

Moderating Effect of Tax Exemption on Purchase Intention of Green Cars in Malaysia

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Abstract

Sustainable consumption is essential for humanity, achieved through the practice of sustainable lifestyles. Hence, renewable resource utilisation derived from ethical consumerism is necessary. The adoption of green transportation is a catalyst. A green car in Malaysia refers to either a hybrid vehicle (HV), plug-in hybrid electric vehicle (PHEV) or electric vehicle (EV). With 90 per cent of its vehicles being fossil-fueled, Malaysia is far behind in its aspiration to adopt green transportation. Hence, proactive actions must be taken to accelerate the adoption of green cars in Malaysia. As the challenges faced by Malaysia are different from other developed countries, this study looks into the moderating effect of tax exemption on the relationship between social influence and willingness to pay on purchase intention of green cars in Malaysia. Specifically, this study adopted marketing as the domain of study, with purchase intention as the central idea. It is a quantitative study based on the deductive research approach. This study chose the Theory of Planned Behaviour and Operant Conditioning Theory as its underpinning theories. The sampling technique adopted would be stratified random sampling via a self-constructed questionnaire. It will collect data from 384 respondents using a questionnaire and analyse it statistically using the SPSS and SmartPLS statistical tools.

Keywords: Social Influence, Willingness to Pay, Purchase Intention of Green Car, Tax Exemption, Green Car Adoption

Introduction

The world is evolving, and the survival of future generations depends on the current generation's practices, i.e. sustainable consumption. Effective use of raw materials, products and energy are key contributors. As Chow (2020) reported in NBC News Science, our world is getting sick, with the temperatures of our oceans accelerating rapidly. Nunez (2022) reported that our sea level is expected to rise by 2050. It is alarming, and the world must act fast.

Consumption is not restricted to individuals and households. It includes governmental agencies, business enterprises and social organisations. Hence, a sustainable lifestyle minimises the damage to the environment. It must not jeopardise the quality of life. Nevertheless, the pre-conditioned societal mindset is a critical challenge, constrained by cultural practices and blocked by government policies. On a global scale, the United Nations

has documented it as Sustainable Development Goal 12, as cited by Wikipedia. Sustainable productions and development are the ingredients; everyone must work together to use resources and minimise wastage and condone pollution. Hence, using renewable resources is highly encouraged.

Sustainable consumption leads to ethical consumerism. According to Hadfield (2021), society must be proactive to guide consumers to make ethical purchase decisions. It means boycotting products that utilise child labour, perform animal testing and cause harm to the environment. According to an article by Nguyen (2021), social responsibility is the keyword. One of the critical contributions to ethical consumerism is adopting green transportation. It is a concept that relies on renewable energy as the core focus. As cited by Bernama (2019) in New Straits Times Press, Malaysia must move forward with green transportation to achieve sustainable consumption. It also reported that more than 90 per cent of vehicles in Malaysia are fossil-fueled, also known as internal combustion engines (ICE). Nevertheless, it would be a tremendous challenge for Malaysia. The green car adoption in Malaysia is less than 10 per cent.

Research Gaps

Social influence refers to the expectations that are socially obligated, be it prescriptive or proscriptive (Baptista et al., 2020; Gangneux, 2021). Initial trust is the underlying principle in social influence (Zhang et al., 2020). Wang and Hall (2020) revealed that social influence is not gaining momentum without a goal. Hence, scholars opined that consumers usually expressed their intention through a statement, i.e. a purchase intention. It is a statement of intent, hence exists in concept but not in action (Ding et al., 2020; Osei-Frimpong et al., 2019). Therefore, green car brands must define the goal before embarking on their social influence journey. Nevertheless, scholars opine that measuring purchase intention is inaccurate, as it may not necessarily turn into action. Many elements influence consumers' purchase intention, namely lifestyle, frugality mindset, perceived risk, personal preferences, and fixed buying behaviour (Chen et al., 2020 Shapiro et al., 2019; Wang et al., 2021).

