

Original Article

Social Cognitive Theory in Understanding Green Car Purchase Intention

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Abstract - The extensive energy consumption in the transportation sector is a major concern, especially with the worsening global warming and climate change in ASEAN countries. However, the inconsistent results indicated in the existing green marketing literature have raised questions as to whether the direct relationship of social influence, economic incentives, environmental attitude, and environmental knowledge are sufficient for behavioral change among the consumers to become more environmentally friendly that subsequently lead them to adopt green cars. In this regard, this paper addresses the importance of collective environmental efficacy, seeing that the absence of collective environmental efficacy may exert challenges to the marketers when they are implementing marketing strategies that related to social influence, economic incentives, environmental attitude, and environmental knowledge to popularize green cars among the consumers. Subsequently, this research will examine the relationships grounded on Social Cognitive Theory (SCT) that may serve as a basis for future empirical research.

Keywords - Social Cognitive Theory, Green car purchase intention, Social influence, Economic incentives, Environmental attitude, Environmental knowledge, Environmental collective efficacy

I. INTRODUCTION

With the increasing threat of global warming and climate change, the extensive energy consumption in the transportation sector has been a critical subject to be solved in ASEAN countries [1]. In order to solve the problem of extensive energy usage, the government has placed greater efforts, including offers 100% tax exemption of import duty and 50% exemption of excise duty for green cars to promote usage while reducing CO₂ emissions [1]. This policy was actually announced under Budget 2011 prior to the NAP 2014 that all hybrids and electric vehicles included both completely built-up (CBU) and completely-knocked-down (CKD) units were exempted from import duties and excise duties.

Yet, on NAP 2014, although the government has reported focusing on Energy Efficient Vehicle (EEV) development [2], the government has also announced that Tax breaks for CBU hybrids and electric cars were withdrawn on Dec 31, 2015, and 2017, respectively [3]. This government initiative has caused the demand for CBU vehicles to be affected in Malaysia, and more or less, it will influence the target of the government to have more green vehicles on the roads. It could be seen from the sudden drop of hybrid car sales in Malaysia with the hybrid car sales dropped dramatically at 44.5% in the first half of 2015 after the withdrawal of tax incentives for CBU hybrid vehicles by the government [4].

This condition is worrying as Malaysia are still left far behind with its unstable green car sales while other countries such as Norway and China are promoting green cars aggressively; which Norway with 51.4% new green vehicles registrations in 2017 based on the data provided by Road Traffic Information Council (OFV) in that country [5] and China hits almost 50% of the sales of the electric vehicles of the global market [6]. Therefore, both government and car companies located in Malaysia have to endeavor to enhance the effectiveness of green marketing plans to stimulate green car sales while increasing the intention to purchase green cars among the consumers.

Although a number of studies have been done to examine the antecedents of green purchase intention, the results remain inconsistent pertaining to the influential factors on green purchase intention [7]. Furthermore, reference [8] has revealed the importance of taking into consideration the interaction of both personal and environmental (external) factors to acquire a full picture of green purchase behavior. However, personal factors such as environmental attitude, environmental knowledge, and collective environmental efficacy have been found to have an uncertain relationship with green purchase intention. References [9] and [10] argued that there is an existence of attitude-behavioral gaps, while reference [11] pointed towards the finite theoretical approach that investigates the impact of knowledge on green product purchase in current literature. Reference [12] has found no relationship



was found between perceived consumer effectiveness (perceived efficacy) and organic apparel purchase intention. In addition, environmental factors, which including the relationships of social influence, economic incentives, and green purchase intention, were also found contradicting. To address these concerns, this study attempts to propose a conceptual framework grounded on Social Cognitive Theory (SCT) to better understand the direct effect of personal factors (environmental attitude and environmental knowledge), environmental factors (social influence and economic incentives), and the indirect effect of collective environmental efficacy on green car purchase intention.

