me to complete this research project more efficiently.

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Last but not least, I would like to express my appreciation to all respondents who had contributed their time and efforts in filling the questionnaires. They had provided valuable feedbacks that assist me in finishing this research. With the assistance and supports from the respondents, I have successfully fulfilled all the components of a questionnaire. Once again, I am grateful and honestly thankful to all.

ABSTRACT

Today, it is always intriguing to speculate about the future of technology. One explanation for this is the accelerating rate of innovation. Cities are essential to the economic growth and success of a nation. The transportation industry supplies urbanisation and urban cities with vibrancy. Rapid progress has been made in urban transportation in Malaysia, although it continues to fall short of fulfilling the needs of an expanding economy and population. Using a norm activation paradigm, this study will assess public attitudes toward sustainable transportation and their propensity to embrace environmentally friendly options such as cycling and public green transit (NAM). This study examined the role of various predictors (awareness of sustainable transport benefits, awareness of traffic problems, government policies, and symbolic motives for using a car) on citizens' acceptability of sustainable transportation options, with environmental concern serving as a mediator and self-transcendence and self-enhancement as moderators. All or some of these variables are reliant on one another. This research will undertake a quantitative research method in order to answer the research questions under study. A set of questionnaires by google form will be distributed to the randomly selected respondents who are public around urban area in Melaka. Therefore this research is expected to analyze the most significant factors that influence the acceptability of public around urban area in Melaka towards green vehicle sustainability. This research will undertake a quantitative research method in order to answer the research questions under study. The data collected from the respondents were loaded on SPSS version 27 for explanatory factor analysis and multiple regression analysis. The pilot test was prepared in Google Forms and distributed to a total of 30 sample respondents. A set of questionnaires via google form will be distributed to the randomly selected 384 respondents who are public in urban areas in Melaka. As a result, only one variables significant are which is benefit awareness. The implication is strongly recommended that public's in urban areas around Melaka consider the factors discussed in these studies when formulating successful tactics to encourage publics to use sustainable trasnportation. As a result, suggestions for future research have been made to improve the quality of this study

Keywords: acceptability, sustainable transportation; environmental concern, malaysia, norm activation

ABSTRAK

Pada zaman serba moden yang sentiasa menarik untuk membuat spekulasi tentang masa depan teknologi. Satu penjelasan untuk ini ialah kadar inovasi yang semakin pantas. Bandar adalah penting untuk pertumbuhan ekonomi dan kejayaan sesebuah negara. Industri pengangkutan membekalkan urbanisasi dan bandar bandar dengan rancak. Kemajuan pesat telah dicapai dalam pengangkutan bandar di Malaysia, walaupun ia terus gagal untuk memenuhi keperluan ekonomi dan populasi yang semakin berkembang. Menggunakan paradigma pengaktifan norma, kajian ini akan menilai sikap pengguna terhadap pengangkutan mampan dan kecenderungan mereka untuk menerima pilihan mesra alam seperti berbasikal dan transit hijau awam (NAM). Kajian ini mengkaji peranan pelbagai peramal (kesedaran tentang faedah pengangkutan yang mampan, kesedaran tentang masalah lalu lintas, dasar kerajaan, dan motif simbolik untuk menggunakan kereta) terhadap kebolehterimaan rakyat terhadap pilihan pengangkutan mampan, dengan kebimbangan alam sekitar berfungsi sebagai pengantara dan diri sendiri. transendensi dan peningkatan diri sebagai moderator. Semua atau beberapa pembolehubah ini bergantung pada satu sama lain. Penyelidikan ini akan menggunakan kaedah kajian kuantitatif bagi menjawab persoalan kajian yang dikaji. Satu set soal selidik melalui google form akan diedarkan kepada responden yang dipilih secara rawak yang awam di sekitar kawasan bandar di Melaka. Oleh itu, kajian ini diharapkan dapat menganalisis faktor-faktor yang paling signifikan yang mempengaruhi penerimaan orang ramai di sekitar kawasan bandar di Melaka terhadap kelestarian kenderaan hijau. Penyelidikan ini akan menggunakan kaedah kajian kuantitatif bagi menjawab persoalan kajian yang dikaji. Data yang dikumpul daripada responden telah dimuatkan pada SPSS versi 27 untuk analisis faktor penjelasan dan analisis regresi berganda. Ujian rintis telah disediakan dalam Borang Google dan diedarkan kepada sejumlah 30 sampel responden. Satu set soal selidik melalui google form akan diedarkan kepada 384 responden yang dipilih secara rawak yang berada di kawasan bandar di Melaka. Akibatnya, hanya satu pembolehubah penting iaitu kesedaran manfaat. Implikasinya amat disyorkan agar orang ramai di kawasan bandar sekitar Melaka mempertimbangkan faktor-faktor yang dibincangkan dalam kajian ini apabila merangka taktik yang berjaya untuk menggalakkan orang ramai menggunakan pengangkutan yang mampan. Sehubungan dengan itu, cadangan kajian akan datang telah dibuat bagi meningkatkan kualiti kajian ini.

Kata Kunci: *Penerimaan, pengangkutan mampan, kebimbangan alam sekitar, pengaktifan norma malaysia*

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CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

The majority of Malaysians are now able to afford public transportation due to the rapid expansion of the country's economy, resulting in a rise in the transport population. Therefore sustainable transportation remains a topic of extensive discussion and investigation. In view of the continuous worldwide emphasis on sustainability and sustainable development in general, it remains important. The United Nations (UN) recently developed a set of Sustainable Development Goals to prioritise the pursuit of sustainable development on a global scale. As global sustainability remains an important priority, sustainable transportation also remains a significant issue. Transportation is a major source of greenhouse gas emissions, contributing to climate change and environmental degradation. Transportation is also vital to people's daily lives, including access to workplaces and other essential locations. In addition to supporting trade, business, and the economy, it is a crucial factor for economic development. When it comes to establishing a sustainable transportation infrastructure, urban areas in developing nations encounter a variety of obstacles. Population growth, increased affluence, and the rapid expansion of cities and urbanisation have all contributed to the rise in travel demand (Zurich 2015). Therefore, the rising use of motorised vehicles has become a source of major environmental and health issues associated with noise pollution, air pollution, and greenhouse gas emissions (Chan, L. 2002). In addition to affecting our physical and emotional health, increased reliance on motorised vehicles is a risk factor for chronic diseases. Consequently, the purpose of this study is to investigate the public's perspective on sustainable transportation and their propensity to pick ecologically friendly solutions such as cycling and public green transportation. Specifically, this study will examine the effect of various predictors (awareness of sustainable transport benefits, traffic problem awareness, government policies, and symbolic motives for using the car) on citizens' acceptability of sustainable transportation options, with environmental concern serving as a mediator and self-transcendence and self-enhancement as moderators. This study offers both from a theoretical and a practical standpoint. Applying a Norm activation model (NAM) to the Malaysia setting, this

study theoretically contributes to the literature on the acceptability of sustainable transportation. This research will assist relevant authorities in understanding and promoting sustainable transportation among Malaysian citizens.

1.2 STUDY BACKGROUND

Malaysia's economy is growing at such a rapid pace that the majority of people can now afford public transport, resulting in an increase in the urban transport population therefore Malaysian roads are currently extremely congested, with all types of transport and passengers travelling at varying speeds. This is exacerbated further by the concern of air pollution and other environmental hazards. The purpose of this study is to ascertain the current state of the Malaysian transportation sector. The majority of prior research on sustainable transportation focuses on the development of indicators or an index system for assessing sustainability. In recent years, academics have focused on the relationship between sustainable transportation and public quality of life, the importance of social network structures, and the difficulties associated with sustainable transportation's acceptance (Portney, K.E 2013). However, public attitudes on selecting sustainable transportation choices receive little attention. Due to increasing urban sustainable transportation concerns and environmental pollution in Malaysia, there is a need to investigate public attitudes regarding selecting alternate forms of sustainable transportation, such as cycling and green public transportation. Consequently, the purpose of this study is to investigate the public's perspective on sustainable transportation and their propensity to pick ecologically friendly solutions such as cycling and public green transportation. Specifically, this study will examine the effect of various predictors (awareness of sustainable transport benefits, traffic problem awareness, government policies, and symbolic motives for using the car) on citizens' acceptability of sustainable transportation options, with environmental concern serving as a mediator and self-transcendence and self-enhancement as moderators.

1.3 PROBLEM STATEMENT

The rapid development of ride-sourcing services has raised a lot of debates among government agencies and researchers. On the one hand, supporters claim that ride-sourcing services could offer a more reliable and economical transportation option compared with traditional taxi services, which would reduce private vehicle use, car ownership, and vehicle emissions (Bardhi and Eckhardt, 2012, Hall et al., 2018, Rayle et al., 2016, Young and Farber, 2019). On the other hand, many researchers have raised concerns about the potential adverse effects of ride-sourcing services, such as inducing road congestion, reducing public transit use, and aggravating social inequality by only catering to the young and the well-to-do (Ceccato and Diana, 2021, Cetin and Deakin, 2019, Clewlow and Mishra, 2017, Lavieri and Bhat, 2019, Rayle et al., 2016, Young and Farber, 2019). To moderate climate change, reduce environmental pollution, and halt global warming, sustainable transportation should become thehighest priority. (Tom Schauble 2020) Therefore this study's purpose is to investigatethe attitude of Melaka residents toward sustainable transportation and to determine what factors may influence their readiness to use environmentally friendly forms ofsustainable transportation such as cycling, hybrid cars, hydrogen, and FCV.

Specifically, this study will examine the effect of various predictors (awareness of sustainable transport benefits, traffic problem awareness, government policies, and symbolic motives for using the car) on citizens' acceptability of sustainable transportation options, with environmental concern serving as a mediator and self-transcendence and self-enhancement as moderators. When each of these issues is successfully addressed, urban growth can be successful. According to the Malaysian National Physical Plan, the urban population will reach 68.2%, or around 18.8 million people, by 2020. In 2010, the population exceeded 20 million people (Aaron O`Neill 2022). This means that urban population growth will be far more rapid than previously anticipated. Peninsular Malaysia is more urbanised than Sabah and Sarawak, which both have a 50 percent population density.

1.4 RESEARCH QUESTION

The problem statement in the previous subtopic has prompted the development of research questions, which will be addressed at the conclusion of this investigation. As a result, the research questions for this study are as follows;

1) What is the public attitude towards green vehicle transportation sustainability?

2) What are the factors that influence the acceptance of sustainable transportation?

1.5 RESEARCH OBJECTIVES

1) To explore public attitude towards sustainable transportation
2) To investigate the key factors that influence attitude towards sustainable transportation.
3) To investigate the relationship between the factors that influence public acceptability towards their usage in green vehicle sustainability around Melaka

1.6 SCOPE AND LIMITATION OF THE STUDY

1.6.1 SCOPE OF STUDY

The research that is being discussed here is about the factors influence the increase of public transportation demand and public transport and the consequences that occur which influence attitude towards sustainable transportation. among road user in Melaka. The population for the study was the youth in Melaka and who are 15 years old till 35 years old will be categories as respondent. While collecting information related to this article, the author used 2 types of data which are primary data by collecting questionnaires from the targeted sample and secondary data by studying the journal articles, database, reports and news articles

1.6.2 LIMITATION OF STUDY

There are some limitations in this study, which limit researchers' access to complete and important information. One limitation that was found when the study was carried out was the time limit. Data collection is a time-consuming risk. It took us about a month to collect all the responses from the target respondents to a large sample size and geographic coverage. In addition, the accuracy of the results seems to be another limitation of this study. Due to time constraints, the study did not cover every state in Malaysia. In this study, these respondents were considered to have provided honest and accurate answers

1.7 SIGNIFICANT OF STUDY

The research is tested because the road user can easily provide safety reason so this public will have to access to the reason of increasing public transport and public transportation high demand for practically everything or environmental attitude of Melaka residents toward sustainable transportation and to determine what factors may influence their readiness to use environmentally friendly forms of sustainable transportation such as cycling, hybrid cars, hydrogen, and FCV and also for the public to take actions regarding the dependant variable which is the causes for it to happen and independent variable .Specifically, the effect of various predictors (awareness of sustainable transport benefits, traffic problem awareness, government policies, and symbolic motives for using the car) on citizens' acceptability of sustainable transportation options, with environmental concern serving as a mediator and self-transcendence and self-enhancement as moderators. So this can encourage the publict to do something in order to stop the pollution occured due to increase of road user in Melaka. It makes everyone involved in this studies feels the convenience and be more safety for them. publics in this era are demand for fast services including urban transport, so the researcher finds the initiative of this sustainable urban transport for people who lives in the city area where most of the problems occur there.

