A Bright Sight of Green Product Market in Malaysia: An Empirical Evidence Using Structural Equation Modelling

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Abstract
Purpose: This study aims to examine the influence of environmental concern, utilitarian benefits, and self-expressive benefits on the attitudes toward green cleaning brands. Additionally, the effect of a moderating variable (attitudes toward green cleaning brand) on purchase intention for green brands (cleaning) (PI) this formation process is examined in the context of developing country of green purchasing behavior.
Design/methodology/approach: Data were collected using an online self-administered survey to 400 consumers in Malaysia through the purposive sampling method. The model is based on the Theory of Planned Behavior (TPB). Descriptive statistics were analyzed using SPSS, and SmartPLS 3.3.3 was used for; a partial least square-structural equation modelling procedure to analyse the postulated study hypotheses.
Findings: The results demonstrate that purchase intention for green brands (cleaning) (PI) was directly and significantly driven by Self-expressive benefits (SE), utilitarian benefits (UB), and environmental concern (EC). Attitude towards green brands (cleaning) mediates the relationship between three antecedents of attitude and purchase intention for green brands (cleaning) (PI).
Research limitations/implications: The current study is limited to the geographical area, of Sabah, Malaysia during Covid-19 pandemic. Therefore, generalizability and gain a better knowledge of the overall context is limited.
Practical implications: The current model brings a bright sight of the green product market to stakeholders to meet the rising need for ecologically friendly cleaning products and help to improve the environmental sustainability and benefits to the consumer. Directions for further research are suggested.
Originality/value: This study guided green firms on cultivating the various behavioral aspects under TPB factors with their consumers over time, with a stronger emphasis on encouraging adoption/purchase behaviors.

Keywords: Environmental Concern, Green Product, Purchase Intention, Theory of Planned Behavior, Utilitarian Benefits, Self-Expressive Benefits

Introduction

Since the coronavirus outbreak from Wuhan, China, to worldwide, it has recently affected the economics and societies across the globe in many ways (Lin et al., 2020; Butu et al., 2020). The COVID-19 pandemic has considerably impacted consumer lifestyles and buying behavior and has radically altered the way businesses and consumers interact (Donthu & Gustaffsson, 2020; Sheth, 2020). Since customers spend more time at home due to limitations and lockdowns, they have come to connect cleanliness with being healthy (Hopkins, 2020; Wichaidit, 2020). As life has become more susceptible to being caused by coughs and illness in recent years, the need to keep a clean environment to minimize coronavirus transmission has been emphasized (Tiong et al., 2020). This occurrence increased the demand for disinfection solutions. However, non-green cleaning products negatively affect humans and the environment, such as water pollution, air pollution, and waste (Choi & Johnson, 2019) leading to green product consumption changes (Zhuang & Riaz, 2021). Thus, it is essential to select the appropriate cleaning products, ideally those safe for human health and the environment.

Green products concerned have started a few years before the Covid-19 pandemic. Green purchase behavior is a specific type of environmentally beneficial conduct that people engage in to show their care for the environment (Chekima et al., 2016). According to Ramayah et al. (2010), green buying behavior represents green purchase intention. While green purchase intention is related to an individual's willingness to purchase and consume products with eco-friendly features (Rashid, 2009). Since those trends become the primary concern, companies begin to implement a green branding strategy in which, if this strategy succeeds, it will increase consumers' green purchase intention (Akturan, 2018). However, it will be challenging to match the vision of the environment into the companies' vision rather than just promoting their green brands alone (Isa et al., 2017). Therefore, companies may need to prepare a proper business plan to achieve more markets segments and to assess their total costs to produce eco-friendly products and, at the same time, avoid harmful effects on the environment (Qi & Ploeger, 2019). Previous studies revealed that green consumers are concerned about the environmental quality of green brands and the environmental effects related to their purchase decisions for such brands (Maichum et al., 2016; Mansor et al., 2019).

