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## GREEN MARKETING: PERCEIVED GREEN PURCHASE CONTROL AND ITS ROLE IN EXPLAINING GREEN PURCHASE INTENTIONS: THE EMERGING MARKET PERSPECTIVE

Sustainable development is becoming a subject of global discussion. Behaviors towards the purchase of eco-friendly products may help protect the environment and reduce the adverse effects of consumption. This article aims to provide a deeper understanding of the predictors of green purchase behavior, and, in particular, to explain the role of perceived green purchase control in shaping the intention to purchase a green product. The theoretical approach is based on the Theory of Planned Behavior. An empirical study was carried out among 650 Polish purchasers of green products; data were collected using an online survey. The research clarifies how perceived green purchase control affects the intention to purchase a green product. Intentions are positively and strongly correlated with attitudes and subjective norms. On the other hand, the relationship with perceived green purchase control is relatively weak, yet statistically significant. This study provides valuable knowledge on the factors clarifying purchasers' behavior towards green products. It aids understanding of the importance of barriers to green product purchases and the formulation of marketing strategies to narrow the gap between positive attitudes and behavior, and trigger the effect of switching to green versions of products.

**Keywords:** green consumer, green marketing, green product, Theory of Planned Behaviour, perceived green purchase control.

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## 1. INTRODUCTION

The concept of sustainable development is becoming a subject of a global discussion, which results from the growing awareness of negative consequences ensuing from environmental degradation (Korombel, Ławińska, 2019). Consumers voice their concern over the environment and the future of the globe, nevertheless, their purchase behaviour does not demonstrate that they care about the environment (Tudu, Mishra, 2021; Kreczmańska-Gigol, Gigol, 2022; Witek, Kuźniar, 2020). Positive attitudes towards care for the environment and green products do not translate into green purchase behaviour (Witek, 2019a; Nguyen, H.V., Nguyen, C.H., Hoang, 2018; Joshi, Rahman, 2015). Consequently, the market share of green products is still modest, and this problem relates not only to developing, but also developed countries. A consumer may take a positive attitude towards a green product, however, he or she may have no intention to purchase it, especially, when there are difficulties. Hence, the relationship between an attitude towards green product purchase and purchase intention should be verified in consideration of the degree of how easy or difficult it is to make a green purchase. Although results of many studies (f.e. Dilotsotlhe, 2021; Zuang, Luo, Riaz, 2021; Paul, Modi, Patel, 2016; Kautish, Paul, Sharma, 2019) point to a relationship between perceived behavioural control and green product intention, there are some pieces of research which demonstrate that such a link is weak or there is no link whatsoever (Barbarossa, De Pelsmacker, 2016; Sparks, Shepherd, 1992).

This study aims to thoroughly investigate the aspects associated with the shaping of green purchase intentions, and specifically, to examine the relations between perceived green purchase control and green purchase intention, as well as between perceived green purchase control and attitudes towards green purchase and subjective norms. The present research allows for a better understanding of green purchase behaviour, and particularly, of the barriers due to which positive attitudes towards green purchase do not always translate into green purchase behaviour.

This research provides organisations, and particularly, marketing managers, with bases for green marketing strategies. The results give valuable guidance about the predictors affecting green purchase behaviour. They are of key relevance to manufacturers and retailers, showing how to overcome barriers, concerns and objections of consumers relating to green purchase, as well as how to apply effective marketing strategies. Understanding the role of perceived green purchase control in the shaping of purchase intentions may help stimulate in the future consumers' behaviour towards environmentally and socially responsible purchasing processes.

## 2. PERCEIVED GREEN PURCHASE CONTROL FROM THEORETICAL PERSPECTIVE

The purchase of a green product will be likely if a consumer adopts a positive attitude towards such a product and if that sort of behaviour of that person is expected by other people around him or her. Furthermore, consumers must perceive themselves as being capable of fulfilling their intentions, and the consumer environment cannot be influenced by any external restrictions. One of the most recognised theoretical approaches explaining consumer eco-friendly behaviours is the Theory of Planned Behaviour (Alzubaidi, Slade, Dwivedi, 2021). It was also considered a useful model for predicting green purchase behaviour (Bhardwaj, Sreen, Das, Chitnis, Kumar, 2023; Setyawan, Noermijati, Sunaryo, Aisjah, 2018; Paul, Modi, Patel, 2016).