1.8 SUMMARY

In the introduction, it mainly discusses the background of the current research, the raising of problems, the research problems found and the research objectives of this research. The legitimacy of the research is mentioned in this chapter. The research scope involves the survey objects of the sample objects and the meanings of some important key terms are also clearly defined. Since this study is aimed to indicate factors of increased in public transport and public transport in the cities area in

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CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

This study offers both from a theoretical and a practical standpoint. This study contributes theoretically to the literature on the acceptability of sustainable transportation by using a Norm activation model (NAM) to the Malaysian setting. This research will assist relevant authorities in understanding and promoting sustainable transportation among Malaysian citizens. The objective of the literature review is to discuss the pertinent terminology and variables utilised in this study and to determine the validity of the research theory based on the opinions of previous researchers. In this study, the literature review will identify and explain the relationship between the literature and the research field.

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2.2 SUSTAINABILITY

According to the United Nations (UN) World Commission on Environment and Development, environmental sustainability is about acting in a way that ensures future generations have the natural resources available to live an equal, if not better, way of life as current generations (United Nations Environment Programme 2007) Environmental sustainability is a major area of interest for governments, businesses and society. Many organizations have introduced a wide range of sustainability programs and practices to reduce their consumption of natural resources, and to diminish their impact on the natural environment (Nidomolu et al. 2009; Delmas et al. 2013; Eccles and Serafeim 2013; Comyns and Figge 2015). Sustainability is meeting our own needs without compromising future generations' ability to do the same(University of Alberta) We require not only natural but also social and economic resources. Sustainability is not just environmentalism. Most definitions of sustainability include considerations for social equity and economic growth. Motivations for sustainability are frequently complex, individual, and diverse. It is

impossible to list the reasons why so many individuals, groups, and communities are working towards this objective. Yet, for the majority of individuals, sustainability boils down to the kind of future we leave for future generations. Sustainability is a shared value among numerous individuals and organisations, as evidenced by their policies, daily activities, and actions. Individuals have played a significant role in shaping our current social and environmental conditions. Together, current and future generations must devise solutions and adapt. Sustainability in this study has three factors, which are: Environmental Sustainability is when all of the earth's environmental systems are in equilibrium and natural resources are consumed at a rate that allows them to regenerate. Second is economic sustainability, in which human communities across the globe maintain their independence and have access to the financial and other resources they need to meet their needs. Economic systems are intact and everyone has access to activities, such as stable sources of income. Last is social sustainability, in which universal human rights and basic needs are accessible to all people, who have sufficient resources to maintain the health and safety of their families and communities. Healthy communities are led by leaders who uphold personal, labour, and cultural rights and protect all individuals from discrimination.

2.3 SUSTAINABLE TRANSPORTATION

Sustainable Transportation refers to any environmentally friendly and low-impact mode of transportation. Transportation sustainability also involves balancing our present and future requirements. Sustainable modes of transportation include walking, cycling, public transportation, carpooling, carsharing, and green vehicles.(Vaughan 2022). As a logical extension of sustainable development, the term sustainable transport was coined to characterise modes of transportation and transport planning systems that are congruent with broader sustainability considerations. There are a variety of definitions for sustainable transport, sustainable transportation, and sustainable mobility (Todd Litman 2009). The European Union Council of Ministers of Transport defines a sustainable transportation system as one that allows the basic access and development needs of individuals, companies, and society to be met safely and in a manner consistent with human and ecosystem health, and promotes equity

among successive generations("European Union's 2015). For instance Fuel-efficient vehicles require less fuel to operate compared with older vehicles. They save fuel costs and emit fewer greenhouse gases such as Hybrid electric vehicles, plug-in hybrid electric vehicles, and all-electric vehicles use electricity to improve vehicle efficiency offers a choice of transport modes, is reasonably priced, operates fairly and efficiently, and supports a competitive economy and balanced regional growth. Limits emissions and waste within the capacity of the world to absorb them, uses renewable resources at or below their rates of generation, and uses nonrenewable resources at or below the rates of creation of renewable substitutes, while reducing the impact on land use and noise production. People are required to engage in sustainable development. Sustainability encompasses more than just operational efficiency and emissions. A life-cycle assessment encompasses production, usage and post-use aspects. A cradle-to-grave design is more significant than a singular concentration on energy efficiency(US EPA 2015).

2.3.1 GREEN VEHICLE

According to the Google Arts and Culture A green vehicle, also known as a clean vehicle, eco-friendly vehicle, or environmentally friendly vehicle, is a road-going motor vehicle that produces fewer negative environmental impacts than comparable conventional internal combustion engine vehicles running on gasoline or diesel, or one that uses alternative fuels. Currently, the term is applied in some nations to any vehicle that meets or exceeds the more stricter European emission requirements (such as Euro6), California's zero-emissions vehicle standards (such as ZEV, ULEV, SULEV, PZEV), or the low-carbon fuel regulations passed in numerous countries. According to the United States Environmental Protection Agency green vehicles may be powered by alternative fuels and advanced vehicle technologies and include hybrid electric vehicles, plug-in hybrid electric vehicles, battery electric vehicles, compressed-air vehicles, hydrogen and fuel-cell vehicles, neat ethanol vehicles, flexible-fuel vehicles, natural gas vehicles, clean diesel vehicles(2022) , and, according to some sources, vehicles that use blends of biodiesel and ethanol fuel or gas. Several authors include conventional motor cars with high fuel economy because, in their opinion, boosting fuel economy is the most cost-effective strategy to enhance energy efficiency and reduce carbon emissions in the transportation sector in the short

term. As part of their commitment to sustainable transportation, these vehicles minimise air pollution, greenhouse gas emissions, and oil imports, so contributing to energy independence. The scope of an environmental analysis goes beyond operational efficiency and emissions. A life-cycle evaluation includes concerns for production and disposal. A cradle-to-grave design is more significant than a singular concentration on energy efficiency.

2.3.2 PUBLIC TRANSPORT

The effects of greenhouse gas emissions, such as air pollution, respiratory ailments, and global warming, are widely established. Numerous reasons, including deforestation, the use of fossil fuels, and emissions from companies and cars, contribute to the growth of these dangerous gases. John Preston's (2020). The driving of personal automobiles is a significant contributor to greenhouse gas emissions, although being routinely overlooked. Those living in densely populated cities feel the effects of car emissions. And as a result of the rapid advancement of technology and the expansion of the middle class, car ownership is expected to increase. This means the universe will become more contaminated than ever before. Adoption of public transit is the only means to reverse this tendency. According to the Oxford Living Dictionary of English Press, Oxford University Public transportation is a method of local transit that allows multiple individuals to travel together along predetermined routes. Public transport (also known as public transportation, public transit, mass transit, or simply transit) is a system of transport for passengers by group travel systems available to the general public, as opposed to private transport, which is typically managed on a schedule, operated along established routes, and charges a posted fee per trip. Buses, trains, and trams are examples of typical modes of public transit. Intercity transit is dominated by high-speed trains, airlines, and motorcoaches. The majority of public transportation services adhere to strict schedules. Some transportation systems operate on a full capacity basis, meaning the vehicle will not begin moving until it is completely filled. However, many cities throughout the world offer shared cabs when time is of the importance.

2.3.3 CARSHARING

Utilizing car-sharing services as opposed to owning a vehicle is an effective approach to lessen your environmental impact and contribute to a more sustainable future. The sustainability effects of automobile sharing are sometimes measured by the number of private cars that can be removed from the road by sharing as opposed to owning, according to Kowalkolski (2021). This is due to the fact that Carsharing is primarily intended for shorter-duration and shorter-distance excursions as an extension of the transportation network and a public service intended to increase mobility options. It may be possible to offer longer trips to further discourage car ownership. CSOs assist members save money over the expense of individual car ownership by encouraging members to travel less frequently, plan trips more thoroughly, utilise other forms of transportation more frequently, and share fuel-efficient vehicles when a car is needed. Carsharing is one of the most renowned examples of the sharing economy, and numerous studies credit this to carsharing's status as a product service system, a use-oriented PSS resulting from the "servitization" process (Liuet al., 2014; Mahut et al., 2015). According to Boehm and Thomas (2013), a product service system is "an integrated bundle of products and services that seeks to provide client utility and value." Servitization in transportation contributes to the development of sustainable urban mobility by removing the need for car ownership and creating a full mobility service offering that meets the needs of citizens for flexibility and convenience (Pinto et al., 2019). Consequently, the primary value proposition of the carsharing service is that users can still enjoy the benefits of a private car without the expense and responsibility of actual ownership. Carsharing enables the variableization of the fixed costs of automobile ownership and increases the transparency of the cost of each journey for the user. This helps to reduce the excessive usage of the private automobile, which is only effective for attempting to amortise the annual fixed expenditures. Members of a carsharing programme have access to the shared vehicle only when necessary, and the decision of which mode of transportation to utilise is determined on a trip-by-trip basis. In accordance with the transport mode hierarchy, small excursions should be taken on foot or by bicycle, whereas lengthy travels should be taken on public transportation, such as buses and trains. This order is disrupted by the automobile, which effectively becomes a mode of transportation for all types of trips: the user, due to its accessibility, flexibility, and comfort, tends to

utilise his own vehicle for all occasions. In addition, it is not always possible to choose between walking and riding due to the dangers associated with cycling and walking in the absence of suitable infrastructure for bikers and walkers. This reliance on the private automobile results in the presence on the road of vehicles sized for a small number of unusual excursions and, as a result, large in relation to the user's typical needs. This indicates that, in general, there are vehicles on the road that consume more fuel, release more pollutants, and, due to their greater footprint, exacerbate traffic and necessitate more parking space. In addition, the acquisition of a new vehicle is frequently postponed, and the vehicles in circulation are frequently old and poorly maintained. Carsharing, on the other hand, offers in most cases the selection of multiple car types based on the demands of each journey and employs better-maintained fleets. They are also newer, less polluting automobiles, and in many areas electric vehicles are available.

2.4 FACTORS THAT INFLUENCE THE ACCEPTABILITY OF SUSTAINABLE TRANSPORT

2.4.1 ENVIROMENTAL CONCERNS

According to Jain, T. R. (2020, December 29), Environment can be defined as a sum total of all the living and non-living elements and their effects that influence human life. While all living or biotic elements are animals, plants, forests, fisheries, and birds, non-living or abiotic elements include water, land, sunlight, rocks, and air. Therefore Environmental concerns means the a matter of interest or importance of environment to someone. According to recent statistics, pollution and ozone depletion are worse than ever, with transportation being the primary cause. The combustion of fossil fuels has a severe influence on the environment, and they are utilised to power the engines of automobiles that are in high demand (Perera, F. 2017). The accumulation of carbon dioxide in the Earth's atmosphere is the root cause of global warming; this is caused by the combustion of coal, oil, and natural gas used to create power and fuel automobiles (UCMP Project Team 2022) . As a result of global warming, the polar ice caps melt, resulting in massive floods, storms, and heat waves that make the normally warm regions intolerably hot. To moderate climate change, reduce environmental

pollution, and halt global warming, sustainable transportation should become the highest priority. (Tom Schauble 2020). Consequently, environmental considerations impact the desirability of sustainable transport where public go through of the prices of fossil fuel goes up due to high demand and scarcity. And temperature increased in Malaysia as a result as a result environmental concerns about can increase cuts in CO2 emissions, can reduce the pollution in urban areas, can reduce global warming due to fossil fuel combustion, can save biotic elements such as animals, plants, forests, fisheries, and birds from extinction are being more awared by the citizens among Malaysian.

