

Green Marketing: Perspective of 4P's

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Abstract—Globalization in today's industry brings social and environmental problems. The challenges of increasingly sophisticated technology for business, encourage companies to adapt to consumer needs. Now consumers are starting to switch to using environmentally friendly products, to minimize negative impacts on health. One company that supports healthy living and enhances environmentally friendly products is Panasonic. The purpose of this research is to find out how to implement a green marketing mix consisting of green product, green price, green promotion, green place. The method used is quantitative with descriptive data analysis and causality using Partial Least Square (PLS). The respondents were 250 Panasonic AC users, with incidental sampling techniques. The results showed that simultaneous changes that occurred in the green marketing mix would be able to influence the purchase decision of Panasonic electronic products by 96.8%. The four sub-variables of the green marketing mix Partially affect the purchasing decisions of Panasonic electronic products. The sequentially dominant in influencing purchasing decisions: price, place, promotion and the product itself.

Keywords: green product, green price, green promotion, green place, purchase decision

I. INTRODUCTION

The development industry is increasingly rapidly turned out to bring social and environmental issues. In the development of the business world today, businesses operating in the global economy. In the world of global marketing today is characterized by very tight and intense competition. The development of increasingly rapid and sophisticated technology becomes a challenge for business people and encourages them to be able to adjust to consumers because in marketing activities, purchasing decisions are in the hands of consumers [1].

Consumer decision making is an important aspect for marketers. Consumer decision is closely linked to information held by the consumer and the various factors that are influenced by consumer knowledge of the product to be bought. Decision making is an individual activity that is directly involved in obtaining and using the goods or services offered. In buying a product, consumers will choose products according to their needs and desires. Consumer assessment of the advantages and strengths of a product can influence consumers in purchasing these products. Consumers will try to get maximum satisfaction then will continue their purchases for a long period of time [2].

The process of consumer purchasing decisions will occur if you see the green marketing factors that exist in a

product whether it meets consumer needs or not. To find out whether the green marketing strategy meets the standards can be seen through the dimensions contained therein. Seeing the many companies competing to use green marketing strategies to attract consumers to buy their products, each company is required to have competitive strategies to improve their products that are environmentally friendly [3].

The public is now increasingly aware of the importance of choosing goods that are environmentally friendly with minimal negative impact on health. Therefore, Panasonic strives to contribute to making life better with features that support healthy living. Increased public awareness of the environment makes more and more companies willing to accept environmental responsibility and implement a new marketing system that is green marketing [4].

One step from producers in Indonesia in implementing green marketing is not marketing products that contain Freon type of Chloro Fluoro Carbon (CFC) that can destroy ozone. Furthermore, several producers and green products marketed in Indonesia are as shown in Table 1.

TABLE 1. GREEN PRODUCT PRODUCERS IN INDONESIA

No	Company	Product
1.	PT. Philips Indonesia	Light Bulb Compact Fluorescent Light (CFL)
2.	PT. Monica Hijau Lestari (The Body Shop)	Products with organic ingredients and packaging that can be recycled (cosmetics)
3.	PT. Panasonic Gobel Indonesia	AC with nonCFC freon and Inverter Technology
4.	PT. Sharp Electronics Indonesia	Refrigerator with nonCFC freon
5.	PT. Internasional Chemical Industry	Lead and mercury free batteries
6.	Toyota Astra Motor	Applicable car with hybrid technology
7.	Asus Indonesia	Halogen-free, Lead-free motherboards and Full High Definition

The importance of the concept of green marketing can be seen from the increase in consumption which causes the depletion of natural resources, climate change, air pollution, and waste. Increased consumption is also one of the causes of global warming that is happening now and increasing environmental damage. The world community began to worry about the possibility of environmental disasters that threaten in terms of health and survival of their offspring. Concern about environmental sustainability increases public awareness in various parts of the world about the

importance of consuming environmentally friendly products (green products) [5].

