

Purchase Behavior of Young Consumers Toward Green Packaged Products in Vietnam

Nhu Ty NGUYEN¹, Le Hoang Anh NGUYEN², Thanh Tuyen TRAN³

Received: October 01, 2020 Revised: December 06, 2020 Accepted: December 14, 2020

Abstract

While green packaging related concerns are mainly studied in developed countries, there is a lack of knowledge to observe purchase behavior toward green packaging in developing countries, especially in Vietnam. Buying green packaged products in FMCG is not required to trade-off between sustainability and product performance. Hence, this present research aims to understand the gap attitude – behavior existing on FMCG green packaged products among Vietnamese young consumers with psychosocial factors (environmental concern, environmental knowledge of green packaging and green trust) and contextual factors (availability of desired green packaging and product attributes). With a sample size of 396 respondents, data was collected by convenient sampling method and then was analyzed using structural equation modeling. The results reveal that all psychosocial factors are positive related to attitudes while purchase behavior is positively influenced. The findings also report that contextual factors have positive impacts on purchase behavior, which proves the important role of contextual factors in influencing consumer choices. It suggests that green packaging is receptive to Vietnamese young consumers but it should be considered within product-related context to enhance the difference in sustainability among similar FMCG products. Practical implications for marketers and future researches have also been discussed at the end of study.

Keywords: Contextual Factors, Product Attribute, product Availability, Green Trust, Young Consumer

JEL Classification Codes: M3, M14, M37, Q56

1. Introduction

It is inevitable that packaging lies on a part of food handling, logistics, manufacturing, transportation, warehousing and retailing (Verghese & Lewis, 2007). However, packaging is the main accumulated leakage volume of plastic waste with over 150 million tons of ocean dumping (Conservancy, 2015). According to Ellen MacArthur Foundation (2017), it is estimated that only 14% volume of

plastic packaging was returned to recycling system and only 5% of plastic packaging material value was added for second use. In Vietnam, one of the top 5 countries contributes to world's marine plastic pollution, 0.28 – 0.73 million metric tons of plastic per year dumping to the ocean where plastic packaging became a threat (Jambeck et al., 2015). This turns into a global issue in developing countries as economy development is prioritized more than environmental improvement (Wang et al., 2019). As a result, the demands for sustainable consumption became receptive to Vietnamese consumers, as they pay attention to green packaging (Quach & Milne, 2019). This brings opportunities and challenges for FMCG companies to engage in green production. Some companies take course of actions for achieving zero-waste in future such as Nestle Vietnam, Lavie, Coca-Cola Vietnam, etc. (Vietnam Investment Review, 2019).

Nevertheless, there is a lack of evidence to observe purchase behaviors toward green packaged products in Vietnam. In the scope of Asia, compared to Vietnam, green packaging has been more studied in India and China (Hao et al., 2019; Prakash & Pathak, 2017). Attitude-behavior model is applied for explaining green behavior (Joshi & Rahman,

¹First Author. [1] School of Business, International University, Ho Chi Minh City, Vietnam [2] Vietnam National University, Ho Chi Minh City, Vietnam. Email: nhutynguyen@gmail.com

²[1] School of Business, International University, Ho Chi Minh City, Vietnam [2] Vietnam National University, Ho Chi Minh City, Vietnam

³Corresponding Author. Scientific Research Center, Lac Hong University, Dong Nai, Vietnam [Postal Address: No 10, Huynh Van Nghe (Provincial Highway 24), Buu Long Ward, Bien Hoa City, Dong Nai Province, Vietnam] Email: thanhtuyentran@lhu.edu.vn

2015) but there is still a need to add more variables for improving explanation power (Armitage & Conner, 2001). In the Vietnamese market, consumers have little knowledge of green packaging technology and define it based on materials (Nguyen et al., 2020). Moreover, 86% Vietnamese consumers are influenced by companies with sustainable commitments (Nielsen, 2015). Therefore, an attitude-behavior gap needs to be narrowed since attitude and high concern are not strong enough to transfer to actual behavior (Akehurst et al., 2012; Diamantopoulos et al., 2003). Research studies mainly focuses on how inter-personal factors influence purchasing but neglects its association in the context of the product, particularly in the case of the FMCG goods (Qalati et al., 2020; Vongurai, 2020). Thus, this research examines on how attitude resonates with both psychosocial and contextual factors to understand complex buying behaviors of FMCG green packaged products.

The present research focuses on young consumers as this generation has more intention to green purchasing and is more receptive to green concept than old generation (Diamantopoulos et al., 2003). The high level of education and young age were confirmed to have positive attitude in green consumption (Wang, 2014). Moreover, researches on green packaging in Vietnam has neglected the young consumers while this generation accounts for 25% population of the main labor force (UNFPA, 2020). Hence, this study hopes to contribute knowledge to understand more green behavior among young consumers in Vietnam.

2. Literature Review

2.1. Green Packaged Product

Green packaging has different names in academic researches such as eco-packaging, sustainable packaging but the same point is that it remains functionality as conventional packaging and has additional sustainable value to reduce environmental pollutions (Nguyen et al., 2020; Prakash & Pathak, 2017; Tulsi, 2020; Lee, 2014; Kardoyo, 2020). Green packaging has a different story from green product in FMCG. When consumers consider to purchase green products, their choices might be affected by the trade-off between performance and sustainability (Luchs & Kumar, 2017). However, consumers do not need trade-off for a common product with green packaging. Instead, they should only pay higher price for green packaging if their basic needs for common products are satisfied, according to Maslow's hierarchy. Green packaging acts as an additional value to a common product (Rokka & Uusitalo, 2008). When it comes to a scenario where two products are identical on performance, additional green values may determine consumer product choices (Ottman, 1998). This should be more appropriate in the context of FMCG market since there

are numerous identical products with different competing brands and affordable prices. People are willing to trade off favorable brand for green packaged products (van Birgelen et al., 2008). Thus, the availability and product attribute may act as new considerable factors affecting consumer choices. Green packaging researches mainly focused on intention (Koenig-Lewis et al., 2014; Prakash & Pathak, 2017) while actual behavior is still needed to understand, particularly in Vietnam context.