2.4.2 GOVERNMENT POLICY

A government is a body of people that work to effectively and successfully guide a unit or community. One thing government does is set and administer policy. They use customs, laws, and institutions to exercise political, executive, and sovereign power with the intent of managing a state of well being that benefits all aspects of the community or unit. Meanwhile policy mean A policy is a principle or course of action proposed or implemented by a governing body. Governing bodies are groups of people that act in unison to guide and support a community, unit, business, institution, etc. Policies can take many forms depending on whether you're looking at an institution, organization, government, or other body. Overall, policies do share some common features. Therefore according Anjeneyulu (2017) Government policy is a declaration of government political activities, plans and intentions relating to a particular cause. Transport is at the centre of numerous economic and social development concerns, accounting for approximately 64 percent of worldwide oil consumption, 27 percent of total energy consumption, and 23 percent of energy-related carbon dioxide emissions. Rethinking and rebuilding transit in the post-COVID age through the implementation of structural changes would go a long way toward sustaining some of the favourable effects on emission levels and air quality produced by efforts to combat the pandemic. Developing a sustainable transportation network to serve a metropolis of 10 million people and a metropolitan area of more than 30 million may appear impossible. The city of Jakarta, Indonesia, for example, has attempted this arduous undertaking. It was the first Southeast Asian city to get the Sustainable Transport Award for its integrated public transportation system in October 2020. In February 2020, Transjakarta, the city's bus rapid transit (BRT)

system, surpassed one million passengers per day (ITDP, 2020). Transjakarta, inaugurated in 2004, is the world's longest BRT system, spanning more than 250 kilometres (155 miles), with dedicated bus lanes that transport passengers around the city (ICCT, 2020). It also connects to smaller vehicles, such as municipal buses and informal microbuses, enabling the system to service a greater territory and more residential areas unreachable to BRT alone. BRT systems therefore provide metro-level services through dedicated lanes, with busways and stations often aligned with the centre of the road, off-board fare collection, and rapid and frequent operations as a result of government policy (ITDP, 2020) Implemented in Malaysia, this will impact the public's preference for sustainable modes of transportation, which are more dependable, convenient, and quick than conventional bus services, and can avoid traffic congestion and lengthy lineups to pay tolls such as combine regulation, pricing & better service quality, cheaper structure charges & taxes, can integrate land use planning and traffic management and more support for advanced technology

2.4.3 SUSTAINABLE TRANSPORT BENEFIT AWARENESS

Numerous social and economic benefits of sustainable transportation could aid in the acceleration of local sustainable development. According to a series of serious reports by the Low Emission Development Strategies Global Partnership, sustainable transportation can help create jobs, improve commuter safety through investments in bicycle lanes, pedestrian pathways, and non-pedestrian pathways, and make access to employment and social opportunities more affordable and efficient (Mona Mahros 2019). It also has the opportunity to save time and money for individuals and government budgets. Sustainable Transportation contributes to the reduction of traffic congestion. It also contributes to the reduction of air pollution and the avoidance of dangers such as asthma. As a result of the utilisation of renewable energy, greenhouse gas emissions are drastically decreased. Participation in sustainable transportation by nations and individuals reduces reliance on nonrenewable energy sources. As a result of all of these factors, transportation expenses are reduced. When individuals utilised sustainable modes of transportation, they increased their physical activity (Dr Jean Paul Rodrigue 2017). Additionally, this results in enhanced social contact. This may also benefit local companies and a thriving economy. In the end, sustainable mobility contributes to healthier lifestyles and a higher quality of life. The inequality between people, resources, and the environment is becoming increasingly pronounced as a result of the rapid rate of urbanisation. Green transportation is an environmentally beneficial and low-carbon mode of transportation. The active promotion of green transportation is advantageous not only for the efficient use of road resources, the reduction of traffic congestion, the reduction of energy consumption, and the air quality but also for the improvement of citizen health as a result of a return to healthy and leisurely lifestyles (marwah 2021)

2.5 PROPOSED RESEARCH FRAMEWORK

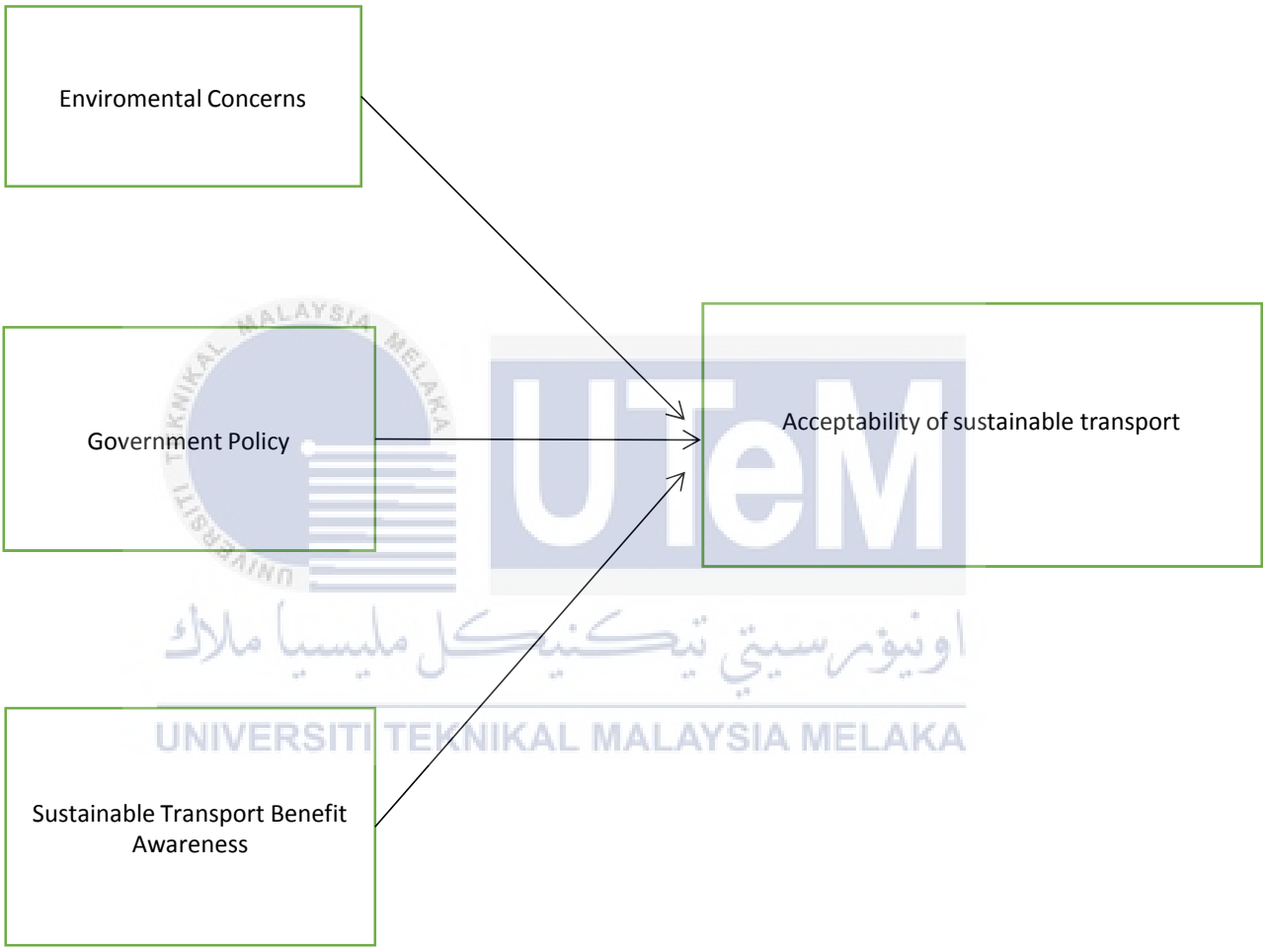

Figure 2.1

2.6 HYPOTHESIS

Three factor are used to examine their relationships with the acceptability of sustainable transport. However, three critical factor are discussed including economic concerns, government policy and the sustainable transport benefitawareness. The hypothesis of the factors such as economic concerns, government policy and the sustainable transport benefit awareness as by the figure 1 sustainable transportation (Figure 1) is an aspect of global sustainability, which involves meeting present needs without reducing the ability of future generations to meet their needs.

Ho1 : Environmental concern strongly influenced the acceptability of sustainable transport.
Ha1 : Environmental concern does not strongly influenced the acceptability of sustainable transport.

According to understanding Todd Litman and David Burwell (2016), Transport Canada also gave a detailed definition of sustainable transport consisting of three core values. First, such a system would be permitting of safe and consistent access to individual and societal basic needs, while securing both human and ecosystem health to ensure stability for future generations. The hypothesis relationship were developed to be tested as show at above.

Ho2 : Government Policy strongly influenced the acceptability of sustainable transport.
Ha2 : Government Policy does not strongly influenced the acceptability of sustainable transport.

According to the Dr Brian Slack (2017) the transportation planning process needs to be addressed by government agencies and society as a whole due to the major associated challenges and problems, such as the increasing demand for transport, the growing number of vehicles on the road, and the need to improve road infrastructure. In making acceptable public transportation systems all stakeholders play an important role and must ensure mobility in an urban area alongside other specifications,

including providing high-quality services for users, being more attractive to users, and providing efficient use of urban spaces. The hypothesis relationship were developed to be tested as show at above.

Ho3: Sustainable Transport Benefit Awareness strongly influenced the acceptability of sustainable transport.
Ha3 : Sustainable Transport Benefit Awareness does not strongly influenced the acceptability of sustainable transport.

According to Mona Mahros (2019) Numerous social and economic benefits of sustainable transportation could aid in the acceleration of local sustainable development. According to a series of serious reports by the Low Emission Development Strategies Global Partnership, sustainable transportation can help create jobs, improve commuter safety through investments in bicycle lanes, pedestrian pathways, and non-pedestrian pathways, and make access to employment and social opportunities more affordable and efficient. The hypothesis relationship were developed to be tested as show at above.

2.7 SUMMARY

In conclusion, this chapter is reviews from the secondary data. This chapter mainly collects and cites the previous research results. In addition, all the studies used in this chapter have provided better insights and understanding of financial management behaviors, giving this study a clearer direction. The methods used in this study will be discussed in the next chapter

CHAPTER 3
RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research method can be described as the tools used to answer a research topic (Ghauri & Gronhaug, 2010). In addition, Frey et al. (1991) noted that research procedures are the tactics that allow researchers to collect data and test theories. The research method can be utilised to aid in data collection, data sampling, and problem resolution. According to Saunders et al. (2012), research method can also be described as the technique and procedure for data collection and data analysis. This chapter will explain the study's research methodology, including the research design and research strategy. The primary objective of this chapter was to describe the methodology and research design that will be employed in the investigation. This study comprised data collecting and sampling methods in order to assess the relationship between dependent and independent variables.

3.2 RESEARCH DESIGN

This research examined the factors affecting the sustainability of urban transportation in Malaysia. According to Saunders et al. (2012), research 24 design describes how a researcher utilised their plan for achieving their research objective and answering their research question. The researcher should choose the appropriate data source collection method and data analysis methodologies with attention. Ridenour and Newman (3848) emphasise the significance of research design to the research process and view it as a dynamic continuum. It is possible to state that each design process is interrelated and that the research objective is a desired standard. The full study approach was then applied to the problem-solving process. Researchers must master the entire procedure and assure its transparency. Exploratory, descriptive, and causal research designs are the three most common types of research designs (Sreejesh et al, 2014). According to Alvin and Ronald (3843), the purpose of exploratory research is to gather background information in order to identify the term, the problem, and the hypothesis, and to establish the order of importance. Utilizing descriptive research to describe and investigate market phenomena. Lastly, causal research is employed when

the researcher has identified the problem and want to evaluate the causal relationship between the problem-related variable and the study objective or problem.

3.3 METHODOLOGICAL CHOICE

In methodological choice, there will be a discussion one research approaches that can be utilised to construct the study which is quantitative. These approaches are used to collect and analyse empirical data in a systematic manner. Quanitative research is more suited to small sample sizes, and its outcomes are neither measurable nor quantifiable. In addition, quantitative approaches are typically defined as using statistical methods to infer results. It will test the hypotheses and population, and the results will be presented numerically (Harwell, 2010). According to the description, this research is primarily concerned with quantifying replies with statistics and data. In order to evaluate the factors affecting the sustainability of urban mobility among Melaka citizen road users, this study used a quantitative research methodology. Statistical results can be derived from a vast quantity of quantitative data using quantitative methods of data analysis. According to Ooi et al. (2015), the validity, precision, and dependability of the quantitative method's results are quite good. The survey research strategy for quantitative research was developed, and it will be conducted through a questionnaire. According to Malhotra and Birks (3847), a quantitative questionnaire can provide a vast amount of data for research. This can make a generalisation an accurate conclusion, as data on public social response is required

3.4 PRIMARY AND SECONDARY DATA RESOURCES

3.4.1 DATA COLLECTION METHOD

There are two types of data sources, according to Collis and Hussey (3849): main data and secondary data. The term "primary data" can be used to refer to information derived from a research project. Typically, interview, observation, case study technique, and surveys towards current article and journal were employed to collect primary data. For another form of data source, secondary data, earlier data was

collected and utilised by other researchers for their own research. Typically, secondary data were collected through looking and surveying for papers, journals, official statistics, and government documents (Burn & Bush, 3843). According to Saunders et al. (2012), a combination of primary and secondary data is frequently employed to answer research questions and attain research objectives. In this study, the researcher has also employed a combination of primary and secondary data sources. The primary data was obtained using a questionnaire, while the secondary data was gathered via the internet and used to support the overall advancement of this study.

