

Explore Young Urban Consumers' Green Purchasing Behavior : Empirical Evidences from Vietnam

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Abstract. Young urban consumers in Vietnam have recently expressed their concerns about the environment. Researchers have discussed some ideas about Vietnamese consumers in general. This paper lays foundations by focus on the group of young urban consumers and explore their behavior toward green purchasing, which has been scantily researched. This quantitative research surveyed 300 respondents of age groups of 15 and 24 in Ho Chi Minh City of Vietnam in December 2019. Sampling technique was used involving respondents with green lifestyle practices and experience in purchasing green products. Exploratory Factor Analysis (EFA) showed the existence of factors that positively and significantly affected buying behavior of young urban Vietnamese consumers. The research concluded that the most substantial factors, which affect young urban Vietnamese consumers' green purchasing behavior, are the availability and the price of green products. It brought important insight and beneficial implications for firms and organizations which produce and distribute green products in Vietnam.

Keywords: green marketing, green products, green purchasing behavior, young urban consumers, Vietnam

1. INTRODUCTION

In recent years, along with the rapid economic development, many environmental problems have emerged, such as greenhouse effect, seawater intrusion, global warming etc. Government, organizations and citizens mention them as a concern in all aspects of life. Moreover, consumers pay more attention to the negative impacts on environment in their purchasing activities. As consumers care more about the environment, they place greater emphasis on environmentally friendly purchasing practices and green consumption. Currently, in developed countries green purchasing behavior has become very popular. In addition, such developing countries where personal income and consumer awareness have improved, green purchasing behavior has made initial progress. On the other hand, economic growth in developing countries like Vietnam has also been accompanied by an increase in environmental pollution and a decline in natural resources. Therefore, promoting the behavior of buying green products can improve this situation. Moreover, the need of studies related to green purchasing in Vietnam which strongly promote the intention and behavior of green purchasing is essential. Furthermore, understanding the green purchasing behavior (GPB) of target customers for eco-friendly products is essential to devise the strategies needed for green marketing models [38]; [8]. Recent researches discussed some ideas among Vietnamese consumers in general. This paper laid foundations by focus on the group of young urban consumers and explore their

behavior toward green purchasing which has been scantily researched. The research concludes that the most substantial factors which affect young urban Vietnamese consumers' green purchasing behavior are the availability and the price of green products. It brings important insight and beneficial implications for firms and organizations which produce and distribute green products in Vietnam.

2. LITERATURE REVIEWS

2.1 Green Products and Green Purchasing Behavior (GPB)

Green products are environmentally friendly products, which were designed and processed in a way that reduces the impact that may cause environmental pollution, whether in production, distribution and consumption [36]. Furthermore, green products are eco-sustainable, recyclable and waste-less [10]. Green Purchasing Behavior (GPB) includes the behavior of choosing to buy and use green products that are recyclable and do not cause harm to the environment [20]. Consumers' behavior towards purchasing green products is often judged on their willingness or intention to buy, most importantly from their buying intent converted to their buying behavior towards the green products and they are aware of these intentions and behaviors that might contribute to environmental health and sustainability [21]. In addition to being dominated by fundamental factors, consumer behavior also requires a number of other cognitive factors such as subjective interest, product understanding, and the

effectiveness associated with the scales measuring direct attitudes or measuring consumer intent and general consumer buying behavior for green products [20].

2.2 Young Urban Consumers in Vietnam

Aggregate reports summarize the global young consumer spending in 2015 was \$ 2.45 trillion. By the end of 2017 this figure was expected to increase exponentially and potentially surpass the spending levels of the previous generation, known as "Baby

Boomers" [7]. Moreover, General Statistics Office Of Vietnam (2020) indicate that the average urban population of Vietnam in 2018 is more than 33 million persons which account for 36% of Vietnam’s population and the labour force at 15-24 years is about 7 million persons which account for 13% of Vietnam’s labour force at 15 years and above [13]. This can be seen as a very promising market for every products. Details are given in those tables (Table 1 & Table 2) below.

