The Influence of Green Marketing Mix on Consumer Purchase Intention Towards Green Products

N.A.S.A. Sabri[1], N. Mansor[1] and H. Musa[1]

[1]Universiti Teknikal Malaysia Melaka

nusaibah@utem.edu.my

Abstract—**Today, the whole world is experiencing environmental problems such as climate changes, global warming and ozone depletion. All the problems have eventually led to disruption and losses for businesses. To ensure smooth operations, businesses are starting to shift their business model favouring towards producing environmentally friendly products. The right marketing strategy will persuade customers to purchase the product offered. Therefore, green marketing is recommended to be used as part of the strategy to guarantee green product purchases among customers. However, the use of green marketing can influence customers are still widely in need of exploration and research. Hence, this paper aims to look into and explore the acceptances of green marketing mix that influence consumer purchase intention towards green products. The study examined green marketing elements towards purchase intention. A total number of 150 responses are analysed to find the acceptances of green marketing mix by using regression analysis. The result indicates that the green marketing mix has positive impact towards customer purchase intention.**

Keywords—*green marketing mix; green product; purchase intention*

I. INTRODUCTION

THE earlier definition about green marketing comes from Hennion and Kinnear in 1976, when they highlighted that the Ecological Marketing is a marketing strategy that help in overcoming the environmental problems [1]. The use of green marketing might function as benefit towards the conducive environment. According to Department of Statistics Malaysia, RM2.55 billion increased in 2015 for environmental protection expenditure with annual growth as much as 3.9 percent [2]. In fact, Malaysian former Finance Minister, Lim Guan Eng has presented the 2019 Budget in Parliament on November 2, 2018, approximately RM2 billion has been allocated by the government for Green Technology Financing Scheme [3].

Green marketing mix has becoming new trend to businesses which promote them to produce products while conserving the environment. Apart from that, there are few researches that studied about the marketing mix and purchase intention focusing on examining the marketing mix [4]. Basically, the public view about green marketing is more to use material that has environmental characteristics to advertise and promote a product and service, furthermore, green marketing is consists of many activities which need to do some innovation and alteration, changing in process of production, improvement in packaging, as well as enhancing promotional strategies [5]. According to Pathak, green marketing is marketing that emphasizing environmentally safe which contains all designated activities in order to satisfy human needs and wants and also ensure the environment is not harm with any pollution [5].

Consumer trust is the main factor in creating and establishing a market for trusted products, such as 'green' products especially when the price is quite pricey and premium [6]. Green marketing is one of the strategies that can be used by the marketers of the company to save and protect the environment from harmful materials and increase their sales at once [5].

II. LITERATURE REVIEW

Green marketing is consisting of all activities which planned in inventing and innovating the goods and services to fulfil the consumer needs and wants, with minimizing the impact towards the natural environment [7]. Green marketing mix is consisting of green product, green price, green promotion and green place. Green strategy can be used for all type of businesses which can be one of the competitive advantages of the company to differentiate with other company. The following topics discuss further on elements of green marketing mix as the basis to form theoretical framework for this study.

A. Green product

Green product is a product which combines with the recycled content, save energy, green innovation and safe to the environment. Eco-friendly products are products that technically and ecologically safe for long run objective in protecting and preserving the natural habitat such as animals and trees [8].

B. Green price

Basically, to keep unpolluted and greener environment, consumers are willing to pay more money [4]. It is critical element in the marketing mix. Price placement is a cost that the consumer willing to pay for a certain product. The researcher found a significant transition in the relationship between price and consumer buying behaviour because the consumer revealed their willingness to pay the eco-friendly products [7].

C. Green promotion

Green promotion is referred the tools of promotion which are advertising, marketing materials, web sites, public relations, sales promotions, Words of Mouth (WoM), direct marketing and many more. The aim of green promotion is encourage the consumer to purchase product that not harmful for the environment but still satisfy their needs and wants [7]. [6] Most of the consumer's choice is massively influence by the packaging of the product.

D. Green place

Green place is where you want to locate your products, so that the consumer can purchase it. It can be whether online (virtual) stores or physical stores. Green place is aim at reducing the carbon footprint in cutting down the transportation emissions. The place to distribute the product needs to have an efficient management logistic which helps in reducing the impact towards the environment [8]. A green warehouse also might give an impact to the consumer in encouraging purchase intention among consumers.