II. LITERATURE REVIEW

A. Social Cognitive Theory

Although there are numerous studies have been conducted to test the green purchase relationship, most of the previous research had utilized Ajzen's (1985) theory of planned behavior (TPB) [13] and Fishbein and Ajzen's Theory of Reasoned Action (TRA) [14] to investigate sustainable behavior relationship. Despite these two theories have contributed to a substantial literature on sustainable behavior studies, reference [15] advocated that they are mainly concentrated on determining internal/psychological/ personal factors at the individual level but overlooking the possibility that other non-psychological factors might also facilitate green behaviors. Reference [8] and [16] found that it is vital to investigate the consumers' external forces (external environment) in molding the personal factors and consequently their green purchasing behavior. Following the suggestion, this study will explore the impact of environmental factors such as social influence and economic incentives on the effect of the personal factor of collective environmental efficacy that subsequently spurs intention to purchase green cars among the consumers. Also, reference [8] further quoted that researchers should ponder the conceivable multidimensional nature of the variables before conclude that a relationship is weak or nonexistent. Therefore, it is essential to understand what environmental factors and personal factors that might influence the green purchasing behavior of Malaysian consumers. Social cognitive theory (SCT) proposed by references [17] and [18] can fill this gap by the incorporated both internal and external environments to explain human behavior. References [17-19] depicted the interaction between environmental factors, personal factors, and human behavior as a triadic reciprocal. According to reference [19], the social cognitive theory emphasizes observational learning. In other words, people do not depend solely on learning new or existing behavior by undertaking them, and either they succeed or fail, but rather it is through imitation from modeled influences or modeled expertise [19]. Moreover, SCT is a theory that focuses on behavioral change [17], which is

pivotal in sustainable purchasing studies that required consumers to change their behavior to solve environmental issues.

B. Environment Factors

The purchase decision of an individual is mainly caused by two factors. One of the factors is environmental factors, which play an important role in influencing consumer behavior. The reason was due to individuals are easy to get influenced by their surroundings in order to assimilate into society while upholding their social identity and to prevent being punished [20]. Reference [21] defines environmental factors as those forces other than personal factors that might influence an individual's consumer purchase behavior. According to reference [22], environmental factors are related to social or situational influences and closely link to social norms in the community itself. Reference [23] described environmental factors or external factors is connected to the social image of consumers and product features such as price, promotion, label, brand, and product quality. Similarly, reference [24] proposed that contextual factors comprise social influence, advertising, rules and regulations, and various features of the broad social, economic and political context. However, it is not limited to the above-mentioned examples as they may have different interpretations for different people [24]. Based on the extensive reviews within the literature both locally and internationally, the researcher discovered that social influence and economic incentives are the most favorable variables to be studied in the Malaysian context. Furthermore, despite there are much research has been conducted to test the relationship between environmental factors and green purchases, the findings are reported to contradict each other for most of the studies. Subsequently, each variable of environmental factors will be explained in detail as follows:

1. Social Influence

A considerable amount of literature related to social influence has been published on marketing research. These researches have been concentrated on consumer purchasing intention [25-33], participation intention [34-35], and green purchasing behavior [15], [36-37]. In the consumer purchasing context, reference [28], who used Theory of Planned Behavior (TPB), has found that social influence has a significant effect on internet purchase intention but did not have a significant influence on internet purchase behavior. The result is consistent with the study by reference [31], whereby the authors showed that social influence significantly influences smartphone purchase intention among university students. It was agreed by reference [38] who urged green marketers to encourage consumers to ask their relevant others such as family, friends, or colleagues to involve in environmental protection activities to form subjective norms on environmental issues that subsequently promote green products purchase

intention. However, reference [35] revealed that subjective norm has no significant influence on participation intention. The author explained this outcome was due to the influence of social identity and group norms. Within the green marketing literature, references [20] and [39] have noted that social influence is the crucial factor to transform consumers' green intention into green actions. It was in accordance with the findings by reference [40] and [41] that social influence indirectly influences green purchasing behavior through the impetus of consumer purchase intention. Therefore, based on the extensive literature reviews, the hypothesis is generated as below:

H1: Social influence significantly positively predicts green car purchase intention.

2. Economic Incentives

A number of studies have attempted to elucidate the relationship between economic incentives and consumer purchases in various areas of studies which including small-displacement (engine) cars (SDC) [42], green vehicles [43], green housing [44], and clothing, jewelry or accessories [45]. For example, reference [46] that utilized focus groups in their study have revealed that economic incentives such as reward points, vouchers, or money back benefits are important attributes that drive consumers to healthier household food purchases. In a different study, reference [45] has revealed that the transaction or cost factor together with incentive programs and demographic factors (gender, income, and a number of children) are vital predictors to influence clothing, jewelry, or accessories online purchase intention. Furthermore, reference [43] has discovered that government financial incentives are important factors that can reduce barriers to the adoption of hybrid and electric vehicles. It was supported by reference [42] that the greater the economic incentives provided by the government, the higher the possibility that small-displacement (engine) car intention could be transformed into a real purchase of this car. Even in Malaysia, the environmental problems have also drawn the government's concern to provide tax incentives to promote hybrid vehicles sales [47]. Yet, surprisingly, this variable has rarely been empirically examined its viability to influence green car purchases in Malaysia. Thus, economic incentives are recommended to be examined of whether this variable can influence intention to purchase a green car in Malaysia. Based on previous reviews within the literature, the hypothesis is created as below:

H2: Economic incentives significantly positively predict green car purchase intention.

