

Green Marketing Mix Strategy using Modified Measurement Scales – A Performance on Gen Y Green Purchasing Decision in Malaysia

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Abstract: *Global goals for sustainable development is shaping the future on purchase behaviour through its trends in sustainable production and consumption. Green marketing mix strategies are seen to put an end to the conventional marketing strategies and is a path breaker that affects the value proposition that leads green purchasing decision (GPD). Thus, to reduce ecological footprint through green marketing mix strategies, this study aims to identify factors that influences young consumers to migrate to GPD. The study was conducted in two phases. Firstly, a qualitative approach was used to extract the current theme in green marketing by interviewing 5 focus groups. The themes were compared with other studies to identify the relevancy of the items and was consequently validated with experts from the relevant industrial and academic field. The final questionnaire was distributed to 200 Gen Y respondents in Malaysia. The data was analysed using the SMART PLS 3.0. The result shows that green marketing mix factors except price influence the trends on Gen Y GPD in Malaysia. The findings are very useful for marketers and manufacturers to understand, and redefining their green marketing mix strategies to meet the global sustainability goals. The fine points discussed in the findings and discussion section is also useful for organizations to implement strategies to attract green consumers to make the green purchases.*

Keywords: *Green Marketing Mix, Green Purchasing Decision, Gen Y, Sustainability*

I. INTRODUCTION

Sustainable purchasing is currently a global phenomenon and is seen to bring positive values to society through the efforts taken by organizations by minimizing environmental harm during the course of procuring service and goods [1]. This upheaval which started approximately four decades ago, is forcing organizations to realize the current and future impact of their business value propositions. In a nutshell, organizations are moving towards defining clear sustainable objectives that explains how their product, production and services can solve customer's problems while staying relevant to their needs and being competitive in the business using green marketing strategies. The growth of green marketing (GM) research can be tracked back to the 1980s as businesses realized that the consumer's purchasing patterns have changed towards a more environmentally friendly attitude.

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GM is defined as a process of greening a product as well as the organization [2], focuses on the use of environmental concepts in decision making throughout the organization [3] and involves producing, pricing, promoting and distributing products and services without harming the environment.

Researchers believe that there is a definite difference between traditional marketing and green marketing. The former does not account the loss or damage that products and services bring to the environment while the latter focuses on the use of environmental concept and issues through all the stages of decision making process in the organization [3]. GM is seen as an advantage to organizations. Studies have indicated GM helps to improve firm performance [4], competitive advantage [2], [5], improve customer satisfaction [6], improve organizations' green corporate image [2], [4], and many other benefits. GM is also defined as the effort by organization to design, promote, price and distribute products in an environmentally friendly manner [7]. [6] have similar views by expressing that GM involves promoting and developing products that meets customer satisfaction at an affordable price, quality, performance and convenient without causing any damage to the environment.

Underpinning the philosophy of Green Marketing in the current business context, the objective of this study is to investigate if the factors of Green Marketing Mix will influence Gen Y Green Purchasing Decision in Malaysia. This study will help organization understand consumer's green approach and consequently guide marketers to develop a dynamic Green Marketing Mix strategy to improve green purchasing in Malaysia. This study will also complement the 6th Thrust of the 11th Malaysia Plan, which aims to pursue green growth for sustainability and resilience by implementing sustainable consumption and production concepts to create green markets (Rajadurai et al., 2018).

II. PROBLEM STATEMENT

Although past literatures have identified various studies on GM and its significant benefits, there is still dearth in the area of GM [4]. This statement is relevant to the context of businesses in Malaysia, as according to [8], GM is still found to be in its pre-mature and infancy stage in Malaysia. The lack of concern by organization to show initiative on green business is an alarming factor not only in Malaysia but globally.

It is alarming that the absence of regulations and proper framework has caused damage to the environment [9].

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These factors are now a growing fear to policy makers. As policy makers such as government agencies work on various initiatives for organizations to move towards going green, consumers on the other hand is also currently tagging along on the same trend. A survey by ACNielsen in December 2018 had indicated that consumers have touted their plea for more environmentally friendly products and are using their spending power to make the changes they desire to achieve environmentally friendly purchasing behaviour (after this used as green purchasing behaviour) [10].