3.4.2 PRIMARY DATA

It has been chosen to use survey in both offline and online techniques to disseminate questionnaires to all 384 respondents in this study. The questionnaires will be sent to Malaysian adolescents. The offline survey questions will be printed and sent to the sample frame. Respondents residing in Melaka will be selected at random, and questionnaires will be mailed at random. After that, data will be collected and analysed using research methods such as SPSS. The results of primary data will be compared to those of secondary data, which includes material from books, newspaper articles, journal articles, databases, and reports.

3.4.3 SECONDARY DATA

The secondary data consists of information or content from an existing publication. This material is available in books, newspaper articles, journal articles, databases, and reports, among other sources. As a student, they can use their identity to obtain pertinent information from the website of the Jabatan Pengangkutan Jalan Malaysia Statistic and the books and journals borrowed from the university library, as well as from the Google scholar website and the Google search engine in order to locate all relevant statistics and databases.

3.5 RESEARCH LOCATION

Due to numerous restraints, this study will only focus on a single firm, specifically in Melaka, based on the relevance and contributions to road statistics based on the stated issue that serves as one of the primary drivers for Melaka's urban transportation. This organisation is also acceptable because it meets the needs of the phenomena investigated in this study. In this organisation, the researcher will be able to obtain the needed information from the chosen respondents.

3.6 RESEARCH STRATEGY

3.6.1 QUESTIONAIRE DESIGN

The questionnaire was intended to correspond with the factor-related research study in order to influence the acceptibility of sustainability in urban transport among Melakarians road users. All admissible and accurate data must be collected in order to answer the research question and achieve the study objective. The questionnaire was developed based on a previous study with a similar title to the current investigation. To collect data and do analysis, a questionnaire will be constructed and created. The questionnaire was written in English. This study employs a build interval scale. Therefore, the selected rating scale is the Likert scale (five-point scale) scaling method measured in the agreeable term (1-strongly disagree, 2-disagree, 3-neutral, 4-agree, and finally 5-strongly agree) with the numerical value 1-5 to respond. The questionnaires' questions were derived from studies conducted by other researchers that are relevant to the current investigation. It was broken into two sections, with the first section containing questions about the respondents' demographics.

Table 3.1: Five points rating scale by Rensis Likert in 1932

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

The second section of the questionnaire measured five variables: four independent and one dependent. The questionnaire will be distributed through online and offline channels. Using online means, a portion of the questionnaire was sent electronically using Google Form. Offline approaches, which indicate that a portion of the questionnaire was hand-delivered to respondents. Modify the question format further and select articles that are pertinent to the research project. The following table 3.1 displays the measurement of each questionnaire item for each independent variable and dependent variable.

INDEPENDANT VARIABLES	**ITEAM MEASURE**	**SOURCES AND YEARS**	**MEASUREMENT ITEMS ADOPTED AND ADAPTED FOR THIS STUDY**
Enviromental Concerns	1) Sustainable transport emit less pollution (air pollution, sound pollution) 2) Sustainable transport promote health to public user 3) Sustainable transport save non renewable energy such as fossil fuel 4) Sustainable Transport can slowdown the climate change (heat stroke)	US EPA (September 2015) Rume, T., & Islam, S. M. D.-U. (2020 September 17)	1)Sustainable transport emit less pollution (air pollution, sound pollution) 2)Sustainable transport promote health to public user 3)Sustainable transport save non renewable energy such as fossil fuel 4)Sustainable Transport can slowdown the climate change (heat stroke)

Government Policy	1) Huge investment in, and patronage of public transport facilities (comfortable and safe waiting are 2) Promote the use electric vehicle such as KTM and LRT by decreasing the fare to public user. 3) Increase the effeciency of public transport (time consume and easy access)	Leila Mead. (2022, June 5) Rodrigue, D. J. P. (2017, December 7).	1) Huge investment in, and patronage of public transport facilities (comfortable and safe waiting are 2) Promote the use electric vehicle such as KTM and LRT by decreasing the fare to public user. 3) Increase the effeciency of public transport (time consume and easy access)
Sustainable Transport Benefit Awareness	1) Sustainable transport are more efficient and easy to handle 2) Sustainable transport can save money due to low fare and low maintenance 3) Sustainable transport provide safer transportation	Jane Marsh. (2020, May 13) Na'asah Nasrudin (May 2018)	1) Sustainable transport are more efficient and easy to handle 2) Sustainable transport can save money due to low fare and low maintenance 3) Sustainable transport provide safer transportation

3.6.2 SAMPLING DESIGN

The target respondents of this survey research were targeted at road user who are living in Melaka. According to Hair et al. (2010), the sample should have 100 or more than 100 in order to ensure the result is more reliability. In addition, Department of Statistical Malaysia (2018) was shows that the population in Malaysia is 33.80 million. In this study, the researcher had selected 384 respondents as the sample size as the source of investigation and evaluation to answer the questionnaires. During this research, simple random sampling method was used as from probability sampling. Tashakkori & Teddie (3843) stated probability sampling technique is selecting huge number of sample from population and sampling randomly. Probability sampling techniques are more suitable for this study in order to eliminate bias and achieve generalization results in the selection process. In addition, researchers need to draw conclusions about the population from the sample to answer research questions and meet research goals. The sampling frames of this study are focus on people on road user who living at Melaka. The researcher will follow the table of sample size for different population by Krejcie & Morgan (1970). Saunders et al. (2012) stated most of the researcher set 95% level of certainty is enough sufficient for the research. The simple random sampling was selected as a sampling technique for this research mean that each individual had opportunity to be chosen and random 384 respondents was selected randomly to participate and answer the questionnaire survey. Hence, respondents will be picked randomly in Melaka and the questionnaires will be sent randomly through online and offline. The study population comprised of the road userwho living in Melaka and from 15 to 35 years old. For the study, 384 questionnaires were distributed directly to respondents.

Table 3.2: Determining sample size of a known population

Source: Krejcie and Morgan (1970)

Population Size (N)	Sample Size (S)
100	80
200	132
300	169
400	196
500	217
600	234
700	248
800	260
900	269
1000	278
2000	322
3000	341

3.6.3 PILOT TESTING

The purpose of the pilot test is to determine the survey questionnaire's dependability and validity (Sekaran, 2003). Before the questionnaire was distributed in a real-world situation, the researcher conducted a pilot test to identify any flaws or weaknesses in the instrument and to make any necessary changes or corrections (Kvale, 2007). According to Saunders et al. (2012), the pilot test administered to family or friends is superior. In addition, pilot tests can provide researchers with ideas for questionnaires or tester feedback.

3.7 TIME HORIZON

In this research study, the researcher chose cross-sectional research due to time constraints. Thus, this study's data and information are collected from a sample population on a single occasion. Consequently, cross-sectional research was suitable for determining the prevalence or overall picture of a phenomenon in a population study at a given time, namely semesters 7 and 8.

3.8 RELIABILITY AND VALIDITY

According to Saunders et al. (2012), the goal of validity and reliability is to prevent receiving an incorrect result. In order to improve the quality of the research, researchers have implemented many strategies to enhance the precision and dependability of measurement. Validity is the ability of a measurement to accurately measure what the researcher wishes to measure. Researchers will utilise reliability to ensure the quality of the questionnaire. If the findings from the data gathering method and analytical procedure have been reproduced by other researchers or replicated, they can be considered reliable (Saunders et al., 2012). Using the Cronbach's Alpha coefficient, the reliability was measured. The typical range of Cronbach's Alpha was between 0 and 1. If the alpha value is larger than 0.70, the study is regarded as credible (George and Mallery, 2003). The reliability outcome will be affected by threats such as participant and researcher mistake, it was discovered (Saunders et al., 2012). To avoid participant mistake, researchers must carefully select respondents to complete the questionnaire. In order to prevent researcher mistake, the researcher should also develop a well-understood and high-quality questionnaire. The objective of the pilot test is to eliminate such factors as misunderstanding and unfamiliarity and to increase result reliability.

Table 3.3: Cronbach's Alpha Coefficient Range and Strength of Association Sources: Saunders et al., (2016)

Cronbach's Alpha Coefficient Range	Strength of Association
≥ 0.9	Excellent
0.9 > ≥ 0.8	Good
0.8 > ≥ 0.7	Acceptable
0.7 > ≥ 0.6	Questionable
0.6 > ≥ 0.5	Poor
0.5 >	Unacceptable

3.9 DATA ANALYSIS METHOD

In this study, version 22 of Statistical Package for Social Science (SPSS) was used to examine and analyse the completed questionnaires by entering the data into the system. SPSS has the ability to give effective data management, a variety of options, and improved output structure. Several data analysis techniques, including descriptive, regression, and Pearson correlation, were employed. To compare and describe the variables of central tendency and dispersion, a descriptive analysis was employed. According to Saunders et al. (2012), descriptive can be used to measure the trend centre using the mode, median, and dispersion to explain the distribution of data values near the trend centre. Typically, frequency and percentage are used in descriptive analysis to describe the demographic features of the target respondents. According to Tabachnick and Fidell (2007), regression analysis is utilised to determine the association between a dependent variable and one or more independent variables. In addition, according to Saunders et al. (2012), regression analysis is utilised to forecast the value of the dependent variable based on the value of one or more independent variables by calculating the regression equation. On the basis of this statement, researchers opted to utilise multiple regression analysis in this study because there were four independent variables whose influence on the dependent variable needed to be examined. Moreover, according to Saunders et al. (2012), correlation coefficient is utilised to determine the strength of a linear relationship between two numerical variables. The researcher selected Pearson correlation to evaluate the strength of the independent variable's relationship with the dependent variable. The range of the coefficient (r) is between +1 and -1, with +1 representing positive correlation and -1 representing negative correlation. 0 indicated that there was no correlation between two variables. If the correlation between two variables is greater, the relationship between them will be stronger (Hair et al., 2008). Figure 3.2 depicted the coefficient of correlation between two variables.

Correlation Coefficient Value (*r*)	Direction and Strength of Correlation
-1	Perfectly negative
-0.8	Strongly negative
-0.5	Moderately negative
-0.2	Weakly negative
0	No association
0.2	Weakly positive
0.5	Moderately positive
0.8	Strongly positive
1	Perfectly positive

Figure 3.1 Correlation Coefficient(Source:Hair et al., 2010)

3.10 SUMMARY

The chapter has provided a summary of the study's research methods. The research design and data collection technique were crucial for obtaining accurate results. This research utilised explanatory research. This study was conducted using a quantitative approach and a questionnaire. The survey was done and contributed by Melakarians road users. A pilot test was undertaken before to implementation in the actual world. This is due to the requirement for enhancements based on the responses of respondents. SPSS was used as a statistical tool to evaluate the acquired data. Researchers attempted to utilise a variety of ways to counteract the dangers and enhance the research's validity and reliability.

CHAPTER 4

DATA ANALYSIS

4.1 Introduction

This chapter discussed about the result and analysis of the survey questionnaire data that had been distributed. The questionnaires have been distributed to 384 respondents around Malacca city. The researcher elaborates about the various statistical tests and interpretation of the results of analysis using SPSS version 22.0. The results involved frequency analysis, reliability analysis, correlation and linear regression analysis to test the hypothesis. The results of this study are shown in the form of tables, graphs and charts to simplify and improve the effectiveness of interpretation of data.

4.2 Pilot Test Result

The researcher had chosen 30 respondents to conduct this pilot test before the actual distribution of the questionnaire. All the result from the collected data of pilot test had been analyze using the software of Statistical Package of Social Science (SPSS) version 22. The objective of the pilot test is to ensure whether the respondents understand all the questions given in the questionnaires. It is also to test the reliability of the questionnaire.

4.2.1 Reliability Test

The Cronbach's Coefficient Alpha had been applying to calculate the reliability of all variables in this study. To identify the reliability value, the variable of Cronbach's alpha has a value greater than 0.60 (Imam Ghozali, 2005).

Cronbach's Alpha	N of Items
0.961	22

Table 4.1 Cronbach's Alpha Pilot Test

In this survey, the researcher use Cronbach's Alpha Coefficient to analyze the reliability of five independent variables and dependent variable which make the total items that has been included in the questionnaire is 17 items. Based on the table above, Cronbach's Alpha of reliability test statistics for all the variables are 0.961 that is considered as excellent reliability value.