Consumers' perception of the usefulness of green cars is essential. The services rendered by green car brands influence purchase intention. A brand with a sustainable, loyal and growing customer base would improve the level of purchase intention (Mukherjee & Ryan, 2020; Wicki, 2022). Hence, integrated marketing communication is the key to green car adoption success (Shanmugavel & Michael, 2022). Green car brands must ensure sustainable customer satisfaction to cultivate affective commitment to purchase a green car (Asadi et al., 2022; Shanmugavel & Michael, 2022). Conforming behaviour is the actual outcome derived from social influence, also known as peer pressure. Conformity seeks approval from the groups one perceives belongs to, i.e. matching values (Velde, 2022; Wang et al., 2019). Hence, green car brands must be able to crystallise the perceived usefulness of green cars.

Unplanned purchase based on irrational thinking is suitable for an instant spike in business but bad for sustainability (Anisa et al., 2020; Shahjehan & Qureshi, 2019). High impulsive purchase behaviour will lead to high post-purchase dissonance, thus lowering post-purchase satisfaction (Chen et al., 2020; Yang et al., 2019). Hence, relying on impulsive purchase behaviour does not ensure green car adoption sustainability (Asadi et al., 2022). Green cars are a high-involvement product that requires careful consideration before purchase. Therefore, relying on impulsive purchase behaviour is counter-productive. Scholars opine that high consciousness derived from social media interactions helps to shape and reshape consumers' beliefs and values towards certain products (Mishra et al., 2021; Saleki

et al., 2019). Shahjehan and Qureshi (2019) proposed that green car brands must pay attention to the conscientiousness of prospective purchasers. It elevates their desire, thus switching from impulsive to conscious purchase.

Green car brands must look beyond purchase intention data when making strategic marketing decisions (Agmeka et al., 2019; Chen et al., 2019; Huang & Ge, 2019). Searching for the pattern should be the focus. Scholars have proven that the linkage between purchase intention and actual purchase is unclear (Agmeka et al., 2019; Curtale et al., 2022; Shah & Zhongjun, 2019). Frugality does not hinder the actual purchase, but supportive government policy does (Chen et al., 2019; Wang et al., 2021). Al Manun et al (2019) revealed that income status was not a deciding factor in green car adoption, but mindfulness of social purchasing does. The perceived usefulness influences prospective purchasers' intention (Dhandra, 2019). Hence, there is no binding or guaranteed action, with the missing variable as the willingness to pay (Asadi et al., 2022). Their perceived worth prevails, triggered by spatial presence and the sense of being there (Garcia-Madariaga et al., 2022; Idris et al., 2022).

Incentives refer to things that motivate people to take action. There are three types of incentives: economic, social, and moral. The economic incentive is a monetary drive, whilst social and moral incentives are non-monetary driven (Buttenheim et al., 2021; Katare et al., 2019; Reis et al., 2022). Incentivising prospective purchasers to accelerate their purchase intention is common. However, according to Li et al (2020), the adoption of green cars is low, despite being given economic incentives. Their study revealed that it is meaningless when consumers do not understand how incentive policies work. Hence, a clear understanding of the nature and function of the incentives given is essential (Ali et al, 2019; Carroll et al, 2021; Huang & Ge, 2019). Hence, managing prospective purchasers' perceptions of the value of a green car is essential. Sustainable adoption is possible when consumers purchase it based on their free will, not through monetary inducement (Asadi et al., 2021; Dhandra, 2019).

The debate on the sustainable adoption of green cars is honest and worth researching. Scholars believe that short-term adoption of green cars would not significantly contribute to a country's aspiration to adopt a green transportation policy (Ali et al., 2019; Carroll et al., 2021). Although green car brings obvious social benefits to Malaysian consumers, their adoption is relatively low compared to other developed countries such as the UK, USA, China or European countries (Asadi et al., 2022; Raji et al., 2019). The heavy taxes imposed on green cars in Malaysia shun prospective purchasers away. There are three types of taxes imposed on a car sold in Malaysia, i.e. sales tax, excise duties, and road tax (Asadi et al., 2021). Car value determines the quantum of excise duties. Green cars are highly priced due to their technology-driven mechanism, thus increasing their excise duties (Brase 2019; Ong et al., 2021; Raji et al., 2019).