Customers are now becoming concern with unscrupulous organisations that ride on the expense of their wellbeing [11]. Consumers sees organizations which are not environmentally concern as a problem. Currently, consumers are aware and concern about the products and services they acquire. However, while consumers are seen to be the main driver of green purchasing behaviour (GPD), studies on the other hand have also pointed out that very few consumers are making the green call which is causing a huge gap between the stated green consciousness and actual green behaviour [12]. This however indicates that, while the need for green marketing seem to be a pressing factor, researchers still believe that green marketing has not achieved its potential for improving the quality of life of consumers [13] and appears to be a promising area for new marketing researches. Another reason for GM not achieving its potential is due to the existing instrument measuring marketing mix which are still traditional and have not incorporated sustainability elements to understand consumer's green GPD. Hence, in line with United Nation's (UN) global Sustainable Development Goal (SDG) to reduce environmental impacts and the 6th Thrust of the 11th Malaysia Plan, which aims to pursue green growth for sustainability and resilience by implementing sustainable consumption and production concepts to create green markets recent studies globally and in Malaysia are also investigating topics associated with green behaviour [14].

III. LITERATURE REVIEW

A. Green Product

Green product (GP1) is explained as product that is manufactured using ingredient that are environmentally friendly [15], has ethical components [16] and ensures the product qualifies to be categorized as green [1], [3], . Although there is a high and pressing need for these GP1 in the market, in Malaysia, this trend appears to be contradicting. Many consumers in Malaysia are still unclear about GP1 and the reason to purchase them. The Sustainable Consumption and Production (SCP) Malaysia, has backed this statement by saying consumers have no solid reason to purchase GP1 compared to their environmentally damaging substitutes. However, in contrast [15] states that consumers' experience in the GP1 is the reason to drive consumers to GPD. While, in another study, [5] explains that the lack in the product knowledge may deter consumers in committing to purchase the GP.

Many researchers find the gap on GPD as the lack of GP1 in the market. This point is emphasized by [3] as the researcher believes there is lack of GP1 in the market and when these GP1 exist, there is lack of clear information on

its accessibility. Hence, this discourages consumer as they are not aware of the product locations. As a result of this, consumers are not encouraged to look out for and purchase GP1. Therefore, this study aims examine if Green Product influences Gen Y green purchase decision in Malaysia. Hence, the hypothesis below is developed :

H1 –Green product influences Gen Y Green Purchase Decision in Malaysia.

B. Green Price

Green price (GP2) has been given equally serious focus by marketers and organization in order to stay competitive in the industry. [1] indicates that there is a huge number of green consumers who are willing to pay extra for green products while [17] explains that green products are priced higher than non-green products. The authors believes that this can be a problem to encourage green purchasing decision [1], [17]. Consumers are also not convinced to purchase green product if these green products are charged at a premium price. The consequential effect of this is seen when organizations tag green product at a higher price [2]. Backing [2], [18] has indicated that when it is inconvenient to consumers, then price is a major barrier to GPD.

However, a study conducted by [19] on wood products in Scandinavia, contradicts this by stating that GC are less price sensitive. Additionally, a recent study conducted by the Nielsen group also states that consumers in Malaysia are willing to pay extra to purchase green products. While there are consumers who are willing to pay extra, this behaviour does not necessarily lead to actual GPD. GP2 has not caught much attention in the recent study internationally and in Malaysia due to its complexity. GP2 is a highly sought area of study in green marketing. Therefore, this study will examine if Green Price influences Gen Y green purchase decision in Malaysia. Hence, the study will look at the next hypotheses:

H2 : Green Price influences Gen Y Green Purchase Decision in Malaysia

C. Green Promotion

Promotion and advertising is a compulsory process of any organization. Promotion takes place to introduce and remind consumer of the existence of its products, service or the organization. The current business worldwide is seen to choose environmental advertisement or better known as green promotion (GP3) through media for introducing their products to GC [20]. The author also stressed that GP3 is seen to encourage and persuade [21] consumers to purchase green product as advertising creates a strong link with brand association while repetitive advertisements can improve the consideration of consumers' choice to purchase a brand or product [22]. [4] states that GP3 is an effective tool to promote products and the organization's efforts to show their concern for the environment. In line with the sustainability agenda globally, most organization have chosen to capitalize on the GP3 to introduce their products and organization [20].