2.2. Theory of Planned Behavior (TPB)

TPB is one of prominent theories to slice out human-psycho aspects for sustainable consumption (Joshi and Rahman, 2015). The main orientation of TPB is to predict future behavior (Ajzen, 1991) by three main factors: attitude, subjective norms, and perceived behavioral control. Attitude is human evaluation of behavior that leads to a favorable or unfavorable outcome (Ajzen, 1991). As one belief is put into consideration if product performance satisfies their particular interests, attitudes will present positive. Subjective norm refers to belief of performing actions to receive social approval (Ajzen, 1991) while Perceived behavioral control (PBC) explains how individuals perceive whether it is easy or difficult behaviors to perform. The present research focuses the Attitude - Behavior gap and chooses Attitude from TPB theory as one of main constructs, as attitude contributes to form green packaging purchasing (Martinho et al., 2015; Prakash & Pathak, 2017). Attitude is a fundamental antecedent of purchase behavior toward green packaging in developing countries (Prakash & Pathak, 2017; Su et al., 2020). People with positive attitude toward eco-social benefits and environmental issues tend to engage in green purchasing behavior (Cheung & To, 2019). Hence, we have the following hypothesis:

H1: Young consumer's attitude influences on purchase behavior of green packaged product.

2.3. Environmental Concern

Environmental concern represents the degree to individuals are aware of environmental issues and are willing to personally support for solutions (Dunlap & Jones, 2002; Lounsbury & Tornatzky, 1977). Environmental concern is considered as a primary antecedent on green attitude and purchase behavior in many studies (Koenig-Lewis et al., 2014; Joshi & Rahman, 2015; Yadav & Pathak, 2016). Environmental concern was confirmed to positively shape young consumer intention towards green packaged product (Prakash & Pathak, 2017). A strong relationship with organic food attitude is driven by environmental concern (Smith & Paladino, 2010). Young consumers who have strong

environmental concern show high engagement level of green purchasing (Kanchanapibul et al., 2014). Thus, hypotheses are established below:

H3a: Young consumer's environmental concern influences on purchase behavior of green packaged product.

H3b: Young consumer's environmental concern influences on attitude of green packaged product.

2.4. Environmental Knowledge of Green Packaging

Knowledge is considered into two types: Objective knowledge and Subjective Knowledge. Objective knowledge is the degree on what consumers actually know while Subjective knowledge is about the extent to what they feel of knowing the subject in memory and problem solving (Metcalf, 1986). We specifically define subjective knowledge as environmental knowledge of green packaging, which is a belief in benefits of using green packaging as an environmental solution (Mishra et al., 2017). Some researchers concluded that subjective knowledge reflect on consumer behavior and attitudes (Kim & Han, 2010; Misha et al, 2017; Yadav & Pathak, 2016). Researching on retailers practicing green grocery packaging, Su et al (2020) reported that subjective knowledge of green packaging affect indirectly on Vietnamese behavior via attitude. Knowledge is also proposed to be a crucial role in forming positive belief in respect with green packaging (Singh & Pandey, 2018). Compared with conventional consumers, green consumers show higher environmental awareness and tendency to practice on green packaging (Martinho et al, 2015). Higher knowledge of green packaging would make consumers strongly believe in positive outcomes when using green packaging (Mishra et al, 2017). However, knowledge of green packaging is not a direct indicator of behavior in the research of Su et al (2020). A study of Malaysian consumers emphasized the role of knowledge in predicting green purchase but failed to influence on attitude (Aman et al., 2012). Therefore, knowledge of green packaging is still inconclusive and needs to be confirmed within this study.

H4a: Young consumer's environmental knowledge influences on purchase behavior of green packaged product.

H4b: Young consumer's environmental knowledge influences on attitude of green packaged product.

2.5. Green Trust

Green trust is a belief in product, services, brands or firms that these could bring positive impact on improving the environment (Chen, 2010). It should focus green trust not only on environmental product performance but also

on perceived firm performances (Ricci et al., 2018). Due to green consumption trend, many companies *green wash* their brands to hinder low-quality environmental performance while they communicate on their positive “green” actions (Delmas & Burbano, 2011). Therefore, consumers tend to have negative attitude toward green claims and are more skeptical about green packaging and products (Carrete et al., 2012). According to Nielsen (2015), 75% Vietnamese consumers choose to purchase their trusted brands. Some studies found that the lack of green trust could be a barrier to practice green behavior (Gupta & Ogden, 2009; Ricci et al, 2018). Trust is confirmed to be an important determinant in attitude-behavior gap on eco-friendly convenience food (Ricci et al, 2018). Nuttavuthisit and Thøgersen (2015) emphasized the fundamental role of trust as a strong factor affecting Thai consumer choices. If consumers have high level of green trust in brand, they will have positive attitude and incline their preference for that brand performance (Chen and Chang, 2012; Chen, 2010).

H5a: Young consumer's green trust influences on purchase behavior of green packaged product.

H5b: Young consumer's green trust influences on attitude of green packaged product.

