THE ACCEPTABILITY OF PUBLIC TOWARDS GREEN TRANSPORTATION

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THE ACCEPTABILITY OF PUBLIC TOWARDS GREEN TRANSPORTATION

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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.

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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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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.

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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

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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.

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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

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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.

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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.

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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

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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.

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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

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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.

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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

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