However, in the study conducted by [21], they believe that GP3 alone is seen not enough to lead consumers to purchase decision. Another study by [23] sees GP3 as not a strong factor and explains that although environmental advertisement is increasingly popular, the environmental claims is still far from clear. Therefore, this study will examine if Green Promotion influences Gen Y green purchase decision in Malaysia. To further assist organization to understand the importance of GP3, the next hypotheses is developed :

H3 : Green promotion influences Gen Y Green Purchase Decision in Malaysia

D. Green Place

Green place (GP4) is the forth factor in the green marketing mix element and plays a significant role to determine an environmentally friendly distribution channel for the product. [24] defines GP4 as a system which can constrain green design solutions as the green product must ensure ecological nature. The distribution channel chosen for placing a product has to ensure it does not affect the environment. [25] has looked into various e-business models which emphasises the distribution channel as the online shopping modes. [26] had indicated in his research that the global trends for shopping has shifted towards e-commerce.

Although the trend for GP4 adopted by organizations in moving towards e-commerce and greening their distribution channel, this does not indicate actual purchasing decision. [26] had indicated that the online purchase process does not necessarily translate to actual purchasing decision. A study conducted in Malaysia by [27] states that the highest population that chooses online shopping is the Gen Y. They further explained in their paper that consumers find online shopping a challenge. Therefore, this study will examine if Green Place influences Gen Y green purchase decision in Malaysia. Having said this, the next hypotheses is derived :

H4 : Green place influences Gen Y Green Purchase Decision in Malaysia

E. Green Purchasing Decision

While GM is seen as a promising area of research, it is almost impossible to ignore the purpose of GM; which is to meet consumer's green demand. Recent studies have defined the trend of green purchasing to favour a new segment of consumer known as the green consumer (GC) [1]. The International Institute of Sustainable Development (IISD) has defined GC as people with intention and commitment towards greener lifestyle and do not expect organization to be perfect in their flight towards being environmental friendly but rather to take substantive steps and be committed to improve or reduce harm to the environment [17]. GC are the drivers of consumer demand for green product which in turn improves environmental performance of products and organizations [1], [17]. Although studies indicate that consumers are concern about the environment, [2] found that it's a key challenge for marketers as they still do not understand what are the factor that drive GC towards GPD.

Green purchase behaviour is a complex form of environmental or ethical decision making behaviour which is considered a type of socially responsible purchasing behaviour [28]. The author also stresses that green

consumers take into consideration the consequences of the damage caused to the environment while considering to purchase. [29] agrees to the above by stating that due to consumer's awareness of the environmental problems around them, they now resort to purchase environmentally friendly products.

There are many studies which has looked at the intention to purchase green products; [30]–[32]. However, these authors also indicate that these intentions do not reflect the actual GPD. What people say is not necessarily what they do [33]. The author also stated that there is a gap between the intention and the actual GPD. Although green consumers are concern about the environment and supports green purchasing, they do not contribute to the actual GPD [28]. Due to the lack in GPD, [29] delineates that the argument on the fluctuating behaviour of GC to purchase green products is the cause for marketers not being successful in selling green products. Backing this statement, [28] believes that manufacturers are required to incorporate the findings in studies related to marketing strategies in order to be able to reach out to a larger consumers and to convince them to purchase green products. Therefore, studies are also required to investigate the adaptability of green consumers on GPD [29] by incorporating green measurements to understand GPD of these consumers.

In addition, recent studies on GC has also been associated with a specific generational cohort known as the Generation Y. Generation Y or also known as the millennials or Gen Y [34]. Gen Y are born in the year 1980 – 2000 [4], [34], [35] and is three times more the size of Generation X and constitute the largest market [36]. An older study conducted by PriceWaterhouse Coopers, 2009 is consistent with the current study by Nielsen Group that confirms Gen Y are very concern about the environment and studying Gen Y GPD is seen as a promising area. Furthermore, [37] confirms that it is important to encourage marketing specialists to focus on studies by generational cohort rather than just looking at the individual level to have a strategic marketing initiative. Therefore, this study will investigate the factors that influences Gen Y GPDs. By understanding these generation's spending and purchasing habits, marketers can reach out to the Gen Y green consumers.