Clarity acts as a fundamental principle to motivate prospective purchasers. Scholars define clarity as a state of being transparent, coherent and intelligible. It helps prospective purchasers to streamline their focus on the underlying reasons for their purchase (Banerjee et al., 2022; Ferrara & Angino, 2021; Haar et al., 2022). When prospective purchasers are lost and directionless, it is hard for them to decide on their purchase. A fixed mindset kicks in, thus driving them to make a fixed purchase behaviour, i.e. shun away from green cars and purchase internal combustion engine (ICE) cars (Japutra & Song, 2020; Zulauf et al., 2021). Hence, the incentives provided must increase their clarity (Banerjee et al., 2022; Fernando et al., 2021; Haar et al., 2022). Sustainable adoption of a green car is the ultimate goal to help Malaysia to achieve its green transportation aspiration (Amoussouhoui et al., 2022; Asadi et al., 2021; Mathivathanan et al., 2022).

Scope and Significance

The respondents must be Malaysian holding a valid driving licence. A green car refers to a passenger car, excluding commercial vehicles; defined as low emission and energy-efficient car. However, for this study, a green car in Malaysia refers to either a hybrid vehicle (HV), plug-in hybrid electric vehicle (PHEV) or electric vehicle (EV). An HV is an internal combustion engine (ICE) car fixed with an additional self-charging battery-operated electric motor without the plug-in charging capability. On the other hand, a PHEV is a combustion engine car fixed with an additional self-charging battery-operated electric motor with a plug-in charging capability. An EV is a fully electric car powered by a lithium-ion battery. There is no internal combustion engine (ICE) fixed inside an EV.

In Malaysia, a green car is categorised as a high-involvement product. There is no income restriction on the ownership of green cars in Malaysia. Nevertheless, this study would expect more respondents in the states within Malaysia with the highest population density and the highest number of cars per square kilometre. Based on the Malaysia National census 2010 data, the top three states with the highest number of cars per square kilometre are Selangor, Johor and Penang. The federal territory of Kuala Lumpur is included in this study because it has a high number of cars per square kilometre.

For four different types of stakeholders, this study is essential. Firstly, the Theory of Planned Behavior and Operant Conditioning Theory adds to the body of knowledge. Secondly, the empirical data will motivate Malaysian authorities to implement green transportation to achieve sustainable development. Thirdly, it offers Malaysian green car brands marketing insights to help them match their product lineup with market demands. Finally, it outlines the advantages of encouraging the adoption of green cars for Malaysians to realise the nation's goals for green transportation.

Proposed Conceptual Model

The relationship between social influence, willingness to pay, tax exemption and purchase intention for a green car are shown in Figure 1. This study identified four variables. It consists of two dependent variables, one independent variable and one moderating variable. The dependent variable is the purchase intention of a green car, whereas the independent variables are social influence and willingness to pay. On the other hand, the moderating variable is tax exemption. Based on the review of past literature, it was concluded that social influence and willingness to pay have a direct relationship with the purchase intention of a green car. Besides that, tax exemption has moderating effects on social influence and willingness to pay against the purchase intention of a green car. The objectives of this study are as follows,

- to test the relationship between social influence and purchase intention of green cars among Malaysian consumers;
- to test the relationship between willingness to pay and purchase intention of green cars among Malaysian consumers;
- to test the moderating effect of tax exemption on social influence and purchase intention of green cars among Malaysian consumers; and
- to test the moderating effect of tax exemption on willingness to pay and purchase intention of green cars among Malaysian consumers.