A recent meta-analysis by Zhuang et al. (2021) on factors influencing green purchase intention has shown that many researchers have attempted to examine multi determinant factors of green product purchase intention. Indeed, researchers have classified purchase intention determinants into three categories: cognitive factors, individual consumer characteristics, and social factors. On the other empirical study, researchers argue that attitude plays a vital role in predicting intention to purchase green, accounting for 40% of the variance of intention to purchase green (Dilotsotlhe, 2021). Alternatively, a study on environmental concern and green purchasing behavior was found to have a strong and direct link among adult respondents in United Stated (Choi & Johnson, 2019). Many studies show that self-expressive benefits (Ahmad & Thyagaraj, 2015) and utilitarian benefits (Suryawan, 2019; Zhang et al., 2019) effectively enhance purchase intention. Maichum et al. (2016) highlighted that green consumption and green-related consumption topics are relatively new topics of study. Thus, its further research on this particular topic is required. From the facts mentioned above, this present study aims to assess determinants factors of consumer's intention to purchase green brands (cleaning) by employing the Theory of Planned Behavior (Ajzen & Fishbein 1980).

Therefore, this study attempts to bridge the gaps while providing better insight into consumers' purchase intention towards green cleaning brands in the Malaysian setting. Based on the mentioned issues, the current study is outlined to examine the mediating effect of consumers' attitude towards green brands (cleaning) on the relationships between green environmental concern, utilitarian benefits, and self-expressive benefits with purchase intention for green brands (cleaning.

Literature Review

In 2012, the Malaysian government approved the MyHIJAU scheme to encourage the country's green products and services to be sourced and purchased certified by the Standards and Industrial Research Institute of Malaysia's Eco-Labelling Scheme (SIRIM) (Mohd Suki & Mohd Suki, 2019). Guala and Merlo (2013) pointed out that the term green has become an important term in marketing and the operation of detergent industries. On top of that, green branding has emerged as a critical approach for earning considerable environmental benefits over competitors (Delgado & Aleman, 2005).

Due to the rising global trend of environmental protection, customers have begun to demand more green products (Jain and Mehta, 2016). In response to consumers' growing awareness towards the environment, more companies have promoted their green products and services to brand themselves as environmentally friendly, promoting green consumption (Wang, 2017) by green customer (Biswas and Roy, 2015). There are three stages in green consumption: product purchase, product use, and product disposal (Wu et al., 2017) and product disposal highly related to environmental issues such as biodegradable, compostable, and recyclable would lead to environmental problems. Green products have been referred to as goods that do not contaminate or use up natural resources and are less toxic to the environment as they are biodegradable, compostable, and recyclable (Song et al., 2009). Many green brand products range from organic food, laundry detergents, household cleaning products, and cosmetics and toiletries. However, this research focuses solely on environmentally friendly household cleaning brands. In specific, green cleaning products can be defined as products manufactured using natural base surfactants and are non-toxic to the environment (Siwayanan et al., 2015).

Environmental Concern and Attitude towards Green Brands (cleaning)

Consumers nowadays are aware of the importance of environmental concerns (Isa et al., 2017). According to Cerri et al. (2018), environmental concern is defined by one's consciousness towards the environment and its issues. Indeed, the researcher explained that Environmental concern is the foundation of all environmental research, and it has a significant role in influencing consumer decision-making (Cerri et al., 2018). Lee (2008) mentioned that environmental concern is considered an integral part of forming beliefs and attitudes towards environmental issues, which influences behavioral intent.

When environmental concerns increase, resulting in higher possibilities of purchasing environmentally friendly goods (Policarpo & Aguiar, 2020). This statement is in line with a study carried out by Paco and Rapose (2009) and Md Jusoh & Ahmat (2017). They noted that consumers nowadays are becoming more concerned about the ecology issues and thus, increase their awareness in shifting their behaviors towards green purchasing. Besides, in a study by Cerri et al. (2018), consumers with a high environmental concern have higher purchase intention towards green products than those with common environmental concerns. Mohd Suki and Mohd Suki (2019) also stated that consumers feel about the environment by purchasing green products.

Past researchers have found evidence that there is a definite relation between consumers' concern for the environment and sustainable purchasing behavior. For instance, Maichum et al. (2016) acknowledged the positive link between these two extremes among Thai consumers. Besides that, a study done by Jaiswal and Kant (2018) proved that environmental concern is one of the best determinants of consumers' attitude towards green products and their willingness to purchase such products, which also in line with other previous studies (Paul et al., 2016; Yadav and Pathak, 2017; Chuah & Lu, 2019). Furthermore, the outcomes in a study

conducted by Cerri et al. (2018) indicated that environmental concern has a significant and direct relationship with green purchasing intention among U.S undergraduates. On top of that, in the Canadian setting, Hanson (2013) noted a direct effect of environmental concern on recycling and sustainable purchasing. Similarly, in a study carried out by Hartmann and Apaoloza-Ibanez (2012), the results reveal that environmental concern positively influences consumer's intention in purchasing green energy brands. Therefore, it can be postulated that:

Hypothesis 1: There is a significant relationship between environmental concern and attitude towards green brands (cleaning).