C. Personal Factors

Another factor is personal or intrinsic to the consumers that due to self-responsibility to the environment; seek for environmental-related knowledge, self-interest, and willingness to take actions for environment protection [23]. According to

reference [48], it is important to grasp the personal factors when investigating consumer product purchases as consumer product purchases were initially triggered by one's personality and internal psychological motivations. Similarly, reference [17] manifested that personal factors are better choices if the situational conditions are impotent. Reference [49] further suggested more internal variables to be determined in future studies (e.g., attitude towards the behavior). Reference [50] further explained that there is still a deficiency in terms of psychological factors during the investigation of environmental-related behavior studies. Based on the exhaustive review within the literature locally and internationally, the researcher found that environmental attitude and environmental knowledge are the most suitable variables to be examined in the Malaysian context. Moreover, albeit there are many types of research have been conducted to test the relationship between personal factors and green product purchases, the findings are reported inconsistent in most cases. Whereafter, each variable of personal factors will be explained in detail as below.

1. Attitude

Numerous studies have investigated the effectiveness of attitude in different area such as electronic deals [51], luxury fashion goods [52], remanufactured products [53], counterfeit sporting goods [54], internet purchasing [26], [55-56], sustainable purchasing [10], [16], [37], [41], [57-66] and green vehicles [67-69].

Added to that, reference [70] proposed to include general environmental attitudes instead of a specific type of attitude for research in green consumption and green product purchases. A related study by reference [71] that tested the effects of demographics on environmentally friendly purchase behavior also suggested including attitude when investigating consumer behavior. In Malaysia, reference [67] that conducted their study among vehicles owners above 18 years in the federal territory of Kuala Lumpur have reported that attitude towards green vehicles, subjective norm, and perceived behavioral control significantly influence green vehicles purchase intention with attitude contributed the highest coefficient among others. Similarly, another study that investigated hybrid car purchase intention in Malaysia also concluded that environmental attitudes have a significant positive relationship with green car purchase intention [68-69]. However, reference [10] discovered that there is a conflict between the expressed attitude of the consumers and their purchasing practices. Reference [9] further claimed that there is attitude-behavioral gap exists in behavioral study. Hence, attitude should not be ignored in any behavioral-related study to better understand the phenomenon. As a result, the hypothesis is suggested as below:

H3: Environmental attitude significantly positively predicts green car purchase intention.

2. Knowledge

There are a considerable amount of studies that investigated the influence of knowledge on consumer product purchases, in which the area of studies included organic cotton and fair trade apparel [11], food purchasing [72], counterfeits [73], insurances, and catering services [74], remanufactured products [75], organic vegetables [76], eco-labeling products [77], general green products [57], [36], [65], [70], [78-84] and green vehicles [69], [85].

In a related study, reference [84] have indicated that environmental knowledge has a significant relationship with green consumer behavior, which comprised of purchasing, using, and recycling. Similarly, it was found that environmental knowledge was an important determinant of environmentally-based purchasing behavior as compared to efficiency-based purchasing behavior and has no significant effect on convenience-based purchasing behavior [78]. In a recent study, reference [86] also found that environmental knowledge has a significant and positive effect on the green purchase intention of Indonesian consumers. In a research conducted in the UK, reference [87] found differences suggesting that there is no significant result between knowledge towards environmental issues and general pro-environmental purchasing behavior for both samples of university students and the general public in that country. Also, reference [82] implied that knowledge about environmental issues is not having a major impact on the green purchase behavior of Malaysian consumers. It might be due to the authors conducted their research at only one city in Malaysia. Based on the reviews, the results showed that there were inconsistent findings in previous studies. Moreover, reference [88] and [89] added that in order to cultivate socially responsible purchasing behavior among consumers, the general information regarding environmental issues and actions required to curb the current environmental conditions are urgently demanded. Therefore, the next hypothesis is recommended as follows:

H4: Environmental knowledge significantly positively predicts green car purchase intention.