IV. CONCEPTUAL FRAMEWORK

Integrating the findings from the literature with the hypothesis developed from the analysis of the literature, a conceptual framework as seen in Figure 1 was developed. The framework helps to define the scope of study that focuses on the problems and the assessments needed for this study.

Therefore, the framework was developed to study the green marketing mix strategies that influences of Gen Y green purchasing decision in Malaysia.

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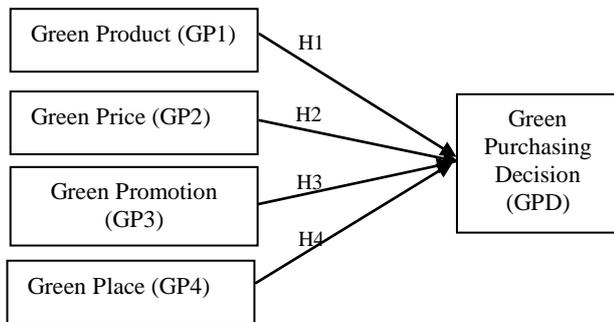


Fig. 1 Conceptual Framework and Hypothesis

V. METHODOLOGY

According to the data taken in 2018 from the Malaysian Department of Statistics, Gen Y accounts for 11,820.30 million people in the year 2018, which is 36.5% of the whole population in Malaysia. From this population, 200 people were chosen as the sample for this study. The target population of this study was Generation Y green consumers who were born in between 1980 to 2000 (18 – 38 years old at the time of the study). The survey implemented a mall intercept method [38], [39] in Malaysia. The study observed a careful multi-level sampling and interview method. As indicated by the Malaysian Shopping Malls Association and Tourism Malaysia, there are 188 shopping malls in Malaysia. The distribution and collection of questionnaires was guided by the mall intercept technique by [38], [40]. To ensure representative of the samples, a survey was conducted in major malls in Malaysia based on the number of visitors. An equal number of questionnaires were made available at each location. The mall intercept method was also appropriate for this survey as Gen Y consumers are known for their ability to spend [34], [39].

VI. INSTRUMENT DEVELOPMENT

The questionnaire development was done in 2 phases; qualitative and quantitative approach. Firstly, a qualitative approach was used to verify and finalize the item measurement in green marketing mix by interviewing 5 focus groups (FG) consisting of 10 Gen Y green consumers and the researcher as the moderator for each session. Table I shows the item measurements taken from past studies. The researcher identified 37 relevant items from the past studies. These 37 items represent GMM with 13 items for GP1, 9 for GP2, 10 for GP3, 5 for GP4 and finally 5 items for GPD. Upon thoroughly going through the items with the focus group and experts, the items were finalized and the researcher retained 30 items for the GMM and GPD. The FG reviewed the items to compare, identify duplicates, relevancy of the items with sustainability and was consequently validated with experts from the relevant industrial and academic field. The expert opinions (EO) were approached to evaluate how well the items represent each variable [41]. Through the FG discussion, this study intends to introduce new items which were raised by the FG and EO. The aim of incorporating FGD and EO sessions is to ensure the item measurement reflects elements of sustainability, green and is relevant to the context of the current green marketing strategies for Gen Y as opposed to traditional GM studies.

Table. 1

Sources	Green Marketing Mix				DV
	GP 1	GP 2	GP 3	GP 4	GP D
P. Kumar & Ghodeswar, 2010	✓	✓		✓	
Devi Juwaheer, Pudaruth, & Monique Emmanuelle Noyaux, 2012	✓	✓			
HA Bekhet & Basheer, 2012	✓				
Manaktola and Jauhari, (2007),		✓		✓	
Sammer and Wüstenhagen, (2006)		✓			
Davari and Strutton, (2014)		✓	✓	✓	
Clifton and Buss (1992)			✓		
Joel J.Davis (1994)			✓		
Ricky Y.K. Chan, 2006			✓		
Rahbar & Wahid, 2011			✓		
Ken Peattie (1993)				✓	
P. Kumar & Ghodeswar, 2010					✓
Paul, Modi, & Patel, 2016					✓
Giampietri, Verneau, Del Giudice, Carfora, & Finco, 2018					✓
Taufique & Vaithianathan, 2018					✓
Arslan & Şar, 2017					✓

VII. PILOT TEST

A pilot test with 42 respondents was conducted to ensure the questionnaires were free from any flaws. This number is accepted and in line with [41] that stated the minimum number of respondent to run factor analysis is 50 respondents. Standard research strategies, procedures and practices were observed during data collection. This includes obtaining authorization, use of third party for data collection, looking for voluntary participation and proper distribution and collection of the questionnaires were observed. A team of interviewer were placed at all mall entrance to ask a qualifying question on 1)are you a consumer of green product?; and 2) were you born between 1980 and 2000?