TABLE 1. Average population by sex and residence in Vietnam

		Total	Male	Female	Urban
Total (Thousand Persons)	2015	91709.8	45224	46485.8	31067.5
	2016	92692.2	45753.4	46938.8	31926.3
	2017	93677.6	46266.3	47411.3	32823.1
	2018	94666.0	46785.2	47880.8	33830.0

TABLE 2. Labour force at 15 years of age and above by age group
(Source: Vietnam GSO, 2020)

		Total	15 - 24	25 - 49	50+
Total (Thousand Persons)	2015	53984.2	8012.4	31970.3	14001.5
	2016	54445.3	7510.6	32418.3	14516.4
	2017	54823.8	7581.1	32599.2	14643.5
	2018	55354.2	7049.3	33339.3	14965.6

Furthermore, today young urban consumers in Vietnam are more inspired by Western lifestyle but still relevant in the local cultural context. It can be said they learn to adapt themselves to a new consumer culture [39]. Young urban consumers can become a potential force in protecting the environment, as the majority of them have very high environmental awareness. Recently, young consumers are very concerned about purchasing green products. Young urban consumers can make a positive contribution to raising awareness about green products and green purchasing such as changing from small actions in their daily shopping routine [26]. Young urban Vietnamese consumers prefer to purchase products that are beyond their primary purpose but also show their status and position in a particular social group [39]. Take food industry for example; Vietnamese consumers have raised a lot of concerns about food safety recently [17]. The fact that farmers use huge amount of pesticides in conventional vegetable

production has prompted Vietnamese consumers switch to organic vegetables due to their outstanding properties. The fact is that there were a huge number of consumers are willing to pay for the purchase and consumption of organic food at higher prices than conventional products, even in double or triple prices. This can be considered way of showing their wealthy and status in a particular social group. In addition, household disposable income in Vietnam will continue to grow since the Consumer Price Index (CPI) in the 6 first month of 2020 still raising (+4,19) and spending for food also rise although it might be slightly affected by Covid-19 (Figure 1). Therefore, it can be predicted that in the near future, the demand for green products and especially organic foods are expected to increase very high in the Vietnamese market. [14] elucidates about management of the reduction of food waste in hospitality industry.

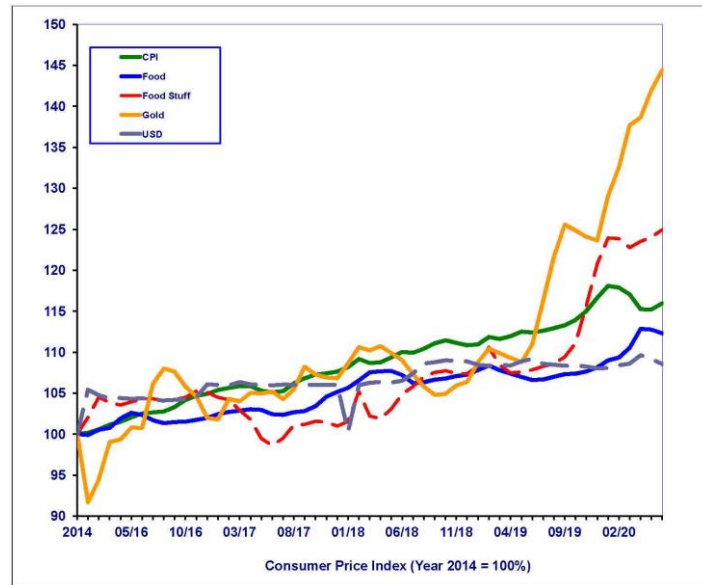


FIGURE 1. Consumer Price Index of Vietnam (Source: Vietnam GSO, 2020)

2.3 Conceptual Background

This research mainly apply Theory of Planned Behavior (TPB) of Ajzen (1991) which is the extension of Theory of Reasoned Action (TRA) also lauch by Fishbein and Ajzen (1975) [1]. Among the theoretical models used to predict and understand human behavior, these are the most widely used frameworks [29]. The TPB is used by many researchers in the study of consumer behavior, including green behavior. In the TPB model, factors

affecting an individual's intention are Attitude toward the behavior (ATB), Subjective Norms (SN) and Perceived Behavioral Control (PBC). The SN is the impulse to do the will of influencers. PBC refers to an individual's ability to perform a certain behavior as well as how easy or difficult it is to perform a behavior and whether the behavior is controlled or restricted. According to the TPB, ATB, SN and PBC directly affect Intention and thereby directly influence behavior. PBC can be both a factor that influences intention and actual consumer behavior.