D. Perceived Efficacy

Perceived efficacy is a widely studied concept and still ongoing to be researched in various fields, including health, psychology, and environment. It is also one of the important elements in SCT [90]. According to reference [17], self-efficacy is the belief in one's ability to perform a given task. Specifically, self-efficacy is the individual's belief about their capabilities to perform a task successfully that subsequently brings about changes that influence their

lives [91]. It is to say that if an individual believes that his or her action can produce the desired outcome, he or she will have the propulsion to act [92]. In relation to environmental consumption, reference [93] claimed that collective efficacy belief is a better indicator than self-efficacy to give an impact on green purchase intention since the ultimate goal is to improve social well-being on a large scale. The author further added collective environmental efficacy would provide stronger implications if the study model were developed for a collectivist country such as Asian countries. Moreover, the author also noticed that when the consumers possessed higher environmental collective efficacy while at the same time have stronger determination to uphold collective value among the communities, these consumers showed a stronger tendency to purchase environmentally friendly products in China. Subsequently, the hypothesis is suggested as below:

H5: Collective Efficacy significantly positively predicts green car purchase intention.

Previous research has shown that when tasks become more difficult, individuals incline to become more vulnerable to the influence of others [94]. It is especially true when involving purchase decisions related to high involvement products such as the green car that is relatively expensive and has higher perceived risks [95]. However, numerous researches indicated that social influence has no significant direct relationship to consumer purchasing behavior [16], [28], [64], [96-97], there might be something left behind, such as intervention variable that needed further investigation to produce long term behavioral change [98].

In a recent study, reference [99] has discovered that perceived efficacy is the key element in comprehending how social influence stimulates an individual's dedication to collective benefits. Following the result, it showed that self-efficacy plays a partial mediation between the positive relationship of social influence and waste separation. In another word, social influence can either exert a direct influence to facilitate waste separation behavior or by enhancing self-efficacy [99]. In the context of electric car adoption, reference [100] posited that current electric car adopters' thoughts and opinions of their vehicle's environmental impacts might increase consumer's environmental self-efficacy when considering adopting an electric vehicle. However, since the environmental problems cannot be solved without collective efforts and also not by the effort of individuals alone [101-103], the accelerator such as collective efficacy that can stimulate individuals to act in a sustainable way, of whether ability as a group is stronger than capability alone to deal with environmental issues should be examined [102]. Based on previous reviews within the literature, the hypothesis is created as below:

H6: Environmental collective efficacy mediates the relationship between social influence and green car purchase intention.

Based on previous findings, it has been found that economic incentives can trigger consumer behavior by lessening or wipe out financial baffles, but additional interventions are needed to generate long-term behavioral change [98]. Although direct economic incentives may prevail over consumers to change their behavior in the short run, the longer-term impact on how the consumers react after economic incentives are eliminated needed further investigation. Accordingly, the potential intervention variable is suggested to be perceived efficacy to produce long-term behavior change [98]. Furthermore, reference [104] has argued that external incentives might not exert influence in promoting desired behavior in the condition of behavior that is intrinsically stimulated, which in the worst case, can restraint it. It is because intrinsically stimulated behavior could be driven within the person, such as the efficacy beliefs. For instance, economic incentives play a little part when the recipients feel worthless and incapable of bringing about changes even financial incentives are given to them [104].

In a related study, reference [105] reported that economic incentives could be provided as an encouragement to individual performance, which may increase the recipient's feeling of self-efficacy, which subsequently leads to a willingness to act [106]. However, although there has been found a significant relationship between economic incentives and psychological conditions, there is limited empirical research that has been conducted on these variables [99]. Accordingly, reference [99] has revealed that economic incentives were a significant positive influence on individual performance while also significantly positively link to participants' efficacy beliefs. Consequently, the results indicated that the relationship between economic incentives and individual performance (engagement in waste separation) was partially mediated by perceived efficacy. Based on a critical review of current literature, the hypotheses are created as below:

H7: Environmental collective efficacy mediates the relationship between economic incentives and green car purchase intention.

To begin with, there is hardly seen any research that tests the mediating role of perceived efficacy, especially collective efficacy, between the relationship of attitude and consumer behavior. Therefore, the supporting arguments for this study are heavily dependent on hearsay evidence from previous literature. Several researchers, such as references [59], [62], and [63], have discovered that environmental attitude was not always translated into green purchase behavior, which indicated the existence of attitude-

behavioral gaps [9]. It was supported by reference [7] that several theories have proven that not only attitude could affect behavior, there are also various factors that have guided consumers towards purchasing behavior while, in the meantime, work upon the potency of the attitude-behavior relationship [7]. As suggested by reference [107], environmental self-efficacy can close this gap and promote the intention to participate in pro-environmental behavior [100]. However, further investigation is needed to understand in what way environmental self-efficacy can be increased [100]. Based on the above discussion, Hypothesis 8 is presented as follows:

H8: Environmental collective efficacy mediates the relationship between environmental attitude and green car purchase intention.