E. Customer purchase intention

Green purchase intention can be referred to the possibility and willingness of the consumer itself towards green products rather than conventional products which can affect their buying decision [9]. Intention is actually a goal that the individual wanted to achieve in performing an action. [10] It can be an indicator in order to know the level of willingness of the consumer to buy the green products. Besides that, purchase intention also can be defined as the consumer desire and willingness in purchasing green products that does not pollute the environment [11].

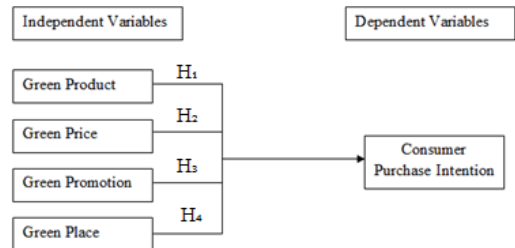Figure 1 shows theoretical framework used to guide researcher to achieve aim of research.

Fig. 1. Theoretical Framework

III. METHODOLOGY

The researcher opted quantitative research as the methodology for this study. Quantitative research is a method in collecting and analyzing the data derived from various sources such as questionnaires and journals. This study usually involves the use of computational, statistical and mathematical tools to obtain the results.

The researcher focused on the influence of green marketing mix on customer purchase intention towards green products. The target population is Melaka and focusing in Melaka Tengah. An online survey is distributed to 150 respondents and the researcher has collected the data through softcopy using Google Form.

A. Operational constructs

Generally, the questionnaire is divided into few sections based on independent variables in this research which are green product, green price, green promotion and green place. A structured question consists of three (3) sections, which are Section A: demographic, Section B: green marketing mix, and Section C: consumer intention towards green products. The researcher evaluated the questionnaire based on the Likert Scale format which consists of 5 score rating, where (1) = Strongly Disagree; (2) = Disagree; (3) = Neutral; (4) = Agree; (5) = Strongly Agree.

B. Data analysis procedure

Statistical Package for Social Science (SPSS) is deployed to analyze data collected. The procedure involves in this research need to be consistent. To test internal consistency, alpha Cronbach has been used and it shows that all of the questionnaire has met the minimum requirement. The rule of thumb for the reliability test shows that if the result is 0.7 and above is represented as good reliability while below as 0.6 is represented as a poor result. This study also uses multi regression analysis to test the hypothesis of this research. Multi regression analysis is used to identify between two or more variables that has a causal relationship and summarizes predictions by using relationships [12].

IV. DATA ANALYSIS AND FINDINGS

A. Demographic profile analysis

TABLE I SUMMARY OF DEMOGRAPHIC ANALYSIS

No	Respondents characteristics	Total respondents	Percentage (%)
1	**Gender**		
	Male	66	56.0
	Female	84	44.0
2	**Races**		
	Malay	97	64.7
	Indian	29	19.3
	Chinese	24	16.0
3	**Age**		
	< 20 years old	5	3.3
	21 – 30 years old	90	60.0
	31 – 40 years old	42	28.0
	41 – 50 years old	9	6.0
	> 51 years old	4	2.7
4	**Occupation**		
	Private sector	39	26.0
	Public sector	13	8.7
	Self-employed	20	13.3
	Student	78	52.0
5	**Monthly income**		
	< RM1000	77	51.3
	RM1001 - RM3000	31	20.7
	RM3001 - RM6000	41	27.3
	> RM6001	1	0.7
6	**Acknowledgement (Did you ever bought green products before?)**		
	Yes	116	77.3
	No	6	4.0
	Maybe	28	18.7

Based on the data of 150 respondents collected from survey, the majority of respondents were female which 56.0% compared to male 44.0%. Female are more likely to purchase green products than male due to female are more possess environmental concerns compared to male [13]. The highest contribution of respondents is the age range

from (21 – 30 years old) which manage to obtain 60.0% of respondents. While the least contribution of respondents is age range (Over 51 years old) which 2.7% of respondents.

The consumers are willing to buy green products irrespective of their age [14]. The higher respondents are dominant by Malay respondents, which about 64.7% of respondents and followed by Chinese (16.0%). Majority of the respondents are a student (52.0%) and the least percentage is the government sector which is 8.7% of respondents. Most of the respondents have monthly income/allowance in the range of (RM1000 and below) which is 51.3% of respondents while the least respondent is who that have monthly income (RM6001 and above) which is 0.7% of respondents. In the other hand, consumer that has different age, race, income, and occupation does not positively impact on the purchase intention towards green products [13].