2.6. Availability of Desired Green Packaged Product

The availability is considered as one of the contextual factors which could affect green behaviors (Gleim et al., 2013; Joshi & Rahman, 2015). Many FMCG companies have altered their packaging with recyclable plastic one. However, Nguyen et al. (2020) revealed that Vietnamese consumers have not seen green packaging in store as they expect. This could explain that the lacking happens when there is limitation of desired green packaging such as natural material-based or their desired products have no sustainable packaging. Vietnamese participants also perceive that paper is more “green” than recyclable plastic and green packaging in their definition is more related to material-based (Nguyen et al, 2020). Consumers rank biodegradable packaging as the top one in their minds, as they perceive it to be more eco-friendly than plastic (Herbes et al., 2018). Consumers are limited in time and efforts to search for green products (Barbarossa & Pastore, 2015). When consumers find difficult to access green products, their attitude-behavior gap is affected (Vermeir & Verbeke, 2006; Nguyen et al., 2019). Easy availability allows purchase behavior happens (Young et al., 2009); otherwise, it becomes a barrier for green purchasing (Padel & Foster, 2005) since consumers do not know how to find green products in stores (Gleim et al, 2013).

H6: Availability of desired green packaged product influences on purchase behavior of green packaged product.

2.7. Product Attribute

Product attribute is more related to consumer preference and judgment in order to differentiate with other products (Alpert, 1971). There are two types of product attributes which are tangible attribute such as size, volume, taste and intangible attribute such as price, quality, design (Lefkoff-Hagius et al., 1990). Price is an important factor in evaluation of green packaged product, followed by high quality and functionality (Martinho et al, 2015). van Birgelen et al (2008) indicated that price and taste should be fulfilled before consumers engage in eco-friendly packaged beverage consumption. Although

consumers have positive attitude on green packaging, other product attributes should be considered with sustainability values (Rokka & Uusitalo, 2008). Visual of green packaging should satisfy Vietnamese consumers in findings of Nguyen et al (2020). Perceived unreasonable price and low quality are identified as prominent barriers of ethical consumption (Barbarossa & Pastore, 2015; Tsakiridou et al., 2008). The price is not an absolute barrier when consumers perceive the products worthy for their money (Padel & Foster, 2005) (Table 1).

H7: Product attribute influences on purchase behavior of green packaged product.

With discussions above, we propose the conceptual model in Figure 1.

Table 1: Discriminant Validity

	EC	PA	EK	GT	AT	AV	PB
EC	0.813						
PA	-0.072	0.768					
EK	-0.007	0.608	0.747				
GT	-0.099	0.352	0.610	0.736			
AT	0.124	0.486	0.692	0.631	0.727		
AV	0.120	-0.171	-0.125	-0.186	-0.184	0.711	
PB	-0.048	0.520	0.403	0.412	0.452	0.020	0.726

Note: (-) Negative score.

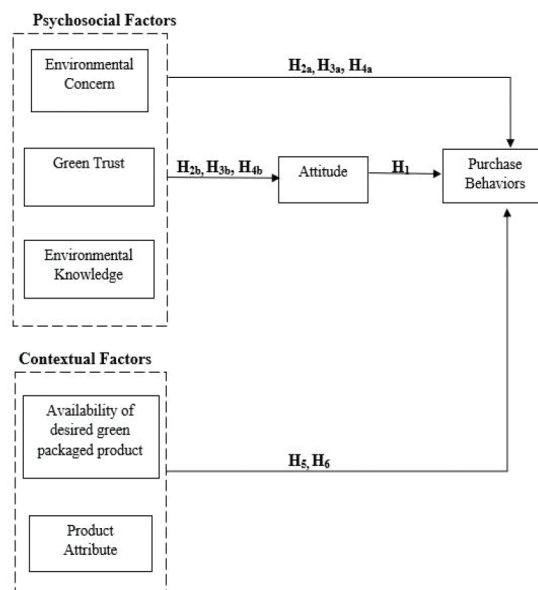


Figure 1: Conceptual model

3. Methodology

3.1. Measurement Scales

Based on previous researches, all of items are built up with measure of 5 points Likert’s scale and presented in Table 2 to collect primary data.

3.2. Data Collection

Data was collected by the convenience sampling method, the survey was conducted with the help of 513 self-administered questionnaires which was spread in the biggest city of Vietnam - Ho Chi Minh City. Data was collected through both direct and indirect channels. The direct

channel distributed questionnaires to targeted consumers at universities, shopping mall and fairs while the indirect channel conducted online survey on the social media platform. The actual data collected consisted of 410 questionnaires with a 79.9% response rate. To let respondents understand clearly about related terms, we illustrated some FMCG products and definition of FMCG. However, we let respondents define green packaging by themselves for the purpose of measuring their desired green packaging. After removing the missing and incomplete responses, the remaining data was 396 responses. The data was also screened for normally distribution by skewness and kurtosis measures. According to Kline (2011), the skewness values of all items should be less than 3 and the kurtosis value less than 10; thus, it was decided to remain all data and items in model.