Variables	Cronbach's Alpha	Number of Items
Environmental Concerns	**0.998**	**4**
Government Policy	**0.967**	**4**
Benefit Awareness	**0.994**	**4**

Table 4.2 Pilot Test Reliability Test

Based on the result of reliability test on pilot survey above, the Cronbach's Alpha value for environmental concerns of use scored 0.998 which is considered as being high reliability. While the value of governments is 0.967 which is falls under very good reliability. The Cronbach's Alpha value for the benefit awareness of sustainable transportation is 0.994 that shared the same good reliability result rank.

Since all the result of variables from Cronbach's Alpha value in this study scored above than 0.60, therefore it can be concluded that the overall reliability test of all item in the questionnaires used is acceptable and valid which can lead to the further study

4.3 Frequency Analysis

4.3.1 Respondent Demographic Profile

This section identify about the frequency of the basic features of respondents demographic analysis. The 384 respondents are measured demographically in term of their gender, race, age, education level, occupation, and how often they use sustainable transportation technology at urban area around Melaka

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	286	69.1	69.1	69.1
Female	128	30.9	30.9	100.0
Total	414	100.0	100.0	

Table 4.3 Demographic of Gender

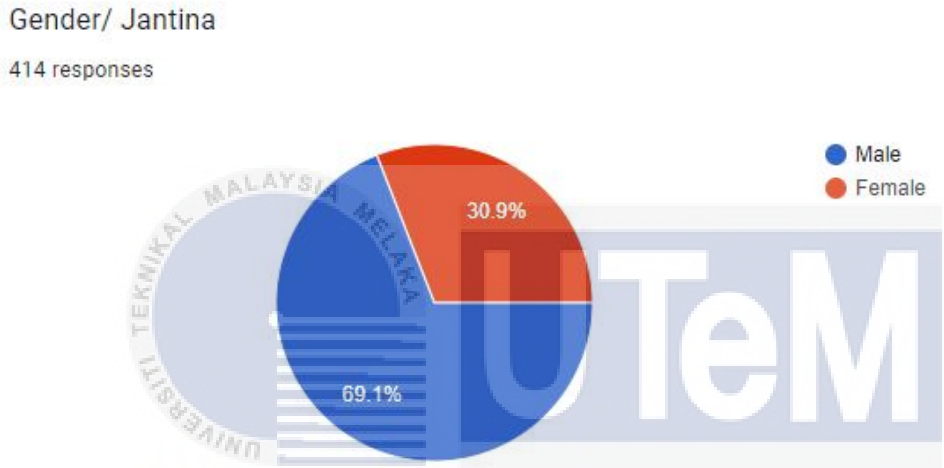

Figure 4.1 Respondent Demographic Gender

The analysis data of gender based on the Table 4.3 and Figure 4.1 show that 286 respondents are male and 128 are female from 384 respondents and 30 pilot test result whose are participated in this research. In percentage, male are 69.1% meanwhile female are 30.9% which indicated that more male respondents participated in this survey rather than female respondents.

4.3.1.2 Race

	Frequency	Percent	Valid Percent	Cumulative Percent
Malay	265	64.0	64.0	64.0
Chinese	98	23.7	23.7	87.7
Indian	44	10.6	10.6	98,8
Others	7	1.7	1.7	100.0
Total	414	100.0	100	

Table 4.4 Respondent Demographic Of Race

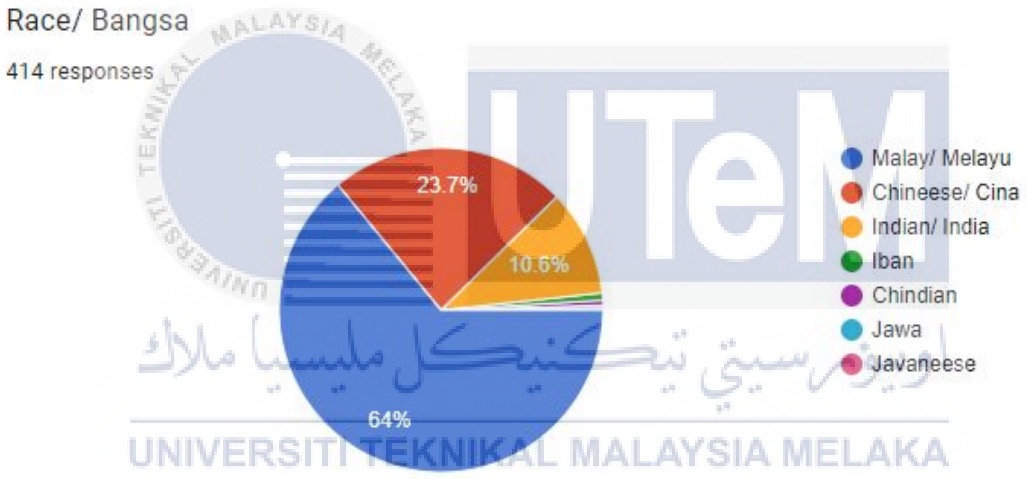

Table 4.2 Respondant Demographic of Race

Based on the Table 4.4 and Figure 4.2 above, the race of the respondents show 265 respondents with 64% are Malay, 98 respondents with 23.7% are Chinese, 44 respondents with 10.6% are Indian and 7 respondents with 1.7% are others which is from Jawa and Iban. Malay respondents have dominated this survey for the research purpose

.

4.3.1.3 Education Level

	Frequency	Percent	Valid Percent	Cumulative Percent
STPM/Matrikulasi/ Diploma/ Asasi	106	25.6	25.6	25.6
Ijazah/Degree	219	52.9	52.9	78.5
Master	65	15.7	15.7	94.2
PHD	13	3.1	3.1	97.3
Other	11	2.7	2.7	100.0
Total	414	100.0	100.0	

Table 4.5 Respondent Demographic Education Level

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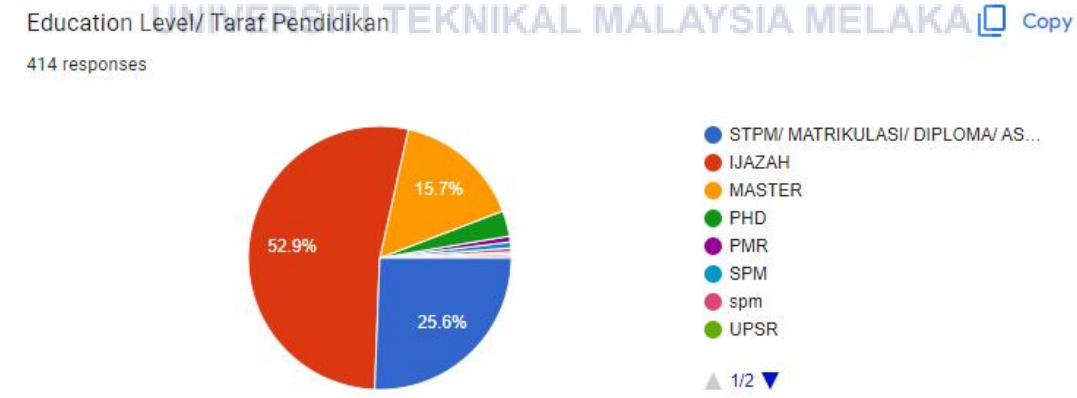

Figure 4.3 Respondent Demographic Education Level

Table 4.5 and Figure 4.3 above shows that respondent from Degree Holder with the percentage of 52.9% as a majority of the respondents for this research which is 219 over 414 respondents including pilot testing. This is followed by 106 respondents are

STPM/ Diploma holder with 25.6% and respondents with Master Education Level with 15.7% and 13% for PHD holder. Meanwhile, there are only 11 respondents have other education level which is UPSR, SPM AND PMR holder. It can be conclude that people who have Degree education Level are more responsive to this survey.

4.3.1.4 Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Self - Employed	79	19.1	19.1	19.1
Public Sector	78	18.8	18.8	37.9
Private Sector	72	17.4	17.4	55.3
Student	162	39.1	39.1	94.4
Retired	23	5.6	5.6	100.0
Total	414	100.0	100.0	

Table 4.6 Respondent Demographic Of Occupation

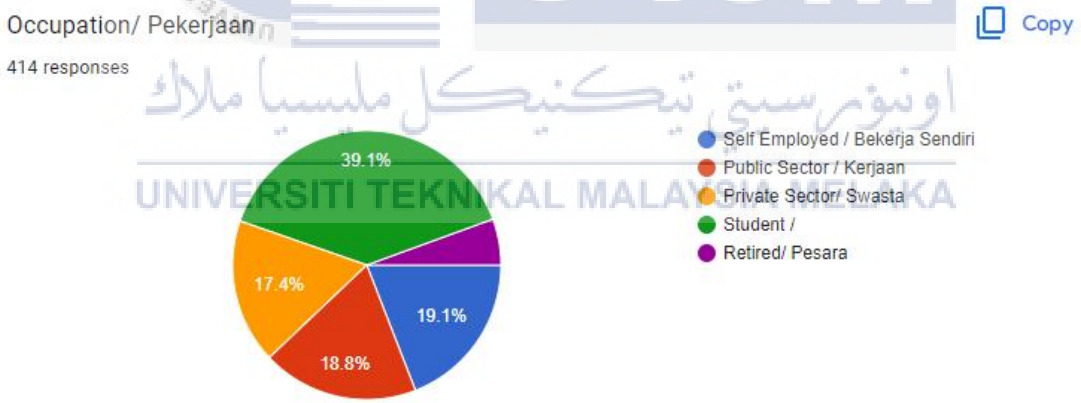

Figure 4.4 Respondent Demographic Occupation

Table 4.6 and Figure 4.4 above indicate that 79 respondents out of 414 are self-employed with only just 19.1% and there are 78 respondents which are 18.8% are public sector employed in the term of respondent's occupation and 72 respondents which are 17.4% are private sector employed in the term of respondent's occupation The chart for respondent's occupation of students shows the highest percentage which is 39.1% that represent 162 numbers of respondents meanwhile the least respondent's

occupation is retired which is at 23 respondent which are 5.6% of total 414 respondent including pilot testing. The researcher can conclude that most of the participants of this survey are students followed by public and private employed and self-employed respondents.

4.3.1.4 Did The Respondent Ever Use The Sustainable Transportation?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid YES	363	87.7	87.7	87.7
NO	51	12.3	12.3	100.0
Total	414	100.0	100.0	

Table 4.7 Respondent Demographic of Sustainable Transportation Usage

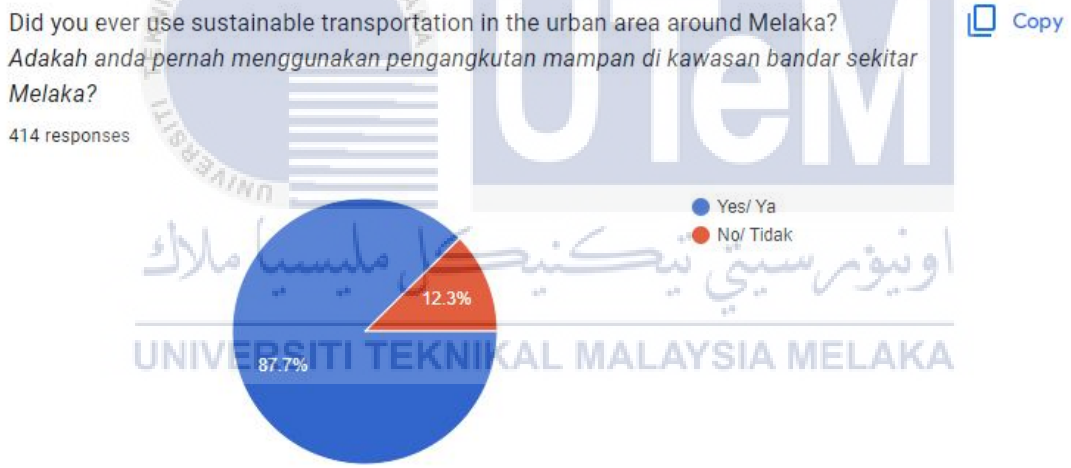

Figure 4.5 Respondent Demographic of Sustainable Transportation Usage

Table 4.7 and Figure 4.5 above indicates that most of the respondents have used a sustainable transportation in urban area around Melaka, which is 363 respondents equal to 87.7%. While the respondents who have not been using Sustainable Transportation around Melaka is only at 51 respondent which is at 13.3% only of the total respondent. The results from this analysis can help researcher evaluate the entire data analysis of this research.

4.4 Descriptive Statistic For Variables

Descriptive statistic for variables provides an analysis and interpretations of respondents' perceptions towards the variables in the conceptual framework. The 5-point Likert scale ranging has been used as a measurement in this research which is started from scale 1: Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree and 5: Strongly agree. The mean score that considered as low is 1.0-2.33, while 2.34-3.67 is considered as moderate mean score and the high mean score is 3.68-5.0. The following below shows that the statistic for the each variables and the percentage of respondents that answered the survey based on 5-point Likert scale ranging.