The main construct of that model is behavioural intention, which was accepted to be the best available predictive factor of behaviour (Ajzen, 1991). Many studies acknowledge that intention is fit to explain and predict behaviour. Furthermore, powerful impact is exerted by attitudes towards behaviour and subjective norms of behaviour (Ajzen, Fishbein, 2005). Nonetheless, incorporating perceived behavioural control into the model effectively verifies behavioural intention, and consequently, behaviour. Behaviour is hence is a function of intention which is based on attitudes, subjective norms and perceived control (Ajzen, 2002). Perceived behavioural control has a direct bearing on intentions (Ajzen, 2002). It is a measure that makes it possible to determine the degree to which consumers have the opportunity and capacity to behave in a particular way. The TPB allows for the assessment of intention and purchase behaviour towards products or brands (Ajzen, 2015).

Attitudes, subjective norms and perceived control behaviour form a comprehensive framework for predicting intentions and real behaviours of purchasers towards green products. Although the results of some studies (Padel, Foster, 2005) stress the higher value of attitudes than other variables, if the purchaser has seen any difficulties, he or she will not behave in a specific way, even when a positive attitude towards green purchase is adopted. Limitations, such as: perceived social pressure and perceived difficulty of specific behaviour, weaken the relation between attitudes and behaviour (Wallace, Paulson, Lord, Bond, 2005). Hence, a positive link between an attitude and intention should be verified through the degree of perceived behavioural control. Consumers perceive difficulties in purchasing products, which has a negative impact on the intention to purchase them. It is very unlikely that consumers will engage in purchasing green products if they believe that making a purchase is difficult or effort related to the purchase of such a product does not bring any benefits to the purchaser and the environment.

Therefore, perceived behavioural control reflects a judgement as to how easy or difficult it is to bring about the effect of a given type of behaviour (Eagly, Chaiken, 1993). That construct takes into consideration perceived difficulties, obstacles and barriers which can be experienced by the purchaser in connection with a given behaviour. It is linked to the consumer's perception of external factors and his or her ability to make a purchase (Ajzen, 1991). Perceived behavioural control includes the factors of internal control (one's own effectiveness), external control (perceived barriers) and objective difficulties, e.g. product availability (Armitage, Conner, 2001). The consumer's conviction about his or her opportunities and difficulties in relation to purchase can either facilitate or limit the behaviour of such a consumer.

Perceived green purchase control reflects individual perception as to whether it is easy or difficult to purchase a green product. It can be associated with situational factors, such as economic costs, time, convenience, the availability of information about the product, and the product availability or visibility (Barbarossa, De Pelsmacker, 2016). As regards the Polish market, price and availability are behavioural control factors that are particularly perceived, as they have the potential to limit purchases (Bryła, 2016). Rejection of higher prices is the greatest barrier to purchasing green products (Connell, 2010; Gleim, Lawson, 2014). The effect of high prices is exacerbated by limited financial resources of purchasers (Chekima et.al 2016). Many studies (Joshi, Rahman 2005; Olsen, 2015) demonstrate that a high price has a negative impact on purchase intentions and purchase behaviour towards green products.

Purchasers' acceptance of higher prices is hindered by reduced efficiency of distribution and low effectiveness of promotional activities. Purchasers perceive limited

availability of green products as a barrier preventing their purchase (Buder, Feldmann, Hamm, 2014). The availability of green products refers to how easy it is for a consumer to localise and purchase a green product for consumption. The availability of green products is relevant to purchasers, affecting both their purchase intention and purchase (Tarkiainen, Sundqvist, 2005). Research showed that limited availability of green products was negatively correlated with purchase intention and thus with its purchase (Young, Hwang, McDonald, Oates, 2010). Where availability limits the purchase of a green product, consumers do not have full control over its purchase. Jarczok-Guzy (2018) points to a narrow range of promotional activities. Bryła (2016) identified, as major barriers to the purchase of green food, not only scarce availability, but also short use-by dates and poor visibility in a shop (Barber, Kuo, Bishop, Goodman 2012).

A critical barrier to purchase is insufficient awareness and scant knowledge of purchasers (Wang, Ma, Bai, 2019). A low level of knowledge about production, characteristics and eco-labelling reduces an interest in green products. This may lead to a lack of trust for green products. Such a situation can hinder the acceptance of higher prices and preclude the purchase of green products, despite a positive attitude towards them.