Utilitarian Benefits and Attitude towards Green Brands (cleaning)

The utilitarian dimension concerns consumption's instrumental or functional value (Batra and Ahtola, 1990). According to Costa et al. (2016), utilitarian benefits are the main benefit obtained from certain products. In particular, utilitarian benefits, also known as functional benefits, can be described as the characteristics of products that satisfy consumer's functional needs, such as respect for the environment, prevention of global warming and no pollution (Bashir, 2020). Furthermore, consumers may consider utilitarian benefits as vital characteristics of green brands, exceeding those of conventional brands (Brijs et al., 2011).
In addition, utilitarian benefits are essential in positioning green brands (Hartmann et al., 2012). According to Lin et al. (2017), consumers look for additional functional benefits when consuming environmentally friendly products. These functional benefits reflect the perceived utility from a brand's capacity to fulfill functional, utilitarian, or physical environmental performance (Stock et al., 2014). From the above explanation, next hypothesis is:

Hypothesis 2: There is a significant relationship between utilitarian benefit and attitude towards green brands (cleaning).

Self-expressive Benefits and Attitude towards Green Brands (cleaning)

Consumers expect self-expressive benefits from consuming sustainable goods in which the concept is based on signaling theory (Ahmad & Thyagaraj, 2010). The signalling theory affirms that consumers are involved in eco-friendly product consumption due to social visibility (Ohtomo & Hirose, 2007). According to Bennett and Chakravarti (2009), higher signalling green products results in higher self-expressive benefits. As per Ahmad and Thyagaraj (2010), self-expressive benefits can be described as emotional benefits, whereby these benefits tend to relate to individuals' green behavior. Bashir et al. (2019) stated that self-expressive benefits refer to product attributes that fulfil consumers' social expressions and self-esteem.
A brand's self-expressive benefits can influence consumer behaviours as the brand provides a means for consumers to express themselves to society (Aaker, 2009; Caroll and Ahuvia, 2006). For instance, by consuming green brands, consumers get an opportunity to show their concern for the environment to others (Hartmann and Apaoloza-Ibanez, 2012). Delgado et al. (2015) mentioned in their study that self-expressive benefits are essential in understanding consumer's green product purchasing.
Furthermore, a study conducted by Policarpo and Aguiar (2020) reveals that consumers show positive relationships between self-expressive benefits and green consumption behavior. This revelation means that self-expressive benefits that consumers perceive are an important attribute as motivation for green purchasing. Besides, in a study by Ahmad and Thygaraj (2015), it is found that self-expressive benefits significantly affect the purchase intention towards green brands among Indian consumers. The findings from a study carried out by Lin et al. (2017) also revealed that the perception of self-expressive benefits improves the green

image. Moreover, the researcher further explained that this type of benefit satisfies consumers' needs for social approval and self-esteem through consuming green brands. Next hypothesis can be derived as follows:

Hypothesis 3: There is a significant relationship between Self-Expressive Benefits and attitude towards green brands (cleaning)

Attitude towards Green Brands (cleaning) and Purchase Intention

According to Chen et al. (2020) attitude towards a brand is parallel to consumers' preference and overall evaluation of that particular brand, which epitomizes their favorableness. Besides, attitude towards a green brand can also be described as a notion developed from consumers' evaluation process and rational judgement toward the green brand (Lee, 2008). The previous study regarding consumers' attitude towards eco-friendly behavior has a remarkable positive relationship with their environmental knowledge and green product purchase intention (Wang et al., 2017). For example, a study carried out by Jaiswal and Kant (2018) showed that attitude towards green products is the strongest determinant of intention to purchase such products. Additionally, Choi and Johnson (2019) noted that consumers who enjoy trying new things in their shopping are more likely to be positive about purchase green products. This proves that a positive attitude resulted in an increased intention in purchasing green products. Similarly, attitude towards a green brand can be described as a notion developed from consumers' evaluation and rational judgments toward the green brand (Lee, 2008). Parallel to these findings, Teng (2009) further mentioned that consumers who have a positive opinion toward a brand are more likely to acquire that brand. Thus, next hypothesis can be draw as below:

Hypothesis 4: There is a significant relationship between Attitude towards Green Brands and purchase intention for green brands (cleaning)

The Mediating Effect of Attitude towards Green Brands (cleaning) on Antecedents of Attitudes and Purchase Intention for Green Brands (cleaning)

Mohd Suki and Mohd Suki (2019) in a series of research on Malaysian consumers' decision-making and evaluation of green products, revealed a causal relationship between attitude and purchase intentions towards green products. In addition, many studies across boundaries perspectives prove that they affect attitudes towards environmentally responsible purchase intention (Auyong & Chin, 2019; Dilotsotlhe, 2021; Maichum et al., 2016; Ramayah et al., 2010). In a different study, some researchers found that attitude and two other factors from TPB predicted intention to engage in environmentally friendly behaviors (Zhuang et al., 2021). According to Choi and Johnson, (2019), general environmental concern was connected to a specific attitude toward a specific behavior, and this specific attitude predicted purchase intention. Therefore, to best predict behavior, environmental concern must be combined with additional characteristics unique to purchasing green items. Thus, based on a previous TPB study, we anticipated that the TPB components and three extending TPB factors accounted for considerable variance in green product purchase intention after adjusting for demographic factors (young adult and at least pre-university and above education level). Therefore, the next hypotheses of this study are:

H5: There is a significant mediating effect of attitude towards green brands (cleaning) on the relationship between antecedences of attitudes and purchase intention for green brands

H5a: There is a significant mediating effect of attitude towards green cleaning brands on the relationships between environmental concern and purchase intention for green brands

H5b: There is a significant mediating effect of attitude towards green cleaning brands on the relationships between utilitarian benefit and purchase intention for green brands

H5c: There is a significant mediating effect of attitude towards green cleaning brands on the relationships between self-expressive benefit and purchase intention for green brands

Theory of Planned Behavior
Theory of Planned Behavior (TPB) was first initiated in order to improve the existing theory which is the Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen (1985). Perceived behavioral control is the new construct added to the TRA model and Ajzen (1985) introduced the new theory as the TPB model. In recent years, TPB has been widely used in predicting consumer's green behavioral intentions (Choi & Johnson, 2019; Dilotsotlhe, 2021; Ramayah et al., 2010; Zhuang et al., 2021). For example, a study utilizing this theory conducted by Cheung et al. (2019) noted that all the three original constructs in the TPB model were all strong determinants of willingness to recycle wastepaper. Maichum et al. (2016) have also applied this theory in their study and revealed that consumers' attitudes, subjective norms, and perceived behavioral control positively affect their willingness to purchase green goods. A study by Sreen et al. (2018) also reveals a significant relationship between the three mentioned constructs in the Indian context. Nguyen et al. (2019) also acknowledged that these three constructs of determinants of behavior from TPB are relevant to green purchase intention. In a nutshell, previous studies' findings demonstrate the TPB model's usefulness in giving a clear knowledge of green purchasing behavior. Hsu et al., (2017) discovered that purchase intention explained significant variance in purchase intention of green skincare products using the theory of planned behavior in a sample of Taiwan consumers. The above facts, shown explanatory power of purchase intention in the context of green purchasing habits, intention alone was chosen as the dependent variable in this current study.

Method
The study was conducted using a descriptive and quantitative approach. The target population of the study included the young adult age group from18 to 35 years old and at least pre-university and above education level, who are aware of green products, being either experiencing using green or non-experiencing using green cleaning product products, living in the district of Kota Kinabalu, Sabah, Malaysia.