4.4.1 Sustainable Transportation for Environmental Concerns

Statistics

		Can increase cuts in CO2 emissions	Can reduce the pollution in urban areas.	Can reduce global warming due to fossil fuel combustion	Can save biotic elements such as animals, plants, forests, fisheries, and birds from extinction.
N	Valid	384	384	384	384
	Missing	0	0	0	0
Mean		4.4689	4.4585	4.4663	4.4482
Std. Deviation		.91187	.92839	.92310	.92507

Table 4.8 Statistic of Dependent Variable

Table 4.8 above indicates that all 384 set of data received are valid and no data is missing. All the statements in this dependent variable that is the sub-variable for Environmental Concerns had the mean values greater than 3.68, indicating that the score of this variable based on respondents' perception is high. The following below

shows that the percentage of respondents that answered the survey based on 5-point Likert scale ranging.

Statement	Scale (%)				
	1	2	3	4	5
Can increase cuts in CO2 emissions	1.3	4.1	8.8	17.9	67.9
Can reduce the pollution in urban areas.	1.6	4.1	8.8	17.9	67.6
Can reduce global warming due to fossil fuel combustion	1.6	4.1	8.3	18.1	67.9
Can save biotic elements such as animals, plants, forests, fisheries, and birds from extinction.	1.3	4.4	9.3	18.1	66.8

Table 4.9 Descriptive Analysis of Environmental Concerns

Based on the results of the first sub-variable of environmental concerns, most of the respondents strongly agree that sustainable transportation can increase cuts in CO2 emissions which is about 67.9% of respondents. Next, 17.9% of the respondents say that they agree with this statement and 8.8% of the respondents just choose neutral opinion about this which also means they not very sure about this service. In addition, 4.1% of respondents disagree which means they quiet don't know about how to sustainable transportation can increase cut in CO2 emission 1.3% is strongly disagree that also means they are not know at all about the how to sustainable transportation can increase cut in CO2 emission

Secondly, the result shows that the highest value of respondents that say Sustainable Transportation can reduce the pollution in urban areas is 67.6% that is strongly agree score. Meanwhile, the respondents that agree are at 17.9% and disagree with this statement have a percentage that is 4.1%. Followed closely are the respondents that just think neutral about this statement is 8.8% and just 1.6% of respondents that strongly disagree in term of how Sustainable Transportation can reduce the pollution in urban areas

Thirdly, the sub-variable that Sustainable Transportation can reduce global warming due to fossil fuel combustion shows that most of the respondents strongly agree with it with the score 67.9% of respondents. After that, 18.1% of the respondents think this opinion is agree and the respondents that neutral about this are about 8.3%. There are about 4.1% of respondents that disagree and 1.6% of respondents strongly disagree about the statement that Sustainable Transportation can reduce global warming due to fossil fuel combustion

Fourthly, the respondent's majority strongly agree with the statement that environmental concerns about sustainable transportation can save biotic elements such as animals, plants, forests, fisheries, and birds from extinction that is 66.8% of respondents. Afterward, 18.1% of respondents agree with this statement and 9.3% of them choose neutral as an opinion about this statement. There are also respondents choose to disagree about this statement that is about 4.4% and the rest of the respondents are 1.3% that choose strongly disagree about this sub-variable.

4.4.2 Government Policy

Statistics

		Combine regulation, pricing & better service quality	Cheaper structure charges & taxes	Can integrate land use planning and traffic management	More support for advanced technology
N	Valid	384	384	384	384
	Missing	0	0	0	0
Mean		4.4456	4.4404	4.6140	4.4637
Std. Deviation		.93052	.91896	.82412	.91452

Table 4.10 Statistic of Dependent Variable

Table 4.10 above indicates that all 384 set of data received are valid and no data is missing. All the statements in this variable that is the sub-variable for government policy of use had the mean values greater than 3.68, indicating that the score of this variable based on respondents' perception is high. The following above shows the percentage of the respondents' acceptability on the first independent variable that is

government policy of use which have 4 different sub-variables that are combine regulation, pricing & better service quality, cheaper structure charges & taxes, can integrate land use planning and traffic management and more support for advanced technology based on 5-point Likert scale ranging.

Statement	Scale (%)				
	1	2	3	4	5
Combine regulation, pricing & better service quality	1.6	4.1	9.1	18.7	66.6
Cheaper structure charges & taxes	1.6	3.6	8.8	20.5	65.3
Can integrate land use planning and traffic management	1.6	3.9	1.0	18.7	74.9
More support for advanced technology	1.6	3.9	8.3	19.2	67.1

Table 4.11 Descriptive Analysis of Government Policy

According to the first sub-variable in the Table 4.11 above, 66.6% of the respondents strongly agree that combine regulation, pricing & better service quality effect the acceptability of public around melaka towards sustainable transportation which make it became the majority opinion. Next, 18.7% of the respondents say that they s agree with this first sub-variable. 9.1% of the respondents think neutral and followed closely by 4.1% of respondents that disagree with the combine regulation, pricing & better service quality effect the acceptability of public around melaka towards sustainable transportation

The second sub-variable shows that the highest value of 65.3% respondents say that they are strongly agree with cheaper structure charges & taxes can effect the acceptability of public around Melaka towards sustainable transportation while 20.5% of them agree with this statement. Respondents whose feel neutral about this statement is about 8.8%. Another balance of the 384 total respondents is disagree and strongly disagree about this statement is 3.9% and 1.6% respectively.

For the third sub-variable, the result shows most of the respondents choose strongly agree scale which is 74.9% that stated government policies that can integrate land use

planning and traffic management can make them choose to use sustainable transportation At the same time, 18.7% respondents agree about this statement followed by neutral scale which is 1.0% of respondents. The rest of the respondents that think disagree and strongly disagree is 3.9% and 1.6% respectively.

Based on the fourth sub-variable that is the got more support for advanced technology, respondents mainly choose strongly agree which is 67.1% and followed by 19.2% of respondents agree with this statement. Then, 8.3% of the respondents choose neutral, 3.9% of respondents disagree and the rest of the respondents strongly disagree about this statement.

4.4.3 Benefit Awareness

		Improvement of commuter safety through investments in bicycle lanes, pedestrian pathways, and non-pedestrian pathways	Can make access to employment and social opportunities	Has the opportunity to save time and money for individuals and government budgets	Utilization of renewable energy, greenhouse gas emissions are drastically decreased
N	Valid	384	384	384	384
	Missing	0	0	0	0
Mean		4.4534	4.4560	4.4560	4.4611
Std. Deviation		.93650	.91984	.91701	.91725

Table 4.12 Statistic of Dependent Variable

Table 4.12 indicates that all 384 set of data received are valid and no data is missing. All the statements in this variable that is the sub-variable for benefit awareness had the mean values greater than 3.68, indicating that the score of this variable based on respondents' perception is high. The following above shows the percentage of the respondents' perception on the first independent variable that is perceived usefulness

which have 4 different sub-variables that are Improvement of commuter safety through investments in bicycle lanes, pedestrian pathways, and non-pedestrian pathways, Can make access to employment and social opportunities, and Utilization of renewable energy, greenhouse gas emissions are drastically decreased based on 5-point Likert scale ranging.

Statement	Scale (%)				
	1	2	3	4	5
Improvement of commuter safety through investments in bicycle lanes, pedestrian pathways, and non-pedestrian pathways	1.8	3.9	8.8	18.1	67.4
Can make access to employment and social opportunities	1.6	3.9	8.8	18.9	66.8
Has the opportunity to save time and money for individuals and government budgets	1.6	3.9	8.5	19.4	66.6
Utilization of renewable energy, greenhouse gas emissions are drastically decreased	1.6	3.9	8.5	18.9	67.1

Table 4.13 Descriptive Analysis of Benefit Awareness

Based on the results of first sub-variable, 67.4% of the respondents strongly agree that Improvement of commuter safety through investments in bicycle lanes, pedestrian pathways, and non-pedestrian pathways which makes it became the majority reason for the acceptability on using sustainable transportation. Next, 18.1% of the respondents say that they agree with this statement and 8.8% of the respondents think neutral about it. In addition, 3.9% of respondents disagree with the online food ordering service give more details and information while the rest 1.8% is strongly disagree with this statement.

Secondly, the result shows that the highest value of respondents that sustainable transportation can make access to employment and social opportunities is 66.8% that

is strongly agree and followed by 18.9% respondents that agree with this statement. Respondents whose feel neutral about this statement is about 8.8% while the other is 3.9% of the respondents choose to disagree with this statement. Meanwhile, the rest 1.6% of the respondents strongly disagree about this statement.

Thirdly, the sub-variable that stated has the opportunity to save time and money for individuals and government budgets shows that most of the respondents strongly agree with it which are 66.6%. After that, 19.4% of the respondents agree and 8.5% of respondents feel neutral about this statement. There are about 3.9% of respondents whose disagree about this statement with the rest of selected respondents strongly disagree that is 1.6%.

Fourthly, the respondent's majority strongly agree with the statement that Utilization of renewable energy, greenhouse gas emissions are drastically decreased. Subsequently, 18.9% of respondents agree with this statement and 8.5% of them choose neutral as an opinion about this statement. There are also respondents choose to disagree about this statement that is about 3.9% and the rest of the respondents are 1.6% that choose strongly disagree about this sub-variable.

4.5 Reliability

The purpose of reliability measurement is to analyze whether the quality of the data in the questionnaire is reliable or not in order to generate an accuracy results. Thus, the researcher used Cronbach's Coefficient Alpha which is the same method in testing the pilot test to calculate the reliability of the study.

Cronbach's Alpha	N of Items
0.994	17

Table 4.14 Reliability Statistic of Actual Survey

In this survey, the researcher use Cronbach's Alpha Coefficient to analyze the reliability of five independent variables and one dependent which make the total items that has been included in the questionnaire is 17 items and had been distributed to 384

respondents. Based on the table above, Cronbach's Alpha of reliability test statistics for all the variables are 0.994 that is considered as excellent reliability value.

Variables	Cronbach's Alpha	Number Of Items
Environmental Concerns	0.998	4
Government Policy	0.967	4
Benefit Awareness	0.964	4

Table 4.15 Reliability Test for Actual Survey

Based on the result of reliability test on actual survey above, the Cronbach's Alpha value for environmental concerns of use scored 0.998 which is considered as being good reliability and share the same rank with government policy that is 0.967. While the benefit awareness is 0.964 which is falls under very good reliability. For sustainability transportation usage that act as dependent variable, the value of Cronbach's Alpha is 0.978 which considered as good reliability.

All the result of these variables has slightly different value with the pilot test result. However, since all the result of variables from Cronbach's Alpha value in this study scored above than 0.60, therefore it can be concluded that the overall reliability test of all item in the questionnaires used is acceptable and valid.

4.6 Pearson Correlation Analysis

In this section, the researcher would like to examine the relationship between the independent variables (environmental concerns, government policies and sustainable transport benefit awareness) and dependent variable (Acceptability of sustainable transport). According to Sugiyono and Wibowo E. (2010), correlation, r that fall between 0.60- 0.799 is considered strong or significant while the p-value which is 0.000 shows the significant relationship between the variables

Correlations

		Environmental Concerns	Government Policy	Benefit Awareness	Acceptability of Sustainable Transport
Environmental Concerns	Pearson Correlation	1	.974**	.987**	.931**
	Sig. (2-tailed)		.000	.000	.000
	N	384	384	384	384
Government Policy	Pearson Correlation	.974**	1	.983**	.926**
	Sig. (2-tailed)	.000		.000	.000
	N	384	384	384	384
Benefit Awareness	Pearson Correlation	.987**	.983**	1	.940**
	Sig. (2-tailed)	.000	.000		.000
	N	384	384	384	384
Aceeptability of Sustainable Transport	Pearson Correlation	.931**	.926**	.940**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	384	384	384	384

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

Table 4.16 Correlation Analysis of Environmental Concerns

Based on the table above, there is a significant relationship between all of the variables including dependent and also independent variables as the significant output between the variables is 0.000. This is because when p-value is 0.05 and below can be consider as statistically significant (Jaadi, 2019).

For independent variables included of environmental concerns, government policy and benefit awareness with dependent variable which is acceptability of sustainable transport. According to Table 4.14, the R-value more than 0.7 indicate as

very strong positive relationship between independent variable which are environmental concerns, government policy, benefit awareness and dependent variable which is acceptability of sustainable transport. Hence, market share can be conclude to have significant relationship significant relationship with acceptability of sustainable transport as the R-values are more than 0.4. In additional, market share can be concluded to have strong negative significant relationship with acceptability of sustainable transport as the R-values are in between 0.40 to 0.69 and the Sig. (2-tailed) between these variables are 0.000. as well.