Table 2: Measurement Scales

Environmental Concern		Dunlap and Jones (2002); Lounsbury and Tornatzky (1977)
EC1	The news media have exaggerated the ecological problem (*)	
EC2	The balance of nature is strong enough to cope with the impacts of modern industrial nations (*)	
EC3	I have high environmental awareness (pick up garbage, reduce the use of plastic bag, etc)	
EC4	We shouldn’t worry about environmental problems because science and technology will solve them before very long (*)	
Environmental Knowledge of green packaging		Su et al (2020)
EK1	In daily consumption, green packaging plays an important role to protect environment	
EK2	Using green packaging is good for people’s health	
EK3	Using green packaging contribute to prevent climate change	
EK4	The benefit of green packaging is the ease of disposal	
Green Trust		Chen and Chang (2012)
GT1	I trust the firms of green packaged product keep environmental promises and commitments	
GT2	I trust green claims on green packaging	
GT3	I trust the green packaged product having environmental performance is dependable	
GT4	The green packaged product has environmental image is generally reliable	
Attitude		Cheung and To (2019)
AT1	I support the idea of purchasing green packaged product	
AT2	By buying green packaged products, I am contributing to society for the present and future.	
AT3	When buying green packaged products instead of non-green packaged products, I am acting morally	
AT4	By buying green packaged products, I am contributing to new businesses that focuses on those products	
AT5	Buying green packaged product is a wise choice	

Table 2: Continued

Product Attribute		
PA1	Green packaged products have reasonable prices (Reason to buy)	Rokka and Uusitalo (2008); Tsakiridou et al (2007)
PA2	Green packaged products have an accepted quality (Reason to buy)	
PA3	Green packaged products have accepted functionality/tastes to my demand (Reason to buy)	
PA4	Green packaged products have accepted aesthetic to my demand (Reason to buy)	
Availability of desired Green packaged product		
AV1	I don't have time to go shopping for green packaged products in stores (*)	Babarossa and Pastore (2015); Nguyen et al. (2020)
AV2	I actually hardly to find green packaged products in the store I shopping unless I look for them carefully (*)	
AV3	Green packaged products are not sold at stores close to where I live (*)	
AV4	Desired products I want to purchase do not have green packaging (*)	
AV5	There is limited products that have desired green packaging as I expect (*)	
Purchase Behavior		
PB1	I have green purchasing behavior over the past six months	Kanchanapibul et al (2014); Yadav and Pathak (2017)
PB2	I _____ green packaged product (do not buy; buy a few; buy some; buy many; buy a lot of)	
PB3	I buy green packaged products even if they are more expensive than the non-green ones	

Note: (*) Items score were reversed in data analysis.

4. Data Analysis

4.1. Demographics

Among 396 responses, there were 146 males (37%) and 250 females (63%). The group of 16 – 24 years old accounts for 71% more than older group with 29%, which is aligned with 66% Undergraduate, 32% Graduate and 2% High School. On monthly income 24% and 22 % share to group from 5 - 10 Million VND and over 10 Million VND respectively while highest percent is 51% of group under 5 Million VND. This explains that students are main young respondents in this survey, suggesting reliability for such studies (Cheah & Phau, 2011).

4.2. Reliability Analysis

The item EC3 and AV1 are deleted since the Cronbach's Alpha if Item Deleted values are greater than Initial Cronbach alpha. In Table 3, there are total 6 constructs having good value above 0.8 which are AT, GT, EC, EK, PA and AV while PB has an accepted value of above 0.7 (Hair et al., 2006). Thus, all items and constructs are reliable to remain.

4.3. Exploratory Factor Analysis

The sample size is 396 so factor loading should be above 0.5 with Principal Component Analysis and Varimax with

Kaiser Normalization rotate method. The KMO is .880 and sig value of Barlett's Test of Sphericity is .000, which indicates positive correlation among variables. All 26 items are qualified as no items have a factor loading below 0.5. There are total of 7 components divided as 7 proposed components and items represent components that should belong to. Moreover, the total variance explained 67.730% is accepted in social sciences as human behavior is complicated and less precise (Hair et al, 2006).

4.4. Construct validity

After running AMOS, discriminant validity test has some error concerns which are: the square root of the AVE for AT is less than the absolute value of the correlations with another factor (0.713) and the AVE for AT is less than the MSV (0.508 < 0.516). This discriminant validity errors means that there are some items of AT which correlate higher with other different variables outside rather than with AT variable. Therefore, we returned to EFA for checking correlation among variables and removed AT5 as it has the lowest factor loadings (0.568) among AT items. This time, the total variance explained value is improved from 67.73% to 68.33% with the same 7 constructs, KMO and Bartlett's Test confirmed suitable items and variables with this sample size.

Table 3: Reliability Analysis

Construct	Item	Cronbach alpha
EC	EC1	.852
	EC2	
	EC4	
EK	EK1	.834
	EK2	
	EK3	
	EK4	
GT	GT1	.822
	GT2	
	GT3	
	GT4	
AT	AT1	.833
	AT2	
	AT3	
	AT4	
	AT5	
PA	PA1	.842
	PA2	
	PA3	
	PA4	
AV	AV2	.802
	AV3	
	AV4	
	AV5	
PB	PB1	.760
	PB2	
	PB3	

Removing AT5 from AT construct helps to improve the discriminant validity. As presented in Table 4, all of items from each variable have factor loading range from 0.604 to 0.863. Moreover, convergent validity and composite reliability are satisfied as all C.R values are greater than 0.6 and AVE values are greater than 0.5, which meet validity requirements suggested by Hair et al. (2006). Below Table 4, the data are satisfactory for the discriminant validity test with the values range from 0.711 to 0.813.