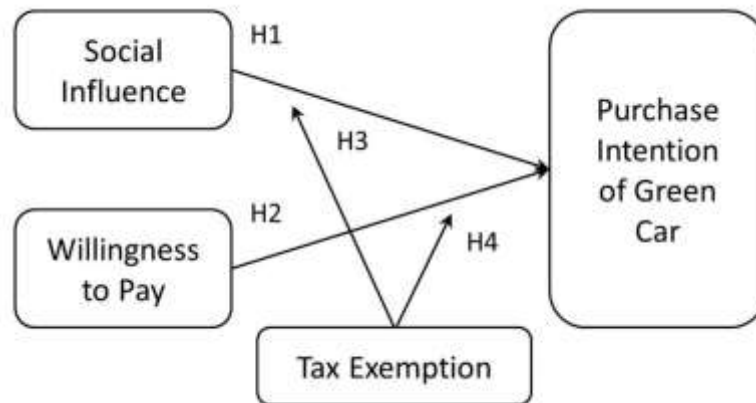


Figure 1. Proposed Conceptual Model

Hypotheses Development

Perceived usefulness influenced the purchase intention for high-involvement products. Social interactions drive prospective purchasers to make wiser via a loyal and growing customer base. Scholars believe that group identity is the outcome when conforming behaviour is well practised. Group identity prevails over individual identity when normative influence is high (Mukherjee & Ryan, 2020; Shanmugavel & Michael, 2022; Wicki et al., 2022). Responsible consumption is the foundation for socially responsible marketing. Hence, green car brands must avoid greenwashing techniques to maintain brand integrity. Sustainable customer satisfaction helps to cultivate affective commitment to purchase a green car (Asadi et al., 2022; Shanmugavel & Michael, 2022). From this perspective, green car brands must educate prospective purchasers on the benefits of owning a green car. Hence, the first proposed hypothesis tests the direct relationship between social influence and the purchase intention of green cars in Malaysia.

H1: *Social influence positively correlates with the purchase intention of green cars in Malaysia.*

A well-articulated purchase intention does not guarantee purchase action. Therefore, green car brands must look beyond purchase intention data to ensure higher green car adoption (Agmeka et al., 2019; Chen et al., 2019; Huang & Ge, 2019). Hence, the linkage between willingness to pay and purchase intention of a green car is interlocked but unclear. Identifying purchase patterns is the hallmark of success (Agmeka et al., 2019; Chen et al., 2019). Scholars have discovered that frugality is not a roadblock, but government policies are. Mindfulness of social purchasing is the keyword that connects willingness to pay and purchase intention of a green car (Huang & Ge, 2019; Shah & Zhongjun, 2019). When prospective purchasers perceived worth is uplifted through spatial presence, willingness to pay is strengthened (Garcia-Madariaga et al., 2022; Idris et al., 2022). Hence, the second proposed hypothesis is to test the direct relationship between willingness to pay and the purchase intention of green cars in Malaysia.

H2: *Willingness to pay positively correlates with purchase intention of green cars in Malaysia.*

Incentives refer to things that motivate consumers or encourage people to take action. It could appear in the form of monetary or non-monetary. The defining element is the ability to move people to take action (Chouchani & Abed, 2019; Davis et al., 2019). Incentivizing prospective purchasers to accelerate their purchase intention is common, but it is essential to understand why the incentives were given (Asadi et al., 2022; Reis et al., 2022). Hence, incentive functions as a moderator to accelerate the purchase intention of a green car. Reward motivation and anticipation drove people to take action faster (Chouchani & Abed, 2019; Clark et al., 2019). Social influence is significant in our life, where the power of word-of-mouth is undeniable (Anosike et al., 2021; Asadi et al., 2021). Social influence instigates people towards a socially obligated action in a specific direction. It involves cognitive intervention (Prentice et al., 2019; Saleki et al., 2019). Hence, social influence has intensified with tax exemption as a monetary incentive to accelerate the adoption of green cars in Malaysia. The introduction of tax exemption by authorities has created a systematic structure to induce consumers to take action (Chu et al, 2019; DeWeese et al, 2022). Therefore, the third hypothesis proposed is to test the moderating effect of tax exemption on the relationship between social influence and purchase intention of green cars in Malaysia.