Other factors controlling green purchase include a sense of one's own effectiveness, convenience, a lack of economic restrictions, a lack of visibility of a product on a shelf (Witek, 2019b). When the purchaser finds that he or she has no control over the purchase of a green product or that his or her control is very weak due to such restrictions as, e.g. the unavailability of products, limited time for searching or limited economic resources, then behavioural intentions will be weaker or this may constrain the behaviour itself or even a person can decide not to purchase a green product. Low perceived behavioural control or its lack may also lead to switching to versions of conventional products (Henryks, 2014).

Many studies indicate that perceived behavioural control has a direct effect on the intention to purchase a green product (Han, Kim, 2010; Tan, 2013; Karatu, Mat, 2015). The greater perceived behavioural control is, the stronger the intentions to purchase a green product are (Mancha, Yoder, 2015; Karatu, Mat, 2015). Furthermore, many pieces of research conducted on the green food market showed a positive relationship between consumer behavioural control and purchase intention (Yin, Du, Chen, 2010; Tseng, Chang, 2015). Perceived behavioural control positively affects the intention to purchase eco-friendly cosmetics (Askadilla, Krisjanti, 2017). Similar contribution were presented in the context of green hotels (Chang et al., 2014) and recycling (Liu, Yang, Clarks, Shelly, 2022). The greater perceived control is, the higher likelihood that there will be stronger behavioural intentions is seen (Tan, 2013; Kim, Chung, 2011). Dowd and Burke (2013) found that the relationship between perceived behavioural control and purchase intention is equal to 0.5. Some pieces of research reveal that perceived behavioural control has no significance for the explanation of these sorts of behaviour (Onel, 2017) and that the relationship between perceived behavioural control, on the one hand, and intention and behaviour, on the other, is irrelevant (Yazdanpanah, Forouzani, 2015; Ng, Paladino, 2013).

### 3. RESEARCH METHODOLOGY

The empirical research aimed to investigate the relationships between perceived green purchase control, on the one hand, and attitudes towards green product purchase and subjective norms regarding the purchase of a green product, on the other, as well as

between perceived behavioural control and the intentions to purchase a green product. The measurement is focused on green product purchase. The main constructs of the model include a dependent variable – green purchase intentions, and the following independent variables: attitudes towards green purchase, subjective norms and perceived green purchase control. The Theory of Planned Behaviour was employed to form the factors explaining purchase intentions and served as the basis for the identification of factors explaining green purchase intentions. Items were prepared based on literature sources (Table 1). These items were evaluated by respondents on a seven-point Likert scale, where 1=strongly disagree and 7= strongly agree.

Table 1. Constructs and Measurement Items in the Research Model

Constructs	Items	Cronbach's Alpha	Sources
Attitude towards green purchase (AGP)	Green purchase protects the natural environment. When I purchase green product, I help protect my health. When I purchase green product I help protect my security. When I purchase green product I am sure that I buy product of higher quality.	0.90	Wang et al., 2019; Tan, 2011; Paul et al.2016; Maichum et al., 2016; Kim, Han, 2010; Yadav, Pathak, 2017
Subjective norms (SN)	My family members purchase green products. My friends think that, I should choose green products.	0.77	Mhlophe, 2016; Taufique, Vaithianathan, 2018; Paul et al., 2016; Maichum et al. 2016; Chan, Lau, 2002; Yadav, Pathak, 2017
Perceived green purchase control (PGPC)	I purchase green product even if with higher price. I have the competence to search for green products among others available in the store. I have time to search and purchase green products. My current habits do not prevent me from purchasing green products. PCB5. I have the income to buy green food products.	0.73	Mancha, Yoder, 2015; Paul et al., 2016; Maichum et al., 2016; Yadav, Pathak, 2017; Kim, Han, 2010
Intention green purchases (IGP)	I plan to purchase green products in the next 3 months. I will purchase a green product when I go shopping next time. I am willing to pay a higher price for green product. I am willing to switch to the green version of the product, but if the price and quality are similar.	0.73	Taufique, Vaithianathan, 2018; Mancha, Yoder, 2015; Paul et al., 2016; Maichum et al., 2016; Wu, Chen, 2014

Source: own study.