Majority of the respondents stated yes (77.3%) that the respondents have purchased green products before. In other hand, 18.7% of respondents said maybe, while 4.0% of respondents admit that the respondent never purchases green products before. 50% of respondents have purchased green products according to a global survey among nine developed countries [15]. The trend therefore, shows green product purchases are increasing globally. It also implicates, consumers are more than ready to purchase green products and can be seen as opportunities for businesses.

B. Reliability analysis

In this research, the researcher uses reliability test to check whether the data obtained from the survey were reliable or not. For the reliability test, overall result that has been utilized by SPSS indicates that the overall Cronbach's Alpha is 0.940 which is excellent. [12]

TABLE II RELIABILITY STATISTICS

Cronbach's Alpha	N of Items
0.940	24

C. Multiple regression analysis

In order to prove the acceptances of green marketing mix towards customer purchase intention towards green products, the researcher used hypothesis testing using multiple regression analysis. Multi regression analysis is used to identify between two or more variables that has a causal relationship and summarizes predictions by using relationships [12]. Referring to the summary of hypothesis testing in Table 3, all the elements in green marketing mix have positive impact towards customer purchase intention on green products.

TABLE III SUMMARY OF HYPOTHESIS TESTING

Independent variables	Unstandardized coefficients (B)	p-value	t-value	R-square
Green product	0.695	0.000	11.272	0.462
Green price	0.476	0.000	11.694	0.480
Green promotion	0.684	0.000	10.483	0.653
Green place	0.669	0.000	13.407	0.548

Based on the results, the value of (R = 0.680) and (R² = 0.462). The researcher concluded that 46.2% of the consumer purchase intention can increase towards green product. It shows that the p-value is 0.000 which lower than alpha value which is 0.05. It also shows that (t = 11.272, p = 0.000, B = 0.696) which means when there is an increase in relative advantage, it will cause 69.5% increase in the acceptances of green product that influence consumer purchase intention. There is significant positive relationship between green products with buying decision of customer [4].

The influence of green price on consumer purchase intention indicates the value of (R = 0.693) and (R² = 0.480). The researcher concluded that 48.0% of the consumer purchase intention can increase towards purchasing green product. It shows that the p-value is 0.000 which lower than alpha value which is 0.05. It shows that (t = 11.694, p = 0.000, B = 0.476) which means when there is an increase in relative advantage, it will cause 47.6% increase in the acceptances of green price that influence consumer purchase intention. The researcher found a significant transition in the relationship between price and consumer buying behaviour because the

consumer revealed their willingness to pay the eco-friendly products [7].

Meanwhile the influence of green promotion on consumer purchase intention resulted the value of (R = 0.653) and (R² = 0.426). The researcher concluded that 42.6% of the consumer purchase intention can increase towards green product. It shows that the p-value is 0.000 which lower than alpha value which is 0.05. It shows that (t = 10.483, p = 0.000, B = 0.684) which means when there is an increase in relative advantage, it will cause 68.4% increase in the acceptances of green promotion that influence consumer purchase intention. Most of the consumer's choice is massively influence by the packaging of the product [7].

The result of green place influence on consumer purchase intention on the other hand shows the value of (R = 0.741) and (R² = 0.548). The researcher concluded that 54.8% of the consumer purchase intention can increase towards green product. It shows that the p-value is 0.000 which lower than alpha value which is 0.05. It shows that (t = 13.407, p = 0.000, B = 0.669) which means when there is an increase in relative advantage, it will cause 66.9% increase in the acceptances of green place that influence consumer purchase intention. Environmental friendly distribution has significantly impact on customer purchase intention [4].

V. LIMITATIONS AND RECOMMENDATION

From this study, the researcher found that there are few limitations throughout the journey of the research. Most of the people didn't understand the actual definition, concept and aim of green marketing since. The main factor that encourages the consumers to purchase green products is to protect the environment [16]. Besides that, green marketing strategy also might face some challenges in inventing and market green products or services. Innovative green products offered by other companies can persuade consumer to buy the products include non-living things or even the future development [17].

Other than that, it is recommended for future research to explore research focuses on the impact of innovative green products strategy on the environment in a long run. Companies that develop and innovate new goods and services which taking into consideration of environmental inputs before entering new market can increase their profits. On top of that, companies may also enjoy a competitive advantage for their concern on the environment [5].

Apart from that, it is suggested to the future researcher to use both online and offline platform to approach the respondents. It is because, both of platforms has own benefits in a way to reach the respondents easily. The researcher can save money and time if online method is used compared to offline method. The other benefit for offline method, the researcher can face to face with the respondent and give explanation and guidance about the research if necessary. So, the respondent will answer the survey according to what the researcher aimed to.