If the target respondent's answer were affirmative, they can proceed to the next questions. Respondents were then



inquired as to whether they were ready to take part in the survey. An affirmative response showed their voluntary involvement in this study.

The respondents were then guaranteed that the survey would take just 10 minutes and were provided with a table and chair to encourage the simplicity of fulfilment of the questionnaire. A five point Likert scales from (1) strongly disagree to (5) strongly agree was used to measure the items. At the end of the data collection period, 193 usable responses were obtained

VIII. ANALYSIS AND FINDINGS

The study found majority respondents to be females. 58% had birth year between 1983 and 1988. The highest respondents represented executives at 32% where else the lowest are senior management at 4%. The income range provided in the questionnaire was between RM18,000 and RM60,000 and the average income per annum of the respondents was above RM60,000. Interestingly, 13% of the respondents used green products for more than 6 years, 9% between 3 to 6 years and 45% between 1 to 3 years. This suggests that many respondents may have migrated to sustainable consumption patterns in the past 3 years, thus, displaying a positive green purchasing decision.

The proposed conceptual framework was tested using the SMARTPLS 3.0. Factor analysis, composite reliability and average variance extracted (AVE) of the variables which is presented in Table II were tested to ensure the model was valid. No items were deleted as the factor loadings were above 0.60. According to [35], [41] this value is acceptable and all the items were retained and ready to proceed for the analysis.

The composite reliability and AVE, as presented in Table II provides information regarding item reliability and validity. The composite reliability for all the item is in an acceptable range of reliability which is above 0.70 [41]. In addition, for validity, this study discovered that all items have a greater than 0.50 AVE and are said to be usable. According to [41], 0.5 or higher is a good rule of thumb to suggest acceptable convergence of each construct.

Table. 2 Result of Convergent Validity Measures

Latent variable	Measurement item	Factor loading (>0.60)	Composite reliability	Average variance extracted
GP1	A1	0.725	0.857	0.501
	A2	0.781		
	A3	0.665		
	A4	0.687		
	A5	0.749		
	A6	0.629		
GP2	B1	0.694	0.847	0.528
	B2	0.746		
	B3	0.804		
	B4	0.760		
	B5	0.614		
GP3	C1	0.715	0.909	0.526

GP4	C2	0.731	0.872	0.535
	C3	0.792		
	C4	0.679		
	C5	0.697		
	C6	0.698		
	C7	0.781		
	GPD	D1		
D2		0.768		
D3		0.762		
D4		0.852		
F1		0.725		
F2		0.799		
F3		0.802		
F4		0.822		
GPD	F5	0.639	0.836	0.743
	F6	0.836		
	F7	0.743		
	F8	0.719		

Furthermore, discriminant validity was completed to extent the differences between each construct by comparing the square root of each construct AVE with the correlation of each construct. Although the discriminant validity can be track by using the Fornell-Larcker criterion, these methods has weaknesses [41]–[43]. According to the authors, the discriminant validity is better identified by using Heterotrait-Monotrait Ratio (HTMT). As presented in Table III, all the constructs were below 0.9 which is in line with [43].

Table. 3 Construct correlation using HTMT values

	GPD	GP4	GP2	GP1	GP3
GPD					
GP4	0.352				
GP2	0.524	0.524			
GP1	0.639	0.370	0.801		
GP3	0.239	0.740	0.571	0.587	

Based on the above statement, all the requirements have been met and achieved the objectives of this study. Next, the researcher tested the relationship between GP1, GP2, GP3 and GP4 and the Gen Y GPD. H1 confirmed that GP1 influences Gen Y GPD. The analysis is shown in Table IV. The path coefficient, t-statistic indicates significant values (PC=4.077, t-stat=4.099 and p>0.05). The beta values of GP1 ($\beta = 0.532$) shows that GP1 has the most significant effect on the GPD. Hence, H1 is accepted. The second hypothesis, H2 found the path coefficient, t-statistic indicates insignificant results (PC=0.824, T-stat=0.830 and p>0.05). Therefore, there is not enough evidence to say that GP2 has a relationship with the GPD. Hence, H2 is rejected. The third hypothesis, H3, confirmed that the GP3 influences Gen Y GPD.