4.5. Goodness of Fit Statistic

Model fit measures are conducted with the initial CFA findings: $\chi^2/df = 1.74$, GFI=.915, AGFI=0.892, TLI=0.947, CFI=0.955, NFI=0.899, RMSEA=0.043, p-close=0.973 and

SRMR = .0412. As recommended by Bagozzi and Yi (1988) and Forza and Filippini (1998), the results indicate the proposed factors representing a good model fit and suitable for building up conceptual model. We continued to test the goodness of fit with structural model by multiple measures. The measure has reasonable values, implying the data fits with structural model which are $\chi^2/df = 1.726$, GFI = 0.913, AGFI=.891, TLI = 0.946, NFI=0.898, CFI = 0.954, RMSEA = 0.043, p-close=0.968

4.6. Results and Discussions

We utilized the p-values and standardized regression coefficients (β values) to test hypothesis. As can be observed in Figure 2, all the psychosocial factors have significant

effect on Attitude which are Hypothesis H2b ($\beta=0.129$ and $p<0.001$), H3b ($\beta=0.399$ and $p<0.001$) and H4b ($\beta=0.340$ and $p<0.001$). It could explain that young generation are concerned and educated about environmental pollution related to packaging, especially environmental knowledge of green packaging contributes the most to explain positive attitude. Moreover, establishing green trust brings positive attitude toward green concept such green packaging among the youth. These results resonate with conclusions from other studies (Prakash & Pathak, 2017; Ricci et al, 2018; Su et al, 2020; Yadav & Pathak, 2016). However, only one psychosocial factor – Green Trust ($\beta=0.191$ and $p=0.01$) has a significant positive impact on Purchase Behavior while Environmental Concern and Environmental Knowledge has no effect on Behavior. It implies that although Vietnamese young consumers have environmental concern and knowledge, they are not ready to purchase green packaged product. Instead of that, people who trust in green packaged

product performances and firms perform actual purchase behavior which is similar to the findings of Chen and Chang (2012) and different from other conclusions that people who have high concern and knowledge are willing to pay and purchase green products (Kim & Han, 2010; Mishra et al, 2017).

The construct extracted from TPB which is Attitude ($\beta=0.148$ and $p=0.017$) positively shaping Purchase Behavior, explaining Vietnamese young consumers with positive attitudes toward green packaging tend to purchase for the purpose of improving environment and society. This has similarities with the researches carried out in the developing country. For instance, Prakash and Pathak (2017) proved the positive significant effect of attitude on Indian young consumers' intention to buy green packaging. The role of Attitude is important to navigate Vietnamese consumers to display positive behavior toward retailers practicing green packaging (Su et al, 2020).

Table 4: Construct Validity Measurements

Constructs	Items	Factor loading	C.R	AVE	MSV
EC	EC1	0.807	0.854	0.661	0.015
	EC2	0.863			
	EC4	0.766			
EK	EK1	0.781	0.834	.558	.479
	EK2	0.738			
	EK3	0.762			
	EK4	0.704			
GT	GT1	0.654	0.824	0.542	0.398
	GT2	0.669			
	GT3	0.817			
	GT4	0.79			
AT	AT1	0.747	0.816	0.528	0.479
	AT2	0.809			
	AT3	0.732			
	AT4	0.604			
PA	PA1	0.713	0.851	0.590	0.370
	PA2	0.822			
	PA3	0.856			
	PA4	0.667			
AV	AV2	0.707	0.803	0.506	0.035
	AV3	0.681			
	AV4	0.71			
	AV5	0.745			
PB	PB1	0.718	0.769	0.527	0.270
	PB2	0.773			
	PB3	0.683			

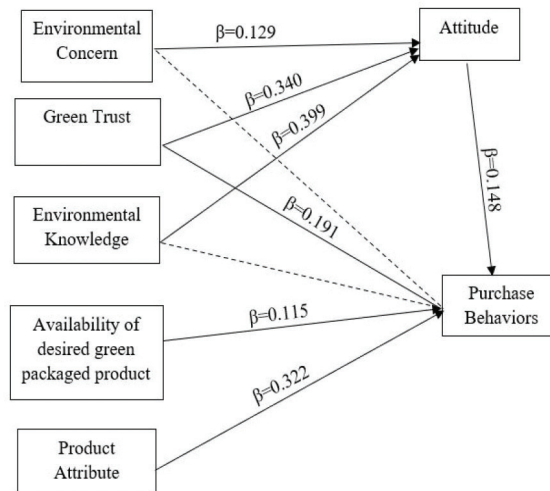


Figure 2: The final model

Moreover, contextual factors including Product Attribute ($\beta=0.322$ and $p<0.001$) and availability of desired green packaged product ($\beta=0.115$ and $p=0.006$) also have positively significant influence on Purchase Behavior, as supported by the theorized hypothesis H6 and H7. In line with Martinho et al. (2015), Nguyen et al. (2020) and van Birgelen et al. (2008), when deciding to purchase green packaged product, Vietnamese young consumers also show more concerns about their preferred attribute from product inside green packaging in order to pay. Moreover, unavailability maybe one of the factors which intercepts the path from attitude to actual purchase since consumers prefer to buying conveniently rather than taking time to look for green packaged products in line with the findings from Padel and Foster (2005) and Young et al. (2010).

5. Conclusion

The research aims to understand how psychosocial and contextual factors associated with attitude from TPB to explain the purchase behavior toward green packaged product. Since there is a lack of literature considering green consumption related to packaging in Vietnam, results from this research helps to contribute knowledge of Vietnamese young consumers' engagement in buying green packaged product. Contextual factors such as availability of desired green packaging and product attributes are highlighted to predict purchase behaviors while the role of attitude is to motivate young consumers for green packaged product consumption. As environmental concerns, knowledge and green trust level are high, positive attitude toward green packaged product would be driven by these psychosocial

factors. Particularly, green trust could influence both attitude and purchase behaviors, indicating perceived green related performances as one of criterias for sustainable choices.