VI. CONCLUSION

In conclusion, the combination of conventional marketing mix with green elements may strengthen companies marketing strategy. Without the right marketing strategy to promote green products, it is difficult for companies to penetrate new market. Adding to the point, it worth note that when it comes to developing countries consumer intention to purchase green products are more towards conservation value rather than concern over environmental consequences. Product attributes consist of environmentally friendly elements shall be highlighted to increase purchase intention among consumers.

ACKNOWLEDGMENT

REFERENCES

[1] Henion, K. E. (1976). Ecological marketing. Grid.

[2] Department of Statistics Malaysia. (2018, November 5) https://www.dosm.gov.my/v1/index.php?r=column/ctwoByCat&parent_id=284&menu_id=NWVEZGhEVlNMeitaMHNzK2htRU05dz09

[3] Zarina Zakariah, (2018, November 2). 2019 Budget: SMEs Get Major Boost. New Strait Times. https://www.nst.com.my/business/2018/11/427731/2019-budget-smes-get-major-boost

[4] Thoria Omer Mahmoud. "Impact of Green Marketing Mix on Purchase Intention." International Journal of Advanced and Applied Sciences, Vol. 5, No. 2, pp. 127-135, 2018.

[5] Pathak, D. "Role of Green Marketing in Satisfying the Customers and Its Impact on Environmental Safety." International Research Journal of Interdisciplinary & Multidisciplinary Studies (IRJIMS), Vol. 2, pp. 17-29, 2017.

[6] Nuttavuthisit, K., & Thøgersen, J. "The importance of consumer trust for the emergence of a market for green products: The case of organic food." Journal of Business Ethics, Vol. 140, No. 2, pp. 323-337, 2017.

[7] Malia, M. A. "Analysis Of The Application Of Green Marketing To Enhance Conscious Consumption (A Case Study Of Led Lamps'consumer In Manado)." Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, Vol. 6, No. 4, 2018.

[8] Hasan, Z., & Ali, N. A. "Modelling The Relationship Between Green Marketing Strategies And Performance Outcomes For Business Sustainability." 2017.

[9] Chin, C. H., Chin, C. L., & Wong, W. P. M.. "The Implementation of Green Marketing Tools in Rural Tourism: The Readiness of Tourists?" Journal of Hospitality Marketing & Management, Vol. 27, No. 3, pp 261-280, 2018.

[10] Ferraz, S. B., Buhamra, C., Laroche, M., & Veloso, A. R. "Green Products: A Cross-Cultural Study of Attitude, Intention And Purchase Behavior. RAM." Revista de Administração Mackenzie, Vol. 18, No. 5, pp. 12-38, 2017.

[11] Rahmi, D. Y., Rozalia, Y., Chan, D. N., Anira, Q., & Lita, R. P. "Green Brand Image Relation Model, Green Awareness, Green Advertisement, and Ecological Knowledge as Competitive Advantage in Improving Green Purchase Intention and Green Purchase Behavior on Creative Industry Products." Journal of Economics, Business & Accountancy Ventura, Vol. 20, No. 2, pp. 177-186, 2017.

[12] Sekaran, U., & Bougie, R. Research methods for business: A skill building approach. John Wiley & Son, 2016.

[13] Roslin Abdul Rahim et. al., "E-WOM Review Adoption: Consumers' Demographic Profile Influence on Green Purchase Intention" IOP Conf. Ser.: Mater. Sci. Eng. 215 012020, 2017.

[14] Shamsi, M. S. and Siddiqui, Z. S. "Green Product and Consumer Behavior: An Analytical Study," Pertanika J. Soc. Sci. & Hum, Vol.. 25 No. 4, pp. 1545 – 1554, 2017.

[15] Chen, C. C., Chen, C. W., & Tung, Y. C. "Exploring the consumer behavior of intention to purchase green products in belt and road countries: An empirical analysis." Sustainability, Vol. 10, No. 3, pp. 854, 2018.

[16] Rosli, N., Abdullah, K., & Haque, A. K. M. "Measuring Consumers' Understanding of Green Marketing Objective and Concept in Relation to Environmental Protection." Advanced Science Letters, Vol. 24, No. 5, pp. 3310-3316, 2018.

[17] Groening, C., Sarkis, J., & Zhu, Q." Green marketing consumer-level theory review: A compendium of applied theories and further research directions." Journal of Cleaner Production, Voll. 172, pp. 1848-1866, 2018.