Quantitative data was collected through a self-administered questionnaire. The first part of the questionnaire gathered the respondents' demographic data such as gender, age group, marital status, education level, employment status, and monthly income. In the second part, respondents were asked to assess a set of items on the questionnaire using a five-point Likert scale, with 1 indicating "strongly disagree," and 5 indicating "strongly agree." The questionnaire was adopted based on already validated measures from the past study on green product purchase behavior, which are an environmental concern (Choi and Johnson, 2019), utilitarian benefits (Lin et al., 2017; Kotler, 2011), self-expressive benefits (Lin et al., 2017; Caroll and Ahuvia, 2006). For "attitudes towards green cleaning brands", the items used were adapted from Su et al. (2019) and purchase intention for green cleaning brands. The remaining part of the questionnaire comprised five items for the purchase intention of green brands (Paul et al., 2016; Kumar et al., 2017).

Purposive sampling is in the form of a non-probability sampling technique adopted in this study since no sampling frame was available on the population of potential green brands consumers, as suggested by Saunders et al. (2009). Due to the Covid-19 pandemic, data was collected using the online form. The questionnaire was created by using Google Form. The questionnaire was then distributed through instant messaging platforms such as WhatsApp and Telegram. Besides, the questionnaire link is also posted on the social media platforms such as Facebook and Instagram. Four hundred (400) questionnaires were distributed to respondents, a total of 289 questionnaires representing of 72 % response rate, and useable data to analyze the results. Thereby the sample size falls within Kline's (2011) recommended of 200-500.

A pilot study involving 30 respondents reached Cronbach alpha value ranging from 0.818 to 0.955, which is above that cutting value of internal consistency of the questionnaire (Hair et al., 2017, 2019). After the data screening procedures, the partial least squares structural equation modeling (PLS-SEM) version 3.6 software was applied to analyze data further. In assessing the model, the two-step approach is recommended by (Hair et al., 2019). In the first step, the common method bias and validity of the measurement model were assessed to identify any common variance problem. Next, the reliability and validity of the proposed model are evaluated to ensure what the survey intended to measure. In the second step, the structural model was examined to test the hypotheses of the study. Finally, the results of hypotheses testing are present to verify the proposed conceptual framework.

Findings
Demographic Profile of the Respondents
This study consists of 73 male respondents (25.3%) and 216 female respondents (74.7%). In terms of age, 149 respondents (51.6%) are in the age between 30 to 35, 117 respondents (40.5%) are in the 24 to 29 age group and the smallest age group is 18 to 23 years old (8.0%). More than half of the respondents are single (66.4%), whereas others are married (33.2%) and divorced (0.3%). As for the education level, more than half of the respondents possess a Bachelor's Degree (69.2%). The rest of the respondents have STPM/Matriculation Certification (A level) /Diploma and other qualifications. In terms of employment status, about 66.8% of the respondents are private-sector employees, followed by students or unemployed respondents (13.8%). The remainder of respondents works as public sector employees (7.2%), self-employed (6.2%) and housewives (5.9%). Finally, the distribution of monthly income data shows that more than 50% of the respondent received RM 3000 to RM 5000 monthly income.

Common Method Variance
The results of Harman's single factor test and full collinearity the common method variance to be 32.718%, which is under the commonly accepted threshold of 50% (Podsakoff et al., 2003). Cronbach alpha, composite reliability, factor loadings, and average variance extracted (AVE) were used to assess the reliability and validity of the measurement models. The average variance extracted (AVE) is used to assess the convergent validity, is measured and calculated using the PLS Algorithm function in SmartPLS 3.3.3. All constructs have AVE values higher than 0.5, composite reliability, and Cronbach alpha above 0.7 for each data group above the minimum threshold recommended by (Hair et al., 2019). Factor loading for each item under all measured constructs was more than 0.5, and the factor loadings for all 20 items ranged between 0.77 and 0.95. As a result, no objects were deleted. Table 2 shows the discriminant validity results of this study. As a result, the discrimination validity has been validated. Thus, this section confirming the validity and reliability of the data for further analysis.