The following measures were developed, which referred to: attitudes towards green purchase, subjective norms, perceived green purchase control. They were used as independent variables, whereas intentions to green purchases were assumed to be a dependent variable (Figure 1).

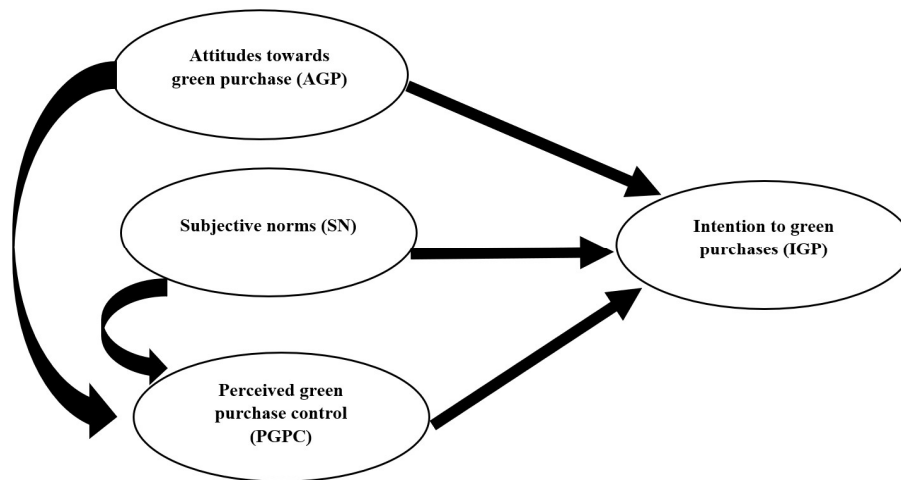


Figure 1. Conceptual Model of Green Purchase Intention

Source: own study.

The variable attitude towards green purchase (AGP) encompasses attitudes towards the purchase of a green product and its benefits. It incorporates environmental and consumer benefits relating to health, safety and high quality. Whereas the construct subjective norms (SN) includes a family and friends as the most important referents towards green purchase and their influence on purchasing decisions. The variable perceived green purchase control (PGPC) was assessed using the following factors: perceived consumer effectiveness, income, time, green product price, availability and habits. The reliability of the measurement for the scales used was tested with Cronbach's alpha. The recommended value should equal at least 0.7 as a sufficient measure of reliability or an instrument of internal consistency (Taber, 2018). A scale reliability analysis showed that the Cronbach's alpha for individual domains ranged between 0.63 and 0.9 and therefore, one statement specifying subjective norms and two statements specifying perceived green purchase control were rejected. Due to that rejection, the scales are characterised by high reliability, which is proved by high Cronbach's alpha values. The scale used for attitudes towards green purchase demonstrated the highest reliability, with Cronbach's alpha being equal to 0.9. The other components had equally satisfactory values for the said coefficient. The acceptable values of alpha, ranging are from 0.73 to 0.77.

On the basis of the above discussed literature and the TPB assumptions the following hypotheses were proposed:

Hypothesis 1 (H1): Intention to green purchases (IGP) is correlated, to the biggest extent, with perceived green purchase control (PGPC).

Hypothesis 2 (H2): The relationship between intention to green purchases (IGP) and perceived green purchase control (PGPC) is positive.

**Hypothesis 3 (H3):** Attitudes towards green purchase (AGP) are positively correlated with perceived green purchase control (PGPC).

**Hypothesis 4 (H4):** Subjective norms of green product purchase (SN) are positively correlated with perceived green purchase control (PGPC).

**Hypothesis 5 (H5):** Perceived green purchase control (PGPC) explains, to the biggest degree, intention to green purchases (IGP).

The research was carried out within one month and finished in January 2019. The online survey method was employed. To eliminate errors and improve the measurement instrument, a pilot study was conducted among 30 consumers. The final analysis covered 650 correctly completed questionnaires, which also met the research sample selection criteria. The empirical data of the results was analyzed using the IBM SPSS Statistics 27.0 computer software. Controlled variables for the sample included the place of living, age and gender of respondents (Table 2).