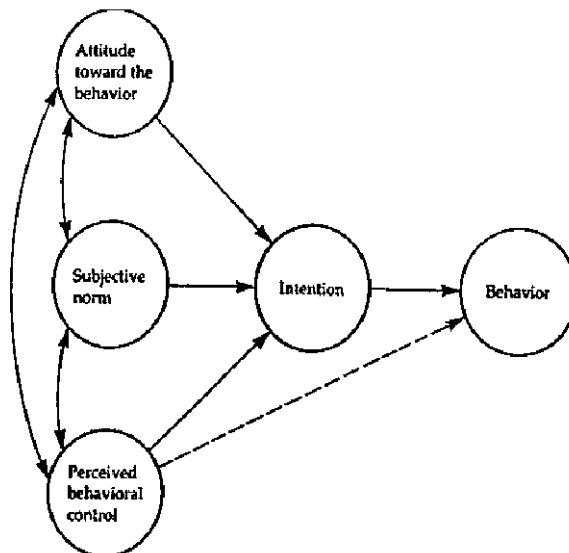


FIGURE 2. Theory of Planned Behavior (TPB) of Ajzen (1991)

Being taken into considerations by TPB and the fact that Vietnamese consumers begin to make green purchasing, especially young urban consumers, we focus doing a research on people who have purchased green products in Vietnam. For research purposes, we made some modifications based on previous theoretical reviews in adjusting the conceptual framework from the previous study of Kumar (2012) named "Theory of Planned Behavior Approach to Understand the Purchasing Behavior for Environmentally Sustainable Products" [25], with the desire to help our research more relevant to the respondents and the Vietnamese context. Variables including green purchase intention (GPI), environmental knowledge (EK), availability of green products (A-GPs) and price of green products (P-GPs) were considered related to Green Purchase Behavior (GPB).

2.4 Green Purchase Intention (GPI)

Green purchase intent (GPI) is defined as the consumer's intention to buy green products for the sake of environmental sustainability, and that intention becomes the motive for the behavior of buying green products [11]. Recent studies have heavily emphasized GPI's direct relationship with GPB [26] but such relationships are rarely mentioned in studies in Vietnam [19]; [31]. Therefore, this study has the ambition to put this relationship into research in the context of Vietnam.

2.5 Environmental Knowledge (EK)

Many recent studies have shown that Knowledge of the environment is the main drive of green consumer behavior [35]; [45]. Consumers more knowledgeable about environmental issues have a more positive attitude toward environmental protection [3]. Environmental knowledge drives consumers to choose environmentally friendly products over unsustainable ones and influence their more environmentally friendly behavior [40]. The lack of information about green products often leads to differences in their environmental attitudes and practical buying behaviors [6].

2.6 Perceived Behavioral Control (PBC)

According to the Ajzen (1991) PBC indicates whether a consumer can easily consume a certain product [1]. Several previous studies of behavior related to the environment have evaluated cognitive behavioral control as one of the control factors, especially in terms of product availability, storage costs, pricing and labeling. These factors are often identified as cognitive barriers to green buying behavior [4].

2.7 The Availability Of Green Products (A-Gps)

In our analysis, beside of PBC, we encompassed factor which is the availability of green products; it reveals if green product is easily found. In fact, very

rarely will consumers purposefully from the beginning to search and purchase green products, so choosing the location of the supply and how to approach customers of green products is very important. Consumers should have access to green products where they are most convenient to shop [30]. Thus it is very important that green products should be more accessible [42].

2.8 Price of Green Products (P-Gps)

One more factor that we encompass is the price of green products. It can be seen that in practice, green products are often sold at a higher price than normal products because they have an additional cost to have better inputs and brand validation [46]. Moreover, many studies have shown that the main reason for customers to make the decision not to buy green products is that the price level of this product is too high [37]. However, many studies have shown that when green products have higher quality than conventional goods, consumers are willing to pay higher prices, even more than twice [5].

According to Nielsen Vietnam research (2020), up to 80% of Vietnamese consumers are willing to pay more to purchase products with environmentally friendly materials. Because in the current period, health factors are the top concern of Vietnamese society [32]. Specifically, 4 out of 5 Vietnamese are willing to pay more to buy products that are committed to the sustainable and a positive environment. 77% of Vietnamese consumers prefer to buy products with health benefits, the proportion of those who prefer to buy organic and natural products; 62% prioritize environmentally friendly products and 61% prioritize products with a commitment to social value. In addition, when analyzing the price, one of the important factors to consider is the level of customer income. And the fact that buying intent and organic food consumption are significantly related to income [16]. As discussed above, the household disposable income in Vietnam will continue to grow so the buying power for urban Vietnam consumer is very promising.