Based on the previous finding, several studies have shown that there is a linkage between knowledge and consumer behavior, yet sooner or later, a person needs to think of his or her ability to execute the action [108]. In other words, knowledge is not certain to be the most significant variable, in the condition that a person might consider he or she is unable to bring about any changes even he or she is well informed [108]. Similarly, in the context of environmental, behavioral studies, reference [109] posited that climate change knowledge alone might not be the most powerful way to stimulate pro-environmental behavior. However, climate change knowledge has been proven to be an important determinant that can lead to a person feeling more integrated into a community which required further investigation. Accordingly, the authors noted that knowledge positively predicts efficacy, which in turn predicts pro-environmental behavior. When there were intervention mediators (efficacy, identity, and values) added to the framework, it was found that the effect of knowledge on behavior was reduced. Specifically, perceived efficacy and values played a mediating role in predicting the association between knowledge and engagement activity, signifying that climate change knowledge with the increased efficacy and values are most prominent to encourage participation in pro-environmental behavior [109]. Therefore, collective environmental efficacy may mediate the relationship between environmental knowledge and green car purchase intention.

H9: Environmental collective efficacy mediates the relationship between environmental knowledge and green car purchase intention.

Based on critical reviews within the literature, the conceptual model is proposed as below:

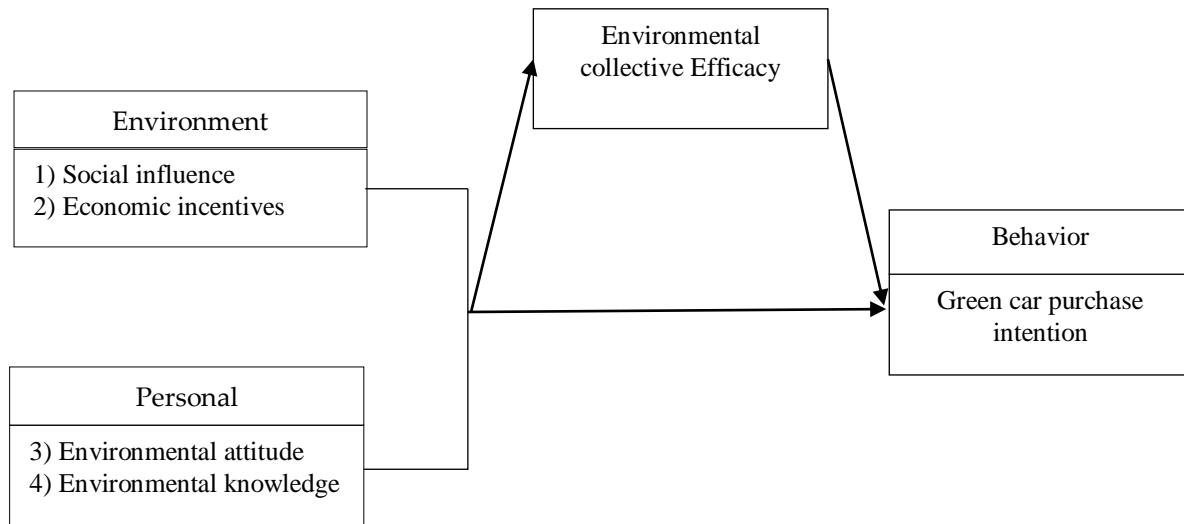


Fig. 1 Conceptual Model

III. CONCLUSION

This study contributes to the growing body of green marketing literature in few aspects. Firstly, there is no research has been found to concatenate the relationships of social influence, economic incentives, environmental attitude, environmental knowledge, collective environmental efficacy, and green car purchase intention so far. Secondly, this paper attempt to explore the direct effect of environmental factors (social influence and economic incentives), personal factors (environmental attitude and environmental knowledge), and indirect effect of collective environmental efficacy on green car purchase intention by grounding on Social Cognitive Theory (SCT). Therefore, the proposed conceptual model is needed to be empirically tested in order to confirm the mediating role of collective environmental efficacy that bridging the relationships among environmental factors, personal factors, and green car purchase intention. In short, this study argues that green car marketers may need to understand that collective efficacy belief among the consumers is an important factor in determining the intention to purchase green cars among the consumers. Without this belief, even the consumers possess a positive environmental attitude, environmental knowledge, influences from family or friends, and monetary inducements, the consumers may still feel hesitant to adopt green cars.

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