Table 2. Characteristics of Respondents

Characteristics	Items	Percentage
Age	18–24	13%
	25–35	30%
	36–45	28%
	46–55	17%
	55 and more	12%
Gender	Male	30%
	Female	70%
Place of living	Village	31%
	Town to 40 thousand	19%
	Town from 40 thousand to 100 thousand	13%
	City from 100 thousand to 500 thousand	12%
	City above 500 thousand inhabitants	25%

Source: own study.

#### 4. RESULTS

The analysis of the Pearson's correlation coefficient, which shows the relationship between the features, reveals that the measures selected for the research are linearly interrelated with each other, which is reflected by correlation coefficients (Table 3). The variable intention to green purchases (IGP) is to the biggest extent correlated with the variable concerning attitudes (AGP). The Pearson's coefficient equals 0.60. The relationship is positive and directly proportional, meaning that as the AGP variable goes up, the IGP variable also rises. Hence, hypothesis 1 has been rejected. Intentions are positively and strongly correlated also with subjective norms (0.50). On the other hand, the relationship with perceived behavioural control is relatively weak, yet statistically significant (0.21). Hence, hypothesis 2 has been supported. Attitudes are strongly correlated with subjective norms, however, the correlation with perceived green purchase control is weak. The relationship between attitudes and perceived green purchase control is positive, hence, hypothesis 3 has been supported. Perceived green purchase control is

positively correlated with subjective norms, although that relationship is weak. Hence, hypothesis 4 has been supported.

The more favourable attitude towards green products the purchaser displayed, the greater his or her willingness to purchase them in the future was declared. Perceived green purchase control also had a bearing on purchase intentions, however, to a lesser extent than attitudes. The opinions of people around a person were significant for his or her purchase, although also to a lesser degree than attitudes. In conclusion, Pearson correlation matrix between the model elements in the whole sample showed that attitudes towards the purchase of green products and subjective norms are positively correlated with perceived behaviour control. Perceived green purchase control has a positive impact on the intentions of purchasing green products from consumers who buy green products. The research showed that consumers had more control over the purchase (hence the more problem-free the purchase was and the more it was feasible), the more willingly he or she expressed the desire to buy.

A regression analysis performed for the model describing intentions to green purchase of all those surveyed led to the conclusion that all the variables incorporated into the model, namely, attitude towards green purchase, subjective norms and perceived green purchase control, had a statistically significant and positive impact on purchase intentions.

The forward stepwise regression method was employed to determine which variables, and in which order, enter the model and describe the “intentions to green purchase” variable to the biggest extent. The first variable to enter the model was AGP ( $R^2=0.36$ ). Another variable entering the model was SN ( $R^2=0.43$ ), followed by PPC ( $R^2=0.45$ ). The results of the estimation of model parameters are shown in Table 4.

It was found, using the forward stepwise regression method, that AGP, SN and PGPC, which describe intentions to green purchase, enter the model in this particular order as variables. Intentions to green purchase were described to the greatest extent by attitudes towards green purchase. The results revealed that the proposed model explains 45% of the variance in intentions to green purchase. It is characterised by a normal distribution of residuals, hence, it has been constructed correctly ( $p=0.25545$ ). Hence, hypothesis 5 has been rejected.

Table 3. Pearson Correlation Matrix between TPB Elements

<b>Variables</b>	<b>Attitudes towards Green Purchase</b>	<b>Subjective Norms</b>	<b>Perceived Green Purchase Control</b>	<b>Intention to Green Purchase</b>
Attitudes towards Green Purchase	1.00	0.45	0.05	0.60
Subjective Norms	0.45	1.00	0.15	0.50
Perceived Green Purchase Control	0.05	0.15	1.00	0.21
Intention to Green Purchase	0.60	0.50	0.21	1.00

Note: Intention – a dependent variable. All correlation coefficients are statistically significant ( $p < .01$ ).

Source: own study.



Table 4. Regression results for "Intention towards green purchase" dependent variable model

Specification	b*	Std. Err. b*	b	Std. Err. b	t	p-Value
Intercept			0.587	0865	0.678	0.497989
Attitude towards Green Purchase	0.477	0.033	0.519	0.036	14.607	0.000000***
Subjective Norms	0.266	0.033	0.484	0.060	8.071	0.000000***
Perceived Green Purchase Control	0.141	0.030	0.113	0.024	4.782	0.000002***

\*\*\*  $p < 0.001$  – there is a very highly statistically significant relationship.