3. RESEARCH METHOD

3.1 Data Collection and Analysis

In order to explore factors that affect young urban Vietnamese consumers' green purchasing behavior, total of 300 respondents between age group of 15 and 24 years in Ho Chi Minh City were surveyed in December 2019. This study uses the convenient sampling technique, the respondents who were interviewed had had green lifestyles and purchased green products before. The sample comprised 40 percent males and 58 percent females out of which around 85 percent of respondents were university students and the remaining 15 percent were high school students. For this study, we use the Social

Science Statistics (SPSS) software to analyze research data and find parameters to base our conclusions. Before conducting Exploratory Factor Analysis (EFA) to collect information on relationships between variables, Reliability Test were included to ensure the reliability of different scales in the beginning stage of the study. The EFA revealed existence of factors that shown positively and significantly affect young urban Vietnamese consumers' green purchasing behavior (GPB) are Attitude toward behavior (ATB), Subjective norm (SN), Perceived behavioral control (PBC), Environmental knowledge (EK), The availability of

green products (A-GPs), Price of green products (P-GPs) and Green purchase intention (GPI)

3.2 Items of Scale

The scales used to analyze factors were the scales used in previous studies, translated into Vietnamese and adjusted for the research context. The Likert scale with 5 levels from 1 totally disagree to 5 totally agree was used in this study. The variables in the scales have been validated and used in various previous studies. In addition, we modified and refined questions to fit research goals and the market context in Vietnam. The specific scale of variables and sources are as shown in Table below.

TABLE 3. Item of Scale

Scale	Items of scale	Source
ATB	ATB1: I appreciate the idea of buying green products. ATB2: I think shopping for green products is a good idea. ATB3: I have a supportive point of view for green product procurement. ATB4: I think that raising environmental awareness for the people is very important	[9]; [41]
SN	SN1: My shopping decisions are influenced by family members. SN2: Most of my relatives think that I should consume green products. SN3: The mass media (newspapers, radio, TV, internet ...) now give a lot of information about green products. SN4: The government now encourages consumers to buy green products. SN5: Many people around me use green products.	[2]
PBC	PBC1: I myself have time to learn, consider buying green products or common products. PBC2: I can buy green products if I want. PBC3: Buying green products for me is easy. PBC4: Whether or not to purchase green products for personal use is completely up to me.	[2]; [23]
EK	EK1: The development of modern society is destroying the environment. I pay a lot of attention to this. EK2: Balancing the natural environment is complex and easy to lose. EK3: Environmental pollution can only be improved when we act together. EK4: Are you clear about the environmental impact of the products you buy and use	[45]
A-GPs	AGP1: Evaluates how easy it is to find green products in the stores that you normally shop AGP2: Evaluates how easy it is to distinguish green products from other products at the stores you normally shop. AGP3: Evaluate the value for money of green products AGP4: I really don't know where green products are sold.	[28]; [15]
P-GPs	PGP1: When making a buying decision, you think the price of the product is very important PGP2: Are you willing to spend more money on green products PGP3: I think it is a good idea to buy green products even though they are more expensive than other products PGP4: You put all your trust in the manufacturer's commitment to the quality of the product because they offer a higher price.	[28]
GPI	GPI1: I intend to buy green products GPI2: I intend to use green products GPI3: I intend to recommend green products to my relatives. GPI4: Since green products cause less environmental pollution, I will buy them	[44]; [34]
GPB	GPB1: I'm willing to spend more money on green products GPB2: I buy environment-friendly products. GPB3: I can pay extra to get green energy. GPB4: Before considering buying a product, I look for the seal certifying that it is environmentally safe.	[41]

3.3 Exploratory Factor Analysis and Reliability

This study uses Cronbach's alpha test to evaluate the quality of the construction scale. The scale is assessed to be of good quality when the population's Cronbach's alpha coefficient is greater than 0.6 [33]. Moreover, according to Hair et al. (1998) if no items had the Item-Total Correlation under 0.3, all of the items would be kept for further test [18]. For this

study, the Cronbach's Alpha values (N=246) of the Table below estimated the internal consistency among items in each factor were 0.863, 0.614, 0.763, 0.621, 0.840, 0.733, 0.768 and 0.910. Therefore all the scales are free from random error and reliable. Thus, through Cronbach's alpha test analysis, the model has 8 scales to ensure good quality with 33 variables.