4.7 Multiple Regression Analysis (MRA)

This research is using Multiple Regression Analysis (MRA) to analyze all the four variables. Three of the variables are independent variables that consist of environmental concerns, government policy and benefit awareness while the remaining variable is acceptability of sustainable transport as dependent variable of this research.

4.7.1 Model Summary of MRA

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.940[a]	.884	.883	.32045	.884	970.108	3	382	.000

a. Predictors: (Constant), Environmental Concerns, Government Policy, Benefit Awareness

Table 4.17: Multiple Linear Regressions of All Variables (Model Summary)

Based on the research analysis by Multiple Regression Analysis (MRA) above, the correlation coefficient (R) value is 0.940 which indicates that the three independent variables (environmental concerns, government policy and benefit awareness) are highly correlate to dependent variable. This is means that the respondents are positive on the acceptability of green transportation. Furthermore, the result of coefficient of determination, R2 in this research shows that a total variation of 88.3% in The

acceptability of public towards green transportation around Melaka can be explained by all the three independent variables. So, this means that the remaining 11.7% of the variation are indirect factor which means there are other variables that have been used for this study the acceptability of public towards green transportation around Melaka

4.7.2 ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	298.863	3	99.621	970.108	.000[b]
	Residual	39.228	382	.103		
	Total	338.090	385			

a. Dependent Variable: Online Usage

b. Predictors: (Constant), Environmental Concerns, Government Policy, Benefit Awareness

Table 4.18: Multiple Linear Regressions of All Variables (ANOVA)

From the ANOVA table above, it shows that the significance level (p-value) of the Multiple Regression Analysis (MRA) test is 0.000 that is below than alpha value of 0.05 which is a 5% level of confidence for this result. Therefore, it means that the overall multiple regressions model is significant at the 5% level of significance and the regression model is a good descriptor of the relationship between with the acceptability of public towards green transportation around Melaka with environmental concerns, government policy and benefit awareness

4.7.3 Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.044	.091		.489	.625
	Environmental Concerns	.124	.114	.120	1.088	.277
	Government Policy	.077	.104	.071	.748	.455
	Benefit Awareness	.771	.138	.752	5.593	.000

a. Dependent Variable: MEANDV1

Table 4.19: Multiple Linear Regressions of All Variables (Coefficients)

Based on the Model 1 in the table above, it is indicates to determine the result of coefficient between independent variables and dependent variable. For the independent variable of environmental concerns of use, it is not significant to the acceptability of public towards green transportation around Melaka because the p-value is 0.227 that is more than alpha value 0.05. For the government policy, it is also not significant to the acceptability of public towards green transportation around Melaka because the p-value is 0.455 that is more than alpha value 0.05.

However, the independent variable for benefit awareness shows the p-value is less than alpha value 0.05 that is 0.00, which means it is significant to enhance the acceptability of public towards green transportation around Melaka.

4.7.4 Hypothesis Testing

Independent Variables	Result
Environmental Concerns	H_{0A}: Environmental concerns is not significant to the acceptability of public towards green transportation around Melaka
Government Policy	H_{0B}: Government Policy is not significant to the acceptability of public towards green transportation around Melaka
Benefit Awareness	H_{1C}: Benefit awarenesss is significant to the acceptability of public towards green transportation around Melaka

Table 4.20 Hypothesis Testing All Variables

The table above shows the t-test result for the three independent variables that are environmental concerns, government policy and benefit awareness based on the symbol of p result. The result for those independent variables is 0.277, 0.455 and 0.00 The purpose of p-test is used to test the hypothesis whether it is valid to be use and accept by respondents or not. The p-test result can be determined by the table of Table 4.17: Multiple Linear Regressions of All Variables (Coefficients**).** The regression coefficients for the variables were statistically significant at the $p<0.05$ level. Based on M. Berntson (2002), if the range of p-value> a, reject He While, if the range of p-value <a, do not reject Ho. Through the hypothesis on the table above, the null hypothesis of environmental concerns and government policy is being accepted and its hypothesis Hie was rejected. It is because the p-test result was lower than the statistical significant 0.005. Meanwhile, for the benefit awareness independent variables, the H, are accepted and were able to affect the acceptability of public towards green transportation

4.8 Summary

In this chapter, the researcher tested all the hypotheses developed for this research using Frequency and Descriptive analysis, Pearson Correlation analysis and Multiple Linear Regression. Internal reliability test is also has been conducted in pilot test and

actual survey to make sure that the reliability of instruments is established. All the result from the analysis shows that there are significant relationships between three independent variables (environmental concerns, government policy and benefit awareness) towards dependent variable (the acceptability of public towards green transportation around Melaka). Unfortunately, two independent variable that is environmental concerns and government policy is not significant to the acceptability of public towards green transportation around Melaka. The next chapter will be Chapter 5 which will summarize about the overall analysis that had been analyzed including discussion and limitation of this study. Lastly, recommendation for future research also will be discuss at the next chapter

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

In this last chapter, the researcher summarized the entire results and outcomes of the research. As an indication, the results that had been analyzed linked to the research objectives that had been discuss at the previous chapter. Lastly, the researcher put all the review about the limitations, implications and recommendations of this research to other researchers about what to do in the future as a guide to conduct the further research in this related study.

5.1 Discussion of Findings

5.1.1 Descriptive Analysis

The Descriptive Statistic Analysis is done by analysing the data collectedfromrespondents in Section A and Section B and C. There are 384 responses from online sellers in total that are completed by 384 respondents in Malaysia. The respondents' demographic consist of genders, age, education level and type of employment The respondents' demographics consist of genders, age, educational level, type occupation and sustainable transportation usage. Based on the findings, most of the respondent were male which consists 69.1% and female 30.9% out of 100%. From the result received from educational level background the researcher notify that 219 respondents (52.9%) were degree. There are 162 respondents consists of 39.1% were student. Followed by 78 respondent are working in public sector and self employed respondent consists of 19.1%out 100%and the rest is the minority of the respondents. For the ethnicity, most of the respondents were Malay with 64%. Meanwhile the respondents who are high ranking of sustainable transportation usage is from google Chrome with 87.7% out of 100% and the most of the respondents haven't used sustainable transportation

5.1.2 Reliability

This study employed a five-point Likert scale, with the scale's computation basedontheprevious chapter's reliability test. The reliability of 3 items in first independent variable. Based on the reliability test on actual survey above, the Cronbach's Alpha value of environmental concerns scored .998, government policy with scored 0.967 and benefit awareness is 0.964 which are considered as being a good reliability according to the Cronbach's Alpha Level Consistency. As the result, the overall Cronbach's Alpha in this research is can be concluded as acceptable reliability and excellent reliability value.

5.1.3 Pearson Correlation

The correlation between independent variables is shown in Table 4.14 in chapter 4 of the correlation analysis, which is to determine the strength relationship for all the variables. For instance, there is a statistically significant (p-value = 0.000). As a result, it is done to determine the validity of the link between the independent factors of government policy, environmental concerns and benefit awareness with dependent variable the acceptability of public towards green transportation. In comparison to other independent factor, benefit awareness had the greatest Pearson Correlation of 0.940, followed closely by environmental concerns with had a score of 0.931. Beside that, government policy had a Pearson Correlation of 0.926. Based on the data analyse from table 4.14 of table Pearson correlation show benefit awareness have a very strong positive relationship with dependent variable.In additional, benefit awareness can be concluded to have strong positive significant relationship with the acceptability of public towards green transportation. Because the significant output of benefit awareness are 0.000. respectively, which are less than 0.05 it is possible to conclude that are is a significant relationship. While environmental concerns and government policy p-value is 0.227 and 0.455 which is more than 0.05

5.1.4 Multiple Regression Analysis

Multiple regression analysis was performed in Chapter 4 to check the relation among the independent variables (government policy, environmental concerns and benefit awareness) against the acceptability of public towards green transportation. Based on the result of regression shown in Table 4.17, R square is 0.625 for regression of the acceptability of public towards green transportation. This indicates

that 62.5% of the acceptability of public towards green transportation that influenced by the independent variables included environmental concerns, government policy and benefit awareness. An equation has been established as below by referring to the table of coefficients in Chapter 4

The acceptability of public towards green transportation = 0.625(constant) +0.0.277 (environmental concerns)+ 0.455(government policy) + 0.000(benefit awareness)

5.1.5 Hypothesis testing

Based on chapter 4 hypothesis testing, three hypotheses have been tested and one out of three hypothesis were satisfied with significant level, p less than 0.05. Therefore, Hypothesis 3 were supported but hypothesis 1 and 2 were not support.

5.2 Summary of Frequency Analysis

Based on the data analysis in Chapter 4, the number of respondents that answers this survey is 384 respondents. Respondents that contributed in this survey consist of 286 of male which is 69.1% and 128 of female respondents which indicates 30.9%. Majority of the respondents were Malay that is about 265 respondents or 64%. Besides, majority of the education level of respondents are someone who has degree with 219 respondents or 52.9% as compared with STPM or diploma holder and master holder. From the total of 384 respondents, the mainly occupation of the respondents are students. with 162 respondents that represent 39.1% and related with respondents mainly occupation that are students, Lastly, among the 384 respondents, most of the respondents that are 363 respondents which are 87,9% have been using sustainable transportation which also means less than once per year.

5.3 Discussion on Research Objectives

In this study, there are three objectives that need to be achieved after the data from the questionnaire had been analyzed and almost 384 respondents had contributed in this survey to give the results for the researcher to achieve the research objective as following below:-

5.3.1 Objective 1: To Explore Public Attitude Towards Sustainable Transportation

Based on the outcomes of the questionnaire, the researcher used descriptive analysis technique to identify the level of public around urban area in Melaka on acceptability of sustainable transportation by determined their level in how well the factors that made they accept the sustainable transportation such as green vehicle in their daily life usage such as environmental concerns like climate change, government policies like cheaper structure and tax and benefit awareness like can make access to employment. Transportation sustainability also involves balancing our present and future requirements. Sustainable modes of transportation include walking, cycling, public transportation, carpooling, carsharing, and green vehicles.(Vaughan 2022). According to the descriptive analysis result, majority of the respondents strongly agree that they have used sustainable transportation at least once in their life 87,7% of respondents. Apart from that, most of the respondents stated their acceptability as agree towards sustainable transportation in term of like using sustainable transportation rather then damaging the environment, have cheaper structure and taxes to be paid and awareness that using sustainable transportation can give access to employment. Here, the researcher can clarify that most of the respondents had positive acceptability towards this service this is because to moderate climate change, reduce environmental pollution, and halt global warming, sustainable transportation should become the highest priority. (Tom Schauble 2020). The European Union Council of Ministers of Transport defines a sustainable transportation system as one that allows the basic access and development needs of individuals, companies, and society to be met safely and in a manner consistent with human and ecosystem health, and promotes equity among successive generations "European Union's 2015).

5.3.2 Objective 2: To Investigate The Key Factors That Influence Sustainable Transportation

The results on the Pearson's Correlation Analysis of this study discover the answer for the second research objective that is to identify the factors that influenced the acceptability of public towards green transportation around Melaka. The results from that analysis shows that the correlation between the acceptability of public towards

green transportation around Melaka and the three independent variables which is environmental concerns, government policy and benefit awareness. The coefficient ranges of the three independent variables are in between + 0.41 - +0.70 which indicated that the relationship between these variables is a moderate relationship and the p-value which is 0.000 shows the significant relationship between the variables. So, it means that, there are significant relationships between one independent variables (benefit awareness) and dependent variable (the acceptability of public towards green transportation around Melaka), Hence, only benefit awareness independent of factors is significantly influenced the acceptability of public towards green transportation around Melaka. This because the active promotion of green transportation is advantageous not only for the efficient use of road resources, the reduction of traffic congestion, the reduction of energy consumption, and the air quality but also for the improvement of citizen health as a result of a return to healthy and leisurely lifestyles (Marwah 2021) also according to Dr Jean Paul Rodrigue 2017 When individuals utilized sustainable modes of transportation, they increased their physical activity. Due to a series of serious reports by the Low Emission Development Strategies Global Partnership, sustainable transportation can also help create jobs, improve commuter safety through investments in bicycle lanes, pedestrian pathways, and non-pedestrian pathways, and make access to employment and social opportunities more affordable and efficient (Mona Mahros 2019).