Source: own study.

## 5. DISCUSSION AND CONCLUSIONS

The green product market is growing dynamically. In particular, green foodstuffs and cosmetics represent the most promising business sectors. Poland is a post-socialist country with the developing green sector, but the share of these products in the household budget is negligible. The present research attempted to understand the role of perceived green purchase control in the green purchase behaviour taking place or not, despite positive attitudes towards green purchase. This research demonstrated that the more problem-free the purchase of a green product for the purchaser was, the greater feasibility of that purchase could be seen. The purchaser having greater control over the purchase was more eager to make that purchase. A lack of perceived control over one's own behaviour may lead to the limitation of green product purchase. A huge number of barriers on the Polish market which hamper the purchase of green products not only create a gap between positive attitudes and behaviour, but also result in switching to a non-green version of products. Perceived factors of green behaviour control are, in particular, the price and availability of a green product. Difficulties in the purchase of green products, which are perceived by purchasers, affect their purchase intentions adversely. Behavioural intentions will be weaker, if the purchaser faces barriers preventing him or her from purchasing (Witek, 2019b). This is different on mature markets, where purchasers display greater sensitivity over sustainable activities performed by companies, and the purchaser does not concentrate on a price in the purchasing process (Ławińska, Korombel, 2023b). On the Polish market, the prevailing trend is still to look for cost-savings at the level of price of goods (Jerzyk, 2015).

The intention to green purchase has been predicted with the use of the direct measures of the main determinants (attitude, subjective norms, perceived behaviour control) that account for 45% of variance in the consumers' intention. The results of this research are concurrent with results of other studies on the green product market. In the study investigating Czech consumers, Zagata (2012) obtained the multiple square coefficient of intention and perceived green purchase control, amounting on average to  $R=0.52$ .

This study explores the fact that attitudes are strongly linked to green purchase intentions, which is in line with other research results. The research showed, however, a weak impact of perceived behavioural control on behavioural intentions, which corresponds to Klöckner's (2013) findings. These results demonstrated that attitudes, perceived behavioural control and social norms explained 55% of variance in intentions. The research revealed that perceived behavioural control had a relatively weak impact on

behaviour. This may be an indication that green products, and specifically green food and cosmetics, are more and more available to wider social groups owing to their sale in conventional retail networks (Zagata, 2012). The research revealed that perceived green purchase control is not a powerful indicator, which, to the greatest extent, explains purchase behaviours towards green products.

Having deeper knowledge of variables affecting the purchaser's behaviour towards green products motivates companies to assume greater responsibility for the effects of their operations and to be more committed to environmental protection. These achievements have an impact on green marketing, as perceived behavioural control has been considered a good indicator of green product purchase intentions. It allows for developing marketing strategies which are in line with the principles ensuring respect for the environment. Informed purchasers who bought green products regularly displayed the greatest willingness to pay higher prices. Purchasers will be prone to pay more for green production methods, on condition that they have been given clear, fair and complete information about that (Ławińska, Korombel, 2023a; Gam, Cao, Farr, Kang, 2010).

The interrelations identified in this research can help formulate practical guidelines for developing marketing instruments, and in particular, an appropriate price policy, creating the effect of visibility and availability. A lack of knowledge and trust is a considerable barrier. When purchasers gain knowledge and competences relating to the identification of a green product, this may help overcome barriers and lead to a purchase.

As indicated by the research, perceived difficulties in purchasing a green product are not that significant, as assumed. However, even if purchasers take a positive attitude towards green products, they do not display actual purchase behaviour. Hence, it is relevant to examine and seek in the future factors that are responsible for green purchase gap. A refusal to accept higher prices may stem from a lack of knowledge about the labour-intensive methods used for green production and benefits from green purchase. Furthermore, when one has no past experiences with green products, this may contribute to a lack of trust. Therefore, these two constructs must be incorporated into future research. In addition, as a consequence of mistakes made by traditional shops, where green products are not properly exhibited and are not conspicuous enough, it can happen that these products will not be able to attract purchasers' attention. Thus, the research implies that additional variables should be incorporated into the model to enhance the explanatory and predictive capacity of that model. Future research may concentrate on selected green products and attempt to clarify perceived green purchase control for different types of green products.

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