5.1. Implications

The marketers can take this information to make an appropriate strategy for targeted customers. In the research, contextual factors have play important role to influence young consumers purchase behavior which are product attribute and availability. These may also become a barrier if there is any low level of each factors. For example, the unreasonable price, unfavorable taste or low-quality product should not be presented with green packaging since green attribute acts as additional value for product in the context that there is a lot of similar products in FMCG sectors and low product attribute may make consumers feel difficulty in purchasing. Moreover, marketers should distribute more green packaged products at familiar stores or place green packaged products on shelf that easily draws attention. This could reduce the difficulty in finding green packaged products and enhancing more convenience for young consumers while they are shopping in stores. In addition, trust is also an important factor to consider for improving both green attitude and purchase behavior. The practices could adapt this knowledge by building up positive green image and transparency through advertising and campaigns. The more transparent the performance is, the more trust is built in consumers for green packaged product. In academic view, the research findings may be the first one to incorporate psychosocial and contextual factors with attitude from TPB to explain behavior for green packaging in Vietnam. Researchers could adapt the

findings to examine more broadly purchase behavior for green consumption literature in Vietnam.

5.2. Limitations and Future Research

The research has also some limitations which can be addressed in future literatures. The first one is that the conceptual model only extracted Attitude from TPB theory to predict behavior while Subjective Norms and Perceived Behavioral Control are also needed to examine for TPB explanation power. According to findings of Liobikiene et al. (2016), Subjective Norms has the strongest effect on purchase behavior for green product in the EU countries. Moreover, the research also claims that high individualism had negative effect on Subjective Norms while Vietnam is considered as a collective society. Therefore, Subjective norms and Perceived Behavioral Control may influence young consumers behavior in Vietnam. In addition, future researchers could extend more new psychosocial factors to adapt with TPB model such as habits or perceive consumer effectiveness as suggested from Joshi and Rahman (2015). The research is also limited in only focusing on young consumers in the largest city but is not able to capture all parts of Vietnam due to lack of time and finance. Therefore, future researchers could generalize purchase behavior with larger scope of research. Moreover, the research is not able to avoid the Social Desirability Bias which is the tendency that respondents choose to answer based on what society desire or accept rather than on what they truly think or feel. Thus, we reduce the bias results by establishing reversed items in construct that may have high social desirability bias.

References

- Ajzen, I. (2011) The theory of planned behaviour: Reactions and reflections. *Psychology & Health*, 26(9), 1113-1127, DOI: 10.1080/08870446.2011.613995
- Akehurst, G., Afonso, C., & Gonçalves, H. M. (2012). Re-examining green purchase behaviour and the green consumer profile: New evidences. *Management Decision*, 50(5), 972-988. <https://doi.org/10.1108/00251741211227726>
- Alpert, M. I. (1971). Identification of determinant attributes: A comparison of methods. *Journal of Marketing Research*, 8(2), 184-191. <https://doi.org/10.2307/3149759>
- Aman, A. L., Harun, A., & Hussein, Z. (2012). The influence of environmental knowledge and concern on green purchase intention the role of attitude as a mediating variable. *British Journal of Arts and Social Sciences*, 7(2), 145-167.
- Armitage, C. J., Connor, M. 2001. Efficacy of the Theory of Planned Behavior: A Meta-analytic Review. *British Journal of Social Psychology*, 40(47), 1-499.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the academy of marketing science*, 16(1), 74-94. <https://doi.org/10.1007/bf02723327>
- Barbarossa, C., & Pastore, A. (2015). Why environmentally conscious consumers do not purchase green products. *Qualitative Market Research*, 18(2), 188-209. <https://doi.org/10.1108/qmr-06-2012-0030>
- Carrete, L., Castaño, R., Felix, R., Centeno, E., & González, E. (2012). Green consumer behavior in an emerging economy: confusion, credibility, and compatibility. *Journal of Consumer Marketing*, 29(7), 470-481. <https://doi.org/10.1108/07363761211274983>
- Cheah, I., & Phau, I. (2011). Attitudes towards environmentally friendly products. *Marketing Intelligence & Planning*, 29(5), 452-472. <https://doi.org/10.1108/02634501111153674>
- Chen, Y. S. (2010). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business ethics*, 93(2), 307-319. <https://doi.org/10.1007/s10551-009-0223-9>
- Chen, Y. S., & Chang, C. H. (2012). Enhance green purchase intentions. *Management Decision*, 50(3), 502-520. <https://doi.org/10.1108/00251741211216250>
- Cheung, M. F., & To, W. M. (2019). An extended model of value-attitude-behavior to explain Chinese consumers' green purchase behavior. *Journal of Retailing and Consumer Services*, 50, 145-153. <https://doi.org/10.1016/j.jretconser.2019.04.006>
- Conservancy, O. (2015). *Stemming the tide: Land-based strategies for a plastic-free ocean*. Ocean Conservancy and McKinsey Center for Business and Environment.
- Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, 54(1), 64-87. <https://doi.org/10.1525/cmr.2011.54.1.64>
- Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research*, 56(6), 465-480. [https://doi.org/10.1016/s0148-2963\(01\)00241-7](https://doi.org/10.1016/s0148-2963(01)00241-7)
- Dunlap, R. E., & Jones, R. E. (2002). Environmental concern: Conceptual and measurement issues. *Handbook of Environmental Sociology*, 3(6), 482-524.
- Forza, C., & Filippini, R. (1998). TQM impact on quality conformance and customer satisfaction: A causal model. *International Journal of Production Economics*, 55(1), 1-20. [https://doi.org/10.1016/s0925-5273\(98\)00007-3](https://doi.org/10.1016/s0925-5273(98)00007-3)
- Gleim, M. R., Smith, J. S., Andrews, D., & Cronin Jr, J. J. (2013). Against the green: A multi-method examination of the barriers to green consumption. *Journal of Retailing*, 89(1), 44-61.
- Gupta, S., & Ogden, D. T. (2009). To buy or not to buy? A social dilemma perspective on green buying. *Journal of Consumer Marketing*, 26(6), 376-391. <https://doi.org/10.1108/07363760910988201>

- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Hao, Y., Liu, H., Chen, H., Sha, Y., Ji, H., & Fan, J. (2019). What affect consumers' willingness to pay for green packaging? Evidence from China. *Resources, Conservation and Recycling*, *141*, 21-29. <https://doi.org/10.1016/j.resconrec.2018.10.001>
- Herbes, C., Beuthner, C., & Ramme, I. (2018). Consumer attitudes towards biobased packaging: A cross-cultural comparative study. *Journal of Cleaner Production*, *194*, 203-218. <https://doi.org/10.1016/j.jclepro.2018.05.106>
- Jambeck, J. R., Geyer, R., Wilcox, C., Siegler, T. R., Perryman, M., Andrady, A., Narayan, R., & Law, K. L. (2015). Plastic waste inputs from land into the ocean. *Science*, *347*(6223), 768-771. <https://doi.org/10.1126/science.1260352>
- Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, *3*(1-2), 128-143. <https://doi.org/10.1016/j.ism.2015.04.001>
- Kanchanapibul, M., Lacka, E., Wang, X., & Chan, H. K. (2014). An empirical investigation of green purchase behaviour among the young generation. *Journal of Cleaner Production*, *66*, 528-536. <https://doi.org/10.1016/j.jclepro.2013.10.062>
- Kardoyo, K., Feriady, M., Farliana, N., & Nurkhin, A. (2020). Influence of the Green Leadership Toward Environmental Policies Support. *The Journal of Asian Finance, Economics, and Business*, *7*(11), 459-467. <https://doi.org/10.13106/jafeb.2020.vol7.no11.459>
- Kim, Y., & Han, H. (2010). Intention to pay conventional-hotel prices at a green hotel—a modification of the theory of planned behavior. *Journal of Sustainable Tourism*, *18*(8), 997-1014. <https://doi.org/10.1080/09669582.2010.490300>
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: Guilford.
- Koenig-Lewis, N., Palmer, A., Dermody, J., & Urbye, A. (2014). Consumers' evaluations of ecological packaging—Rational and emotional approaches. *Journal of Environmental Psychology*, *37*, 94-105. <https://doi.org/10.1016/j.jenvp.2013.11.009>
- Lee, J. W. (2014). The Impact of Product Distribution and Information Technology on Carbon Emissions and Economic Growth: Empirical Evidence in Korea. *Journal of Asian Finance, Economics and Business*, *1*(3), 17-28. <https://doi.org/10.13106/jafeb.2014.vol1.no3.17>
- Lefkoff-Hagius, R., & Mason, C. H. (1990). The role of tangible and intangible attributes in similarity and preference judgments. In: M. E. Goldberg, G. Gorn, & R. W. Pollay (Eds.), *ACR North American Advances* (Vol. 17, pp. 135-143). Provo, UT: Association for Consumer Research.
- Liobikienė, G., Mandravičkaitė, J., & Bernatoniėnė, J. (2016). Theory of planned behavior approach to understand the green purchasing behavior in the EU: A cross-cultural study. *Ecological Economics*, *125*, 38-46. <https://doi.org/10.1016/j.ecolecon.2016.02.008>
- Lounsbury, J. W., & Tornatzky, L. G. (1977). A scale for assessing attitudes toward environmental quality. *The Journal of Social Psychology*, *101*(2), 299-305. <https://doi.org/10.1080/00224545.1977.9924020>
- Luchs, M. G., & Kumar, M. (2017). “Yes, but this other one looks better/works better”: how do consumers respond to trade-offs between sustainability and other valued attributes?. *Journal of Business Ethics*, *140*(3), 567-584. <https://doi.org/10.1007/s10551-015-2695-0>
- Ellen MacArthur Foundation (2017). *The New Plastics Economy: Rethinking the future of plastics & catalysing action*. Retrieved December 13, 2017 from: <https://www.ellenmacarthurfoundation.org/publications/the-new-plastics-economy-rethinking-the-future-of-plastics-catalysing-action>
- Martinho, G., Pires, A., Portela, G., & Fonseca, M. (2015). Factors affecting consumers' choices concerning sustainable packaging during product purchase and recycling. *Resources, Conservation and Recycling*, *103*, 58-68. <https://doi.org/10.1016/j.resconrec.2015.07.012>
- Metcalfe, J. (1986). Feeling of knowing in memory and problem solving. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *12*(2), 288. <https://doi.org/10.1037/0278-7393.12.2.288>
- Mishra, P., Jain, T., & Motiani, M. (2017). Have green, pay more: an empirical investigation of consumer's attitude towards green packaging in an emerging economy. In: *Essays on Sustainability and Management* (pp. 125-150). Springer, Singapore. https://doi.org/10.1007/978-981-10-3123-6_7
- Nguyen, A. T., Parker, L., Brennan, L., & Lockrey, S. (2020). A consumer definition of eco-friendly packaging. *Journal of Cleaner Production*, *252*, 119792. <https://doi.org/10.1016/j.jclepro.2019.119792>
- Nguyen, H. V., Nguyen, C. H., & Hoang, T. T. B. (2019). Green consumption: Closing the intention-behavior gap. *Sustainable Development*, *27*(1), 118-129. <https://doi.org/10.1002/sd.1875>
- Nielsen (2015). Sustainability influences purchase intent of Vietnamese consumers. Retrieved April 25, 2015 from: https://www.nielsen.com/wp-content/uploads/sites/3/2019/04/Vietnam_CSR20release_EN.pdf
- Nuttavuthisit, K., & Thøgersen, J. (2017). The importance of consumer trust for the emergence of a market for green products: The case of organic food. *Journal of Business Ethics*, *140*(2), 323-337. <https://doi.org/10.1007/s10551-015-2690-5>
- Ottman, J., & Books, N. B. (1998). Green marketing: opportunity for innovation. *The Journal of Sustainable Product Design*, *60*(7), 136-667.
- Padel, S., & Foster, C. (2005). Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *British Food Journal*, *107*(8), 606-625. <https://doi.org/10.1108/00070700510611002>
- Prakash, G., & Pathak, P. (2017). Intention to buy eco-friendly packaged products among young consumers of India: A study on developing nation. *Journal of Cleaner Production*, *141*, 385-393. <https://doi.org/10.1016/j.jclepro.2016.09.116>