5.3.3 Objective 3: To investigate the relationship between the factors that influence public acceptability towards their usage in green vehicle sustainability around Melaka

As for this research objective, Multiple Regression Analysis is used to analyze the answer which is obtained from 384 respondents. According to the Table 4.17 at the previous chapter, the Multiple Regression Analysis result for the r-0.884 represents that a total variation of 88.4% in publics' acceptability towards green vehicle sustainability usage can be explained by Environmental concerns, government policy and benefit awareness. Furthermore, the value for F= 970.108 which is not significant and the p-value of 0.000 is smaller than alpha value of 0.05.Thus, the alternate hypothesis is accepted at alpha 0.05. The significance value for one from three independent variables is positively related to green vehicle sustainability service

usage because their significance value is less than p-value 0.05. Those related variables are benefit awareness. For the remaining independent variable that is environmental concerns and government policy, it is not significant towards green vehicle sustainability service usage as the regression coefficient is more than p- value 0.05

This means that environmental concerns and government policy is not affect or not significant towards the acceptance of public to the green vehicle sustainability service usage. Based on the previous research the apathy many people display can be described as implicatory denial. Even if we believe in climate change, we might not behave in a way that reflects that. People often deny the implications of the facts of climate change. Our ability to go on with our lives without taking action is denial in a way. Many people believe in climate change, but still don't really think about it or consider what should be done about it (Maya Katler Gold 2021) As a result, this research finding are aligning with the previous study that stated environmental concerns and government policy has not influence to public acceptability towards green vehicle sustainability around urban areas in Melaka.

5.4 Limitations of the Study

There are several limitations of the study during conducting this research although the results of analysis are considered statistically significant. These include the 51 respondents did not answer the questions based on their knowledge in this field. This is because several of them never use the sustainable transport before and in order to still get their perception, those respondents are uncertainty in answering the questions.

Besides, due to the time constrain, the researcher having difficulty to get the all feedback from respondents in a short time and researcher does not have much time to distribute the questionnaire especially when some of the respondents refuse to answer the questionnaire and make researcher to find other respondents which take more time.

Lastly, the problem occur when the questionnaire was designed to fulfil the research objective and to answer the research questions in this research, the data might not be able to provide enough evidence or opinion because there are too many questions to

be answered and respondents might not understand well some of the questionnaire which can make the results not quite accurate or precise.

5.5 Implications of the Study

The analysis are carried out to accomplish the objective of this research which is to identify the factors (environmental concerns, Government Policy and Benefit Awareness) that influence customers' acceptability towards sustainable transportation around Melaka and the researcher able to fulfil the objective by analyzed it through reliability, descriptive, correlation and regression test based on the data collected from 414 respondents.

In addition, through this study, the researcher able to provide new knowledge the government in understanding the factors that influence customers acceptability towards sustainable urban transport usage. Hence, the study has important implications to the government that they should pay more attention to the quality of sustainable urban transport technology around Melaka make sure the sustainable transportation can be delivered to public user at the accurate time to build satisfaction among 51 customers. As a result, consumer may feel more satisfied in using sustainable transportation around Melaka

Last but not least, the researcher eventually able to reveal the new framework which indicates that environmental concerns, government policy and benefit awareness towards customers' acceptability on sustainable transportation in urban area around Melaka. Thus, if appropriate concern is implant to the independent variables, then customers are more enhance in using sustainable transportation service. Nonetheless, researcher believes that there are many better ways can be done to improve this study. So that, researcher suggests some recommendations for future research as a reference.

5.6 Recommendations for Future Research

The researcher has proposed some recommendations for future research. Firstly, since thereis only using survey questionnaire to collect cross-sectional data, therefore future

research can use the method of interviewing because this can reduce the misunderstanding when the respondents interpreted the questions.

Secondly, this study just focused public acceptability towards sustainable transportation service usage in area Malacca city only, so, the future research required to extend this study in other geographical areas such as in other countries in order to get more different results and findings.

Lastly, the future research can evaluate the study using other factors that related with sustainable transportation usage and not just focuses on public acceptability but also focus on how their attitude, behavior or perception towards this sustainable transportation which became more popular in this era.

5.7 Summary

As a whole, the objectives for this research were to identify the level of public around Melaka, to evaluate the factors that influence public acceptability on using sustainable transportation, to identify the relationship between the factors of customers' perception and acceptability on sustainable transportation and to determine the most significant factors that influence public around Melaka acceptability on sustainable transportation. Therefore, the researcher assumed that the findings and the objectives as they have been supported by the previous researcher's findings that simultaneously answering the research questions for this research topic

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APPENDICES

FINAL YEAR PROJECT

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

TITLE: THE ACCEPTABILITY OF PUBLIC TOWARDS GREEN TRANSPORTATION

Purpose of this survey:	This study will examine the effect of various predictors (awareness of sustainable transport benefits, traffic problem awareness, government policies,) on citizens' acceptability of sustainable transportation options
Important:	I want to invite you to participate in this research project by answering all questions. All information given will beusedforacademic purpose only. Thank you for contribute in this research and I very appreciate that.
For further clarification and/ or instruction, please	For further clarification and or instruction, please contact Nurul Shahirah Binti Rasip

contact	Supervisor: Datin Dr. Suraya Binti Ahmad Address: Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka, Jalan TU 62, 75350 Ayer Keroh, Melaka

STATEMENT OF CONFIDENTIALITY

The information you provide will be held in the strictest confidence. We will neither publish, release, nor disclose any information on or identifiable with individual persons or organization or companies.

The Acceptability Towards Sustainable Transportation: A Study In Melaka

Assalammualaikum and Greetings,

Dear Sir/Madam/Mr/Ms,

I am Nurul Shahirah Binti Rasip, a final year student at Universiti Teknikal Malaysia Melaka (UTeM) under the Faculty of the Bachelor of Technology Management with Honors (High Technology Marketing). I am researching for the acceptability towards sustainable transportation: A study in Melaka. The following questionnaire will require approximately 5 to 10 minutes to complete. Finally, I assure you that I will keep the information confidential and only use it for academic purposes. Thank You Very Much for your time and have a great day

Due to increasing urban sustainable transportation concerns and environmental pollution in Malaysia, there is a need to investigate public attitudes regarding selecting alternate forms of sustainable transportation, such as cycling and green public transportation.

Consequently, the purpose of this study is to investigate the public's perspective on sustainable transportation and their propensity to pick ecologically friendly solutions such as cycling and public green transportation. Specifically, this study will examine the effect of various predictors (awareness of sustainable transport benefits, traffic problem awareness, government policies, and symbolic motives for using the car) on citizens' acceptability of sustainable transportation options, with environmental concern serving as a mediator and self- transcendence and self-enhancement as moderators

SECTION A: DEMOGRAFHIC PROFILE/*BAHAGIAN A: PROFIL DEMOGRAFI*

This section aims to obtain your personal information with several questions listed. Please select the answer options provided.

Bahagian ini bertujuan untuk mendapatkan maklumat peribadi anda dengan beberapa soalan yang disenaraikan. Sila pilih pilihan jawapan yang disediakan.

Gender/ Jantina*

☐ Male

☐ Female

Race/ Bangsa

☐ Malay/ Melayu

☐ Chinese/ Cina

☐ Indian/ India

☐ Other _____

Education Level/ Taraf Pendidikan

☐ STPM/ Diploma/ Asasi/ Matrikulasi

☐ Degree/ Ijazah

☐ Master

☐ PHD

☐ Other _____

Occupation/ Pekerjaan

- [ ] Self-Employed/ Bekerja Sendiri
- [ ] Public Sector/ Kerja Kerajaan
- [ ] Private Sector/ Kerja Swasta
- [ ] Student/ Pelajar
- [ ] Retired/ Pesara

Did you ever use sustainable transportation in the urban area around Melaka?
Adakah anda pernah menggunakan pengangkutan mampan di kawasan bandar sekitar Melaka?

- [ ] Yes/ Ya
- [ ] No/ Tidak

SECTION B: THE ATTITUDE OF MELAKA RESIDENCE TOWARDS SUSTAINABLE TRANSPORTATION TECHNOLOGY. / *BAHAGIAN B: SIKAP PENDUDUK MELAKA TERHADAP TEKNOLOGI PENGANGKUTAN LESTARI*

This section provides the statement that reflect your behavioral intention of Melaka Resident to sustainable transportation technology. Please rank your statement by using appropriate scale: *Bahagian ini menyediakan pernyataan yang mencerminkan niat tingkah laku anda terhadap teknologi pengangkutam lestari. Sila susun pernyataan anda dengan menggunakan skala yang sesuai:*

1 = Strongly Disagree

1 = Sangat tidak setuju

2 = Disagree

2 = Tidak setuju

3 = Neutral

3 = Berkecuali

4 = Agree

4 = Setuju

5 = Strongly agree

5 = Sangat Setuju

		SCALE				
CODE	**ITEMS**	**1**	**2**	**3**	**4**	**5**
DV 1.1	The efficiency experience provided by sustainable transportation will increase my willingness to implement it in my daily life usage. Pengalaman kecekapan yang disediakan oleh pengangkutan					

	mampan akan meningkatkan kesediaan saya untuk melaksanakannya dalam penggunaan kehidupan seharian saya.					
DV 1.2	I may use Sustainable Transport frequently in the future. Saya mungkin menggunakan Pengangkutan Lestari dengan kerap pada masa hadapan.					
DV 1.3	If I have opportunity, I will use Sustainable Transport. Jika saya mempunyai peluang, saya akan menggunakan Pengangkutan Lestari					
DV 1.4	I would recommend Sustainable Transportation Technology to others.Saya akan mengesyorkan penggunaan teknologi pengangkutan lestari kepada orang lain.					
DV 1.5	I would like to reuse sustainable transport for my daily usage Saya ingin menggunakan semula pengangkutan mampan untuk kegunaan harian saya					

SECTION C: WHAT ARE THE FACTORS THAT INFLUENCE THE ACCEPTANCE OF SUSTAINABLE TRANSPORTATION. / BAHAGIAN C: APAKAH FAKTOR┐FAKTOR YANG MEMPENGARUHI PENERIMAAN PENGANGKUTAN LESTARI

	ENVIRONMENTAL CONCERNS: I prefer to adopt Sustainable Transport Technology because; Saya lebih suka menggunakan teknologi pengangkutan Lestari kerana	**SCALE**				
CODE	ITEM	1	2	3	4	5
IV 1.1	Can increase cuts in CO2 emissions Boleh meningkatkan pengurangan pelepasan CO2					
IV 1.2	Can reduce the pollution in urban areas. Dapat mengurangkan pencemaran dikawasan sesak.					
IV 1.3	Can reduce global warming due to fossil fuel combustion Dapat mengurangkan pemanasan global akibat aktiviti pembakaran bahan api					
IV 1.4	Can save biotic elements such as animals, plants, forests, fisheries, and birds from extinction. Boleh menyelamatkan unsur biotik seperti haiwan, tumbuhan, hutan, perikanan, dan burung daripada kepupusan.					

	GOVERNMENT POLICY: I prefer to adopt Sustainable Transport Technology because; Saya lebih suka menggunakan teknologi pengangkutan Lestari kerana	**SCALE**				
CODE	ITEM	1	2	3	4	5
IV 2.1	Combine regulation, pricing & better service quality Gabungan peraturan, harga & kualiti perkhidmatan yang lebih baik					
IV 2.2	Cheaper estructure charges & taxes Caj & cukai struktur yang lebih murah					
IV 2.3	Can integrate land use planning and traffic management Dapat mengintegrasikan perancangan guna tanah dan pengurusan trafik					
IV 2.4	More support for advanced technology Lebih banyak sokongan untuk teknologi canggih					

	BENEFIT AWARENESS: I prefer to adopt Sustainable Transport Technology because; Saya lebih suka menggunakan teknologi pengangkutan Lestari kerana	**SCALE**				
CODE	ITEM	1	2	3	4	5
IV 3.1	Improvement of commuter safety through investments in bicycle lanes, pedestrian pathways, and non¬ pedestrian pathways Peningkatan keselamatan komuter melalui pelaburan dalam lorong basikal, laluan pejalan kaki, dan laluan bukan pejalan kaki					
IV 3.2	Can make access to employment and social opportunities					

	Boleh membuat akses kepada peluang pekerjaan dan sosial					
IV 3.3	Has the opportunity to save time and money for individuals and government budgets Mempunyai peluang untuk menjimatkan masa dan wang untuk belanjawan individu dan kerajaan					
IV 3.4	Utilisation of renewable energy, greenhouse gas emissions are drastically decreased Penggunaan tenaga boleh diperbaharui, pelepasan gas rumah hijau berkurangan secara drastik					