Table 1: Validity and Reliability of The Measurement Model

Construct	Item	Indicator Reliability	Convergent Validity	Internal Consistency Reliability	
		Outer Loadings	AVE	Composite Reliability	Cronbach's Alpha
Environmental Concern	EC1	0.844	0.701	0.903	0.861
	EC2	0.908			
	EC3	0.821			
	EC4	0.770			
Utilitarian Benefits	UB1	0.924	0.839	0.940	0.904
	UB2	0.931			
	UB3	0.892			
Self-expressive Benefits	SE1	0.941	0.881	0.967	0.955
	SE2	0.951			
	SE3	0.943			
	SE4	0.919			
Attitude towards GreenBrands (Cleaning)	ATT1	0.915	0.833	0.952	0.933
	ATT2	0.924			
	ATT3	0.872			
	ATT4	0.938			
Intention to Purchase Green Brands (Cleaning)	PI1	0.851	0.821	0.958	0.945
	PI2	0.897			
	PI3	0.929			
	PI4	0.936			
	PI5	0.914			

Table 2: Discriminant Validity Using Fornell-Larcker Criterion

Construct	ATT	EC	PI	SE	UB
ATT	**0.912**				
EC	0.382	**0.837**			
PI	0.754	0.348	**0.906**		
SE	0.613	0.258	0.538	**0.939**	
UB	0.596	0.247	0.488	0.684	**0.916**

Structural Model: Hypotheses Testing

The structural model was constructed after establishing the direct influence of between variables in this current investigation. Concerning the hypotheses testing, Table 3 shows the combined analysis of path coefficients, t-values, and p- values which indicate that environmental concern to attitude, utilitarian benefit to attitude, self-expressive benefit to attitude, and attitude to purchase intention have statistically significant path coefficients. It can be concluded that hypotheses 1,2,3 and 4 were supported.

In this section, the effect sizes (f2) are evaluated. The (f2) computes the relative impact of a predictor construct on endogenous constructs. Based on the guideline by Cohen (1988), the values of 0.02, 0.15 and 0.35 represent small, medium and large effects respectively. From Table 3, environmental concern (EC) (β = 0.22, t= 3.813, p = 0.00), utilitarian benefits (UB) (β = 0.29, t= 4.43, p = 0.00), and self-expressive benefits (SE) (β = 0.36, t= 6.325, p = 0.00) have small effects in producing R^2 for predicting attitude towards green brands (cleaning) (ATT). Meanwhile, attitude towards green brands (cleaning) (ATT) has a large effect in

producing R2 for predicting intention to purchase green brands (cleaning) (PI) (β = 0.50, t= 10.716, p = 0.00).

Interestingly, the results structural model in Table 3, indicates that environmental concern (EC), utilitarian benefits (UB), and self-expressive benefits explained up to 48.0% of the attitude of customers towards the adoption of green appliance products. On the other hand, attitude contributed up to 64.0 % of the purchase of green brand intention.

Mediation Result

The results of mediation analysis indicated there is a significant mediating effect of attitude towards green cleaning brands on the relationships between environmental concern (β=0.111, t-value=3.567; p<0.05), utilitarian benefits (β=0.151, t-value=4.102; p<0.05) and self-expressive benefits (β=0.180, t- value=5.152; p<0.05) with purchase intention for green cleaning brands. Table 4 shows the summary of the result of the conducted mediation analysis.

Table 3: Results of Structural Model

Hypothesis	Relationship	Std. Beta (β)	Std. Error	t-value	p-value	Decision	R2	f2	Effect Size
H1	EC→ATT	0.221	0.058	3.813	0.00	Supported	0.479	0.082	Small
H2	UB→ATT	0.299	0.068	4.425	0.00	Supported		0.089	Small
H3	SE→ATT	0.358	0.057	6.325	0.00	Supported		0.121	Small
H4	ATT→PI	0.504	0.047	10.716	0.00	Supported	0.636	0.357	Large

Table 4: Mediation Analysis

No.	Relationship	Indirect Effect Beta	Std. Error	t-value	p-value	95% UL	95% LL	Decision
H5a	EC →ATT → PI	0.111	0.031	3.567	0	0.060	0.161	Supported
H5b	UB → ATT → PI	0.151	0.037	4.102	0	0.094	0.214	Supported
H5c	SE → ATT →PI	0.180	0.035	5.152	0	0.120	0.235	Supported

Discussion and Conclusion

The results revealed that environmental concern has a significant relationship with attitude towards green brands (cleaning) (β = 0.29, t= 4.43, p = 0.00). H1 is supported. This result is consistent with most previous studies measuring environmental attitudes, which includes the studies by Chuah & Lu (2019), Cerri et al. (2018),Yadav and Pathak (2016), and Paul et al. (2016). Besides, according to Hartmann and Apaoloza-Ibanez (2012), consumers with favorable views and environmental concerns were more likely to engage in green consumer behaviors than consumers who were not ecologically concerned.