- Qalati, S. A., Wenyuan, L. I., Vela, E. G., Ali, B. U. X., Barbosa, B., & Herzallah, A. M. (2020). Effects of Technological, Organizational, and Environmental Factors on Social Media Adoption. *The Journal of Asian Finance, Economics and Business*, 7(10), 989-998. <https://doi.org/10.13106/jafeb.2020.vol7.no10.989>
- Quach, P., & Milne, G (2019). *Plastics a growing concern: A Vietnam perspective*. Retrieved September 4, 2019, from <https://www.ipsosconsulting.com/en/vietnam/articles/plastics-a-growing-concern-a-vietnam-perspective>
- Ricci, E. C., Banterle, A., & Stranieri, S. (2018). Trust to go green: an exploration of consumer intentions for eco-friendly convenience food. *Ecological Economics*, 148, 54-65. <https://doi.org/10.1016/j.ecolecon.2018.02.010>
- Rokka, J., & Uusitalo, L. (2008). Preference for green packaging in consumer product choices—do consumers care?. *International Journal of Consumer Studies*, 32(5), 516-525. <https://doi.org/10.1111/j.1470-6431.2008.00710.x>
- Singh, G., & Pandey, N. (2018). The determinants of green packaging that influence buyers' willingness to pay a price premium. *Australasian Marketing Journal*, 26(3), 221-230. <https://doi.org/10.1016/j.ausmj.2018.06.001>
- Smith, S., & Paladino, A. (2010). Eating clean and green? Investigating consumer motivations towards the purchase of organic food. *Australasian Marketing Journal*, 18(2), 93-104. <https://doi.org/10.1016/j.ausmj.2010.01.001>
- Su, D. N., Duong, T. H., Dinh, M. T. T., Nguyen-Phuoc, D. Q., & Johnson, L. W. Behavior towards shopping at retailers practicing sustainable grocery packaging: The influences of intra-personal and retailer-based contextual factors. *Journal of Cleaner Production*, 279, 123683. <https://doi.org/10.1016/j.jclepro.2020.123683>
- Tsakiridou, E., Boutsouki, C., Zotos, Y., & Mattas, K. (2008). Attitudes and behaviour towards organic products: An exploratory study. *International Journal of Retail & Distribution Management*, 36(2), 158-175. <https://doi.org/10.1108/09590550810853093>
- Tulsi, P., & Ji, Y. (2020). A Conceptual Approach to Green Human Resource Management and Corporate Environmental Responsibility in the Hospitality Industry. *The Journal of Asian Finance, Economics, and Business*, 7(1), 195-203. <https://doi.org/10.13106/jafeb.2020.vol7.no1.195>
- UNFPA. (2020). *Report on Vietnamese Youth 2015-2018*. Retrieved 2020 from: <https://vietnam.unfpa.org/en/publications/report-vietnamese-youth-2015-2018>
- Van Birgelen, M., Semeijn, J., & Keicher, M. (2009). Packaging and proenvironmental consumption behavior: Investigating purchase and disposal decisions for beverages. *Environment and Behavior*, 41(1), 125-146. <https://doi.org/10.1177/0013916507311140>
- Vergheze, K., & Lewis, H. (2007). Environmental innovation in industrial packaging: a supply chain approach. *International Journal of Production Research*, 45(18-19), 4381-4401. <https://doi.org/10.1080/00207540701450211>
- Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude-behavioral intention" gap. *Journal of Agricultural and Environmental ethics*, 19(2), 169-194. <https://doi.org/10.1007/s10806-005-5485-3>
- Vietnam Investment Review. (2019). *Groups striving for plastic reduction*. Retrieved September 19, 2019 from: <https://www.vir.com.vn/groups-striving-for-plastic-reduction-70641.html>
- Vongurai, R. (2020). Factors Affecting Customer Brand Preference toward Electric Vehicle in Bangkok, Thailand. *The Journal of Asian Finance, Economics and Business*, 7(8), 383-393. <https://doi.org/10.13106/jafeb.2020.vol7.no8.383>
- Wang, C., Ghadimi, P., Lim, M. K., & Tseng, M. L. (2019). A literature review of sustainable consumption and production: A comparative analysis in developed and developing economies. *Journal of Cleaner Production*, 206, 741-754. <https://doi.org/10.1016/j.jclepro.2018.09.172>
- Wang, S. T. (2014). Consumer characteristics and social influence factors on green purchasing intentions. *Marketing Intelligence & Planning*, 32(7), 738-753. <https://doi.org/10.1108/mip-12-2012-0146>
- Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, 135, 732-739. <https://doi.org/10.1016/j.jclepro.2016.06.120>
- Yadav, R., & Pathak, G. S. (2017). Determinants of consumers' green purchase behavior in a developing nation: Applying and extending the theory of planned behavior. *Ecological Economics*, 134, 114-122. <https://doi.org/10.1016/j.ecolecon.2016.12.019>
- Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: green consumer behaviour when purchasing products. *Sustainable Development*, 18(1), 20-31. <https://doi.org/10.1002/sd.394>