TABLE 4. Exploratory Factor Analysis and Reliability

No.	Scale	Items of scale	Cronbach's Alpha
1	ATB	ATB1, ATB2, ATB3, ATB4	0.863
2	SN	SN1, SN2, SN3, SN4, SN5	0.614
3	PBC	PBC1, PBC2, PBC3, PBC4	0.763
4	EK	EK1, EK2, EK3, EK4	0.621
5	A-GPs	AGP1, AGP2, AGP3, AGP4	0.840
6	P-GPs	PGP1, PGP2, PGP3, PGP4	0.733
7	GPI	GPI1, GPI2, GPI3, GPI4	0.768
8	GPB	GPB1, GPB2, GPB3, GPB4	0.910

Source: Prepared by the authors.

Next, to collect information on the relationships between the variables we use the EFA test. It solved the problem related to the correlation between items. According to Pallant (2020) EFA test analysis should perform the following tests. The first was the EFA eligibility test with $KMO = 0.768$, satisfying the condition $0.5 < KMO < 1$, so the EFA is suitable for actual data. The second was to check the correlation of observed variables in a representative measure. Bartlett test has $Sig. <= 0.05$, which means that the observed variables were linearly correlated with the representative factors (Bartlett, 1954). Likewise, Total Variance Explained need to be greater than 50% and Eigen- value of each factor greater than 1 are accepted.

Thus, through the Reliability tests and the tests of the EFA model, 7 scales with 33 characteristic variables are identified. Summarized results are described as follows: F1 (GPB), F2 (GPI), F3 (AGP), F4 (EK), F5 (ATB), F6 (PGP) and F7 (SN). All 33 items for the eight variables were subjected to EFA which revealed that these factors accounted for approximately 71.146 per cent of the variance. This means that 71,146% change in factors was explained by observed variables (components of F). The accepted criterion for significant factor loadings was 0.50 [18]. Hence, all items in 7 Factors were retained. The Variance Explained for each factor were illustrated in the table below.

TABLE 5. Variance Explained

Independent variables	Name	Group of items	Variance Explained
F1 (GPB)	Green purchase behavior	PBC1, PBC2, PBC4, PGP2, GPB2, GPB3	25.20
F2 (GPI)	Green Purchase Intention	EK1, GPI1, GBP1, GPI2, GPI4	14.01
F3 (AGP)	Availability of green products	AGP1, AGP4, GPB4, ATB3, SN1	19.52
F4 (EK)	Environmental knowledge	EK2, EK3, GPI3, PBC3,	9.92
F5 (ATB)	Attitude toward behavior	ATB1, ATB2, SN5, AGP2, AGP3, ATB4,	9.80
F6 (PGP)	Price of green products	EK4, PGP4, PGP1, PGP3	14.07
F7 (SN)	Subjective norm	SN2, SN3, SN4	7.48
TOTAL			100.00

Source: Prepared by the authors.

Multiple Linear Regression

To consider the relationship between AGP and PGP and GPB, this study used linear regression analysis. The three factors with the variance responsibility basis explained by the variables included in the highest EFA test discussed above will be analyzed. The purpose is to measure the influence of two independent variables (AGP and PGP) on the dependent variable (GPB). Based on the Model

Summary and ANOVA table shows that the Regression model is found to be statistically significant. The regression model explains 38.1 (R²) of the total variance and is significant at $F = 22.910$, $p < 0.000$. Compared with the above theoretical basis review, the results of the multiple linear regression are consistent with the deductions drawn and show that the impact of AGP and PGP on GPB is direct in the case of young urban Vietnamese consumers.

TABLE 6. Multiple Linear Regression

Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Change	Square Change	F Change	df1	df2	
1	.631 ^a	.399	.381	.78666062	.399	22.910	7	246	.000	1.675

a. Predictors: (Constant), AGP, PGP

b. Dependent Variable: GPB

Source: SPSS Output file.

TABLE 7. Regression model

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	99.242	7	14.177	22.910	.000
Residual	149.758	239	.619		
Total	249.000	246			

Source: SPSS Output file

4. RESULT AND DISCUSSION

This study concludes that the buying behavior of young urban Vietnamese consumers is influenced by many novel factors and mostly related to their multi-faceted conception. Therefore, green purchasing behavior seems to be better assessed by specific group of people than general. Exploratory factor analysis (EFA) revealed existence of seven factors that shown positively and significantly impact the GPB which are GPI, AGP, EK, ATB, PGP and SN. Among those factors, AGP and PGP were the most important predictors of GPB. The multiple linear regression model confirms that the availability and price of green products is significant in explaining young urban Vietnamese consumers' green purchasing behavior. The research concluded that the most substantial factors which affect young urban Vietnamese consumers' green purchasing behavior are the availability and price of green products. It brings important insight and beneficial implications for firms and organizations that produce and distribute green products.