H3: *Tax exemption moderates Malaysia's social influence and purchase intention of green cars.*

When prospective purchasers are convinced of the purpose of their purchase, their willingness to pay improves (Zhang et al., 2021). When the product perceived value fulfilled prospective purchasers' expectations, purchase intentions are intensified (Kyto et al., 2019). Tax exemption enhances their willingness to pay by reducing the initial purchase price of a green car (Belisle-Pipon, 2022; Ferrell & Ferrell, 2021). Undoubtedly, providing tax exemption accelerates the adoption of green cars, but the debate on sustainability remains unanswered (Ali et al., 2019; Carroll et al, 2021). Inclusive and strategic actions to create sustainable green car adoption in Malaysia (Anosike et al., 2021; Asadi et al., 2021; Nazari et al., 2019; Zhuge et al., 2020). Due to the high initial purchase prices of green cars, the willingness to pay among prospective purchasers fluctuates. Uncertainties and ambiguities worsen the situation (Jung & Jin, 2021). Hence, the provision of tax exemption enlightens green car brands' worries. It may not be a permanent measure, but it relieves both parties to make some adjustments (Kim & Sullivan, 2019). Therefore, the fourth hypothesis proposed is to test the moderating effect of tax exemption on the relationship between willingness to pay and purchase intention of green cars in Malaysia.

H4: *Tax exemption moderates Malaysia's willingness to pay and purchase intention of green cars.*

Research Methodology

Research philosophy addresses assumptions, perceptions, knowledge, and the nature of the proposed study or the targeted method of knowledge development. Business studies cover the subject matter of this study. As a result, it is necessary to acknowledge and adopt three crucial roles within the research philosophy. They inform, demystify, and methodically facilitate (Roje et al, 2021; Zhang, 2020). This study adopted marketing as the field of study, with purchase intention as the primary research question. This paper adopted the positivism belief approach as its research philosophy. A subjective mental and cognitive interpretation

based on observing perceptions and reflecting through analysis and grounded communication, the belief in research is the conviction of truth. The foundation of positivism is that the social world can be understood objectively. Researchers who adhere to the positivist school of thought act as objective analysts. This study would disassociate from researchers' values based on this approach, thus promoting impartiality (Madden, 2021; Matta, 2021).

This study uses a deductive research approach in terms of research design. Researchers from a variety of research fields use and value it extensively. Researchers frequently link scientific inquiry with a deductive strategy. It occurs when researchers read the existing theories of the phenomenon and look at previously conducted studies. It is typical in the deductive research approach to develop hypotheses based on the relationships found and then test them to ensure their validity (Vicente, 2021).

Consequently, a quantitative methodology would be an appropriate methodological choice for this study. It uses a correlational research approach and concentrates on a quantitative study with one method. The correlational research approach also makes use of statistical information. It gauges a strong bond between two or more variables (Saunders & Bristow, 2015). By mapping the strengths of the established relationship, interpretations of the results are made. The distinguishing feature of correlational research methodology is the ability to spot trends and patterns derived from data analysis. An individual is used as the unit of analysis in a cross-sectional survey used as this paper's research tool. A cross-sectional study analyses the study populations (respondents) at a particular point to conclude (Ortman & Cooper, 2021; Thompson et al., 2021).

It is essential to specify the study's population. Therefore, this study defines the population as Malaysians with current driver's licences. A driving licence is required in Malaysia to drive, governed by the Road Transport Act of 1987. Thus, Malaysians with a valid Class D driving licence who reside in Malaysia would make up the sampling frame. The information can be retrieved from the Road Transport Department of Malaysia registry. In quantitative deductive research, a sample is examined to represent the population by generalising findings. An extract of units from the entire population is referred to as a sample. Krejcie and Morgan (1970) assert that generalities are used to choose the sample size. The population size needed to obtain a representative sample decreases as the population size increases. Since the population is over 5,000, 384 respondents would be the necessary sample size. Stratified random sampling would be the method used (Castro-Pearson et al., 2022; Detmer & McCutchan, 2021). The data collection tool for this study will be a self-made questionnaire. It will use a questionnaire to gather data, which will then be statistically analysed using the SPSS and SmartPLS statistical tools. Pre and post-tests will be administered to evaluate the validity and dependability of the instrument.