The analysis in Table IV shows that there is a positive and significant effect between the GP3 and the Gen Y GPD



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(PC=2.030, T-stat=2.041 and $p < 0.05$). GP3 indicates the third highest beta value ($\beta = 0.281$) which means GP3 is also an important contributor to the Gen Y GPD. Therefore, H3 is accepted. The fourth hypothesis, H4, affirmed that the GP4 significantly influences Gen Y GPD. The investigation in Table IV indicates the path coefficient, t-stats demonstrates immaterial qualities (PC= 2.351, T-stat=2.356 and $p < 0.05$). Along these lines, the qualities demonstrate that GP4 has an impact on the GPD. Therefore, H4 is accepted with regards to 193 Malaysian green consumers.

Table. 4 Structural estimates of the model

	Path coefficient	P Values	Beta value
GP1 -> GPD	4.077	0.000	0.532
GP2 -> GPD	0.824	0.407	0.135
GP3-> GPD	2.030	0.041	0.281
GP4 -> GPD	2.351	0.019	0.292

IX. DISCUSSION AND FINDINGS

The results showed that among the four predictors, GP1 is the most significant relationship towards the Gen Y GPD. Gen Y green consumer decision was influenced by the quality of the product and the product’s recycling features. Their decision to purchase green products is influenced by their lifestyle, energy efficiency, the green packaging and their belief that green products are less harmful to the environment.

The second most influenced predictor is GP4. The decision to purchase green products was influenced by the distribution method. Respondents prefers purchasing products that is delivered to their home. This encourages GC to buy directly from producers via online. This supports past studies which indicates that Gen Y does not travel to the physical stores for purchasing [34]. Instead, they prefer to purchase from stores that supports green causes.

GP3 is also significant to the Gen Y green purchasing decision. The provision of sufficient environmental information and the impact of the green promotions supports their environmentally friendly lifestyle. Online promotions and advertisements are also seen to influence Gen Y GPD. The inclusion of information about the effectiveness and green initiative of the producers also drives them towards GPD. Besides, Gen Y green consumer considers trust and attractiveness of the promotional campaigns and materials important. Additionally, deals such as promotion on discount attracts Gen Y GPD which encourages them to practice pro-environmental behaviour.

X. LIMITATION AND RECOMMENDATION FOR FUTURE STUDIES

Although the authors addressed the common method bias during the study, there might be some biases that could occur while respondent were answering the questionnaire, whereby their responses might have been influenced by their partner, friends. The respondents could have answered the survey without focusing well and reading carefully. Thus, it is advisable that a qualitative method by having an interview or observing the consumer’s reactions while they answer the

questionnaire. This will help the researchers to gain better insight on the respondent’s true feelings. Meanwhile, future research is evidently required to widen the respondent range but including non-green consumers to understand what deters them from making a green purchase decision [32].

XI. CONCLUSION

This study examined the influence of Green Marketing Mix elements (Green Product, Green Price, Green Promotion and Green Place) on Gen Y Green Purchasing Decision in Malaysia. The major investigations of the study are: i) Green Price does not influence Gen Y GPD in Malaysia; and ii) GP has the highest influences Gen Y GPD, followed by GP4 and GP3. This study provides a better understanding and insights of Gen Y green consumers’ needs. This study also aims to assist marketers to derive a dynamic marketing strategy by intrinsically evaluating and analysing the modified green marketing mix measurement which represents the thoughts of the green consumers. This study will help organization have an indication of Gen Yer’s green concepts and behaviours towards sustainable purchasing. It is also important to understand the specific need and desire of this cohort as they are found to have the highest purchasing power compared to other cohorts. To the knowledge of the author, other studies had not introduced new modified item measurement which has been verified by the FG and EO to ensure these items are relevant and actually measures Gen Yer’s actual green purchasing decision. Thus, this study will help organization alter their green marketing mix strategy to achieve GPD in Malaysia.

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