In terms of practical application for managers, this study suggests a few execution strategies for companies and firms that manufacture and distribute green products, especially marketing managers, to be able to integrate product development and distribution strategy based on environmental sustainability. The research concludes that the most substantial factors which affect young urban Vietnamese consumers' green purchasing behavior are the availability and price of green products. Moreover, Kotler et al. emphasizes that, in order to ensure the public's acceptance and preference for green products in the future, it is essential to learn about green pricing and distribution strategies [24]. Further, this research highlights some opportunity which appear up to the current context of Covid-19 crisis and provide specific recommendations to the above situation.

Firstly, the availability of green products refers to place marketing strategy and management strategies cover from production, distribution to consumption and after sales. Therefore, making products always available is the key to a business' survival. In this situation, it is paramount that consumers must be able to see green products throughout the market sector. Currently, Internet and e-commerce website plays a

key role in distribution in Vietnam. This can be considered as an effective tool targeting green consumers in Vietnam, especially young urban consumers. Moreover, purchasing behavior of consumers is changing due to difficult situation caused by the Covid-19 crisis. It is an opportunity for businesses to change their business models to match the customer value and operate their online sales channels. Nielsen research in Vietnam (2020) shows that up to 35% of their respondents spend more time watching online content, 25% of them increase online shopping activities during 'Lockdown' and this could be a longterm trend [32]. In the current context, businesses need to take these opportunities to turn difficulties into advantages. This might results in increasing sales, recovering after crisis and sustainable development in the future. In addition, the use of information systems and technology in the supply chain has a positive impact on service quality and brings about a great economic effect [27]. Specifically, this application offers huge savings in cost, time and inventory issues. Firms and organizations that produce and distribute green products could apply those strategy in their marketing plan for effectively targeting consumers and saving delivery cost.

In the next section, we recommend about price strategy for green products. As discussed above, price of green products might be higher than normal ones. However, consumers may still be willing to pay a higher price for green products if the business ensures the quality, origin, and distribution of these products. Therefore, businesses can use the strategy of 'premium pricing' with products defined as green products to indicate costs for items such as inputs, production costs. In fact, up to 80% of Vietnamese consumers are willing to pay more to purchase products with environmentally friendly materials. However, in any research context, customers are always sensitive to price and see it as the first measure when purchase a product [24]. Thus, there are still a large number of consumers asking for discounts. In the curent context, young urban consumers in Vietnam are considered shopaholic; however, most of them demand discounts. Marketing managers might use the 'psychological pricing' which include comparative pricing (placing expensive next to standard), 'BOGOF' (buy one, get one free) etc. There are also several barriers in sustainable development in context of green

purchasing behavior [43]. The authors also point out that the media, by its compelling nature, has a positive effect on green buying behavior by increasing awareness of the severity of environmental problems. To fully maximize this strategy, business must get media persuasion with their discount offers and gaining a relatively effective market share. However, business must be careful with this pricing strategy since it can affect the product value in the customer mindset. As discussed in the literature reviews, when it comes to pricing strategy, it is very important for marketing directors to consider income levels. Also as discussed above, the household disposable income in Vietnam will continue to grow although we still affected by the Covid-19 crisis so the purchasing power for urban Vietnam consumer is very promising.

5. CONCLUSION

The research concludes that the most substantial factors which affect young urban Vietnamese consumers' green purchasing behavior are the availability and the price of green products. They bring important insight and beneficial implications for firms and organizations which produce and distribute green products in Vietnam. Although there are certain limitations of the survey structure, the sample size as well as the limited knowledge of the author, this research laid foundations by exploring the behavior toward green purchasing of young urban Vietnamese consumers which has been scantily researched. This study only surveyed 300 respondents in Ho Chi Minh city, Vietnam with convenient sampling method, so the representation is not high. For more scientifically representative results and higher reliability, the sample size needs to be larger and survey respondents in other urban areas such as Hanoi and Dannang. Future research can examine the consumption habits and lifestyle characteristics of young urban Vietnamese and other ASEAN countries. This allows in-depth analysis, and most importantly, helps the community better understand the economic efficiency and environmental development benefits of green purchasing and sustainable consumption.

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