Discussion and Conclusion

Strong social influence creates conforming behaviours. It seeks approval from the groups one perceives belongs to, i.e. matching values (Baptista et al., 2020; Gangneux, 2021). In this study, the matching values refer to prospective purchasers seeking green car owners' advice, opinion, and recommendations. The two main reasons that drive conformity are Informational and normative influences drive conformity, thus developing a trusting relationship. Scholars opine that one tends to change their beliefs, attitudes, or actions to conform to others (Chen et al., 2020; Shapiro et al., 2019; Wang et al., 2021). A high trust level accelerates prospective purchasers' involvement in product testing, thus uplifting purchase

intention. Conformity is high when prospective purchasers are exposed to other green car owners' experiences. Hence, based on the review of past literature, the relationship between social influence and purchase intention is expected to be highly correlated (Asadi et al., 2022; Shanmugavel & Michael, 2022).

Being a trustworthy brand is a crucial idea in socially responsible marketing. It elevates the willingness to pay, thus assisting in higher green car adoption in Malaysia (Chen et al, 2020; Yang et al., 2019). Marketing practices or activities deployed to engage the broader social and environmental impacts help to strengthen prospective purchasers' willingness to pay. Socially responsible marketing gives the impression to prospective purchasers that green car brands are taking positive initiatives to reduce the negative consequences of their business operations. With high social consciousness, green car brands must adopt responsible marketing as their underlying marketing backbone (Mishra et al., 2021; Saleki et al., 2019). It is expected for social influence to heighten the emotional closeness between prospective purchasers and green car brands. It allows both parties to build a stable, long-lasting relationship that ensures higher purchase intention. A higher level of brand anthropomorphism will lead to higher brand attachment, thus accelerating green car adoption in Malaysia (Agmeka et al., 2019; Curtale et al., 2022; Shah & Zhongjun, 2019).

Three types of taxes are imposed on a car sold in Malaysia, i.e. sales tax, excise duties, and road tax. The common understanding among Malaysian consumers is that green cars are expensive and only affordable to wealthy people. Tax exemption refers to the rebate given by the Malaysian government, as announced yearly during the tabling of the country's budget. Therefore, the tax exemption given by the Malaysian government is subjected to yearly review. Hence, the expected moderating effect of tax exemption on the relationship between social influence and willingness to pay on the purchase intention of a green car is weak and fluctuating. Tax exemption may accelerate green car adoption short-term, achieved through increased impulsive purchase behaviour (Buttenheim et al., 2021; Katare et al., 2019; Reis et al, 2022). Economic incentives triggered impulsive, not compulsive, purchasing behaviour. Nevertheless, it still fails to induce compulsive purchase behaviour to ensure sustainable green car adoption in Malaysia (Brase. 2019; Ong et al., 2021; Raji et al., 2019).

Opinion remains without empirical studies supported by underlying theories. Hence, the proposed conceptual model in this study is grounded within the Theory of Planned Behaviour (TPB) and Operant Conditioning Theory (OCT). TPB aims to predict and explain one's beliefs and behaviour (Ajzen & Fishbein, 1969). It believes that attitude, subjective norms and perceived behavioural control affect an individual's behavioural intentions and behaviours. It asserts that behavioural intentions are determined by attitudes toward behaviour, subjective norms, and perceived behavioural control. The core mechanism is the intention of the consumer itself. Based on TPB, subsequent behaviours depend on the initial intention of the consumer. On the other hand, OCT acts as reinforcement to support the moderating relationship of tax exemption on social influence and willingness to pay. Hence, this study strives to improve Malaysia's green car adoption level by improving the purchase intention of green cars.

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