Similarly, the finding of this study revealed that utilitarian benefits (β = 0.29, t= 4.43, p = 0.00) significantly influenced attitude towards green brands (cleaning). Thus, H2 is supported implying that many young adult consumers in Malaysia believe that the functional benefits of

green cleaning brands may prevent environmental destruction and global warming. This finding is in line with (Sarkar et al., 2019; Hartmann and Apaoloza-Ibanez, 2012).

The current study found that self-expressive benefits (β = 0.36, t= 6.325, p = 0.00) also positively impact consumers' attitudes towards green brands (cleaning). Hence, H3 is supported. This finding shows that young adult consumers in Malaysia are willing to purchase and consume products that are less harmful to the environment, enabling them to achieve self-expressive benefits by showing in their social environment that they share environmental conservation standards (Policarpo and Aguiar, 2020). According to Zhuang et al. (2021) self-expression brands are a means by which individuals can express themselves. However, the result obtained was in contrast with the finding of Hartmann and Apaoloza-Ibanez (2012) finding in which self-expressive benefits have no direct relationship with attitude in the context of green energy brands.

Implication of the Study

As green brands and consumers' green purchasing behavior remain key study subjects, the current study has significant practical implications for the study and green practice. This study indicates that customers' attitudes about green brands (cleaning) are the most crucial factor influencing their purchase intentions for such goods. The study improved marketers' awareness and knowledge of customers' intentions to purchase green brands (cleaning) in their local environment. According to the results, attitude toward green cleaning brands emerged as the most important driver of green cleaning brand purchase intention among Malaysian young adults. Thus, marketers must concentrate on three of these determinants since they significantly influence customers' intentions to purchase green brands (cleaning). With attitude exerting a more significant impact, marketers could use infomercials and promotions to draw customers' attention to green brands (cleaning), as this may influence their purchase intention for these goods.

Additionally, by gaining additional evidence of the factors that influence customers' attitudes about green brands (cleaning), marketers will meet the rising need for ecologically friendly cleaning products. Environmental concern was also found to substantially affect customers' attitudes about green cleaning brands, which affects their purchase intention. This study implies that politicians and marketers should develop public interventions demonstrating how environmentally conscious customers' use of green cleaning products may help mitigate negative environmental consequences. Besides that, the results of this study show that concerning customer self-expressive benefits and utilitarian benefits potentially enhance consumers' attitudes towards green cleaning brands. It can improve their purchase intention and contribute to green consumerism. To increase consumer interest in these brands, marketers should promote to customers how the green cleaning products they provide help to improve environmental sustainability and benefits to the consumer. Appropriate exposure to the brands' advantages is critical to any green-friendly brand (Pickett et al., 1995). Additionally, this strategy is critical for increasing customer awareness of green brands in Sabah, Malaysia. Additionally, this technique is critical for increasing customer awareness of green brands in Sabah, Malaysia.

Limitation and Recommendation

This study has numerous drawbacks. Firstly, the current study is limited to the geographical area, the capital city of Sabah, Malaysia. Purposive sampling was used to obtain data, and the respondents were young adults ranging in age from 18 to 35. As a result, the sample would not be representative of Malaysia's entire population. Therefore, extensive parametric sampling is advised to increase the results' generalizability and gain a better knowledge of the overall

context. Saunders et al. (2009) assert that a larger sample size might result in a more normal distribution and more reliable results. Secondly, this study was performed during a Covid-19 pandemic, and it employed an online method to disseminate Google Forms to respondents via instant messaging and social media platforms. Although this data gathering technique is deemed functional and more accessible, future studies should collect data in real-world scenarios, including green cleaning products, such as green shops and supermarkets.

Conclusion

In conclusion, the results of this study add to a better knowledge of the factors influencing green product purchasing behaviors in developing nation markets. Additionally, the study guided green firms on cultivating the various behavioral aspects under TPB factors with their consumers over time, with a stronger emphasis on encouraging adoption/purchase behaviors. Therefore, green businesses need to acquire knowledge and awareness of the factors that drive the adoption and purchase of green products to ensure this niche industry's continued growth. To do this, stakeholders must focus on four factors from this study that can help them accelerate growth and encourage green purchasing behaviors that benefit them, their customers, and the country.

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