Since the beginning of 2016 electronic sales in Indonesia have increased by around 20-30%. The highest sales of electronic products in 2016 were Air Conditioners (AC) and washing machines. Panasonic positions its company as an environmentally friendly company through the Panasonic Eco Ideas program. Panasonic Eco Ideas is Panasonic's program towards environmentally friendly companies in 2018. This is realized by Panasonic launching electronic products using recycled materials and the latest technology to reduce the level of carbon dioxide (CO₂) emissions that cause greenhouse gases that spur global warming [6].

Panasonic is working on Green Factories (GF) activities in an effort to reduce the environmental impact caused by manufacturing. In particular, each plant based on legal compliance, develop plans to reduce environmental impact in production activities, focusing on CO₂ emissions, total waste generation, water consumption, and the release of chemical substances. Progress implemented and improved control through a special unit management to achieve environmental impact reduction and business management. Panasonic supports government regulations that prohibit the use of air-conditioning substances containing hydrochlorofluorocarbons (non-HCFCs) that trigger global warming [4].

II. MATERIALS AND METHODS

A. Green Marketing

Green marketing is a strategic effort carried out by companies to provide environmentally friendly goods and services to their target consumers [7]. Green marketing is a marketing mix planning process that utilizes changes in consumer awareness of products/services that are more environmentally friendly by changing products, making ways and packaging more environmentally friendly in order to satisfy and meet consumer needs and reduce negative impacts on the environment and also invites consumers to care more about the environment. It can be concluded that environmentally friendly marketing refers to all marketing activities that are responsive to environmental protection [8]. Fig. 1 shows the relation of Green Marketing and Purchase Decision.

Green marketing is a business strategy philosophy that has the following objectives [7]:

- 1) Satisfy consumer needs for products and services that are environmentally friendly and to adapt company behaviour to social and environmental values prevailing in today's society.
- 2) Achieve the company's economic goals, making him realize that achieving these economic goals is not incompatible with the achievement of goals for the environment.
- 3) Achieve both of these goals by minimizing environmental damage.

Green marketing mix adapts four elements of the marketing mix (4P), namely [9]:

1) Green Product.

Green Product is a product that does not pollute the environment, does not waste resources or products that can be recycled. Green products help save energy to maintain and enhance natural environmental resources and reduce or eliminate the use of toxic substances, pollution and waste

2) Green Price.

Green Price is an important element of the marketing mix. Most customers are ready to pay more if there is a perception of the value of additional products. This value can improve performance, function, design, visual appeal or taste. The environmental benefits normally be an added bonus but often will be the deciding factor between the comparison value and quality products with the products of competitors. The price for green products mostly required the extra costs incurred by consumers as a form of quality products that are more environmentally friendly.

3) Green Place.

The choice of where and when to make a product available has a significant impact on attracting customers. Only a few customers are interested in buying green products. The location must also be in accordance with the image that the company wants. The location of the company must differentiate the company from its competitors. This can be done with in-store promotions and attractive visual displays or using recycled materials to emphasize environmental and other benefits.

4) Green Promotion.

Promote products and services to target markets including advertising, public relations, sales promotion, direct marketing and onsite promotions. Smart green marketers will be able to strengthen environmental credibility by using sustainable marketing and communication tools and practices. The key to a successful green marketing mix is credibility.

B. Purchase Decisions

Consumer decision making is a process of problem solving that is directed at the target. Consumer decision is closely linked to information owned and various factors that are influenced by consumer knowledge of the product to be bought. Consumer decision making model will begin with the emergence of consumer needs for the product they want to buy, then after consumers recognize their desires as part of problem solving, the consumer will search for information to fulfil his knowledge of the product he wants [10].

The core of the consumer decision-making is a process of integration that combines the knowledge to evaluate two alternative behaviors or more, and choose one of them. "Decision-making consumer covering all the process through which consumers identify problems, find solutions, evaluate alternatives, and choose between choices [11].

C. Relationship between Green Marketing and Purchasing Decisions

The marketing mix is a tool for marketers consisting of various elements of a marketing program that needs to be considered so that the implementation of the marketing strategy and the determination of the position determined can run successfully [12]. In the marketing mix to increase the amount of quality and quantity of a service, it is necessary to apply a marketing strategy. the factors that influence consumers to decide on a purchase are product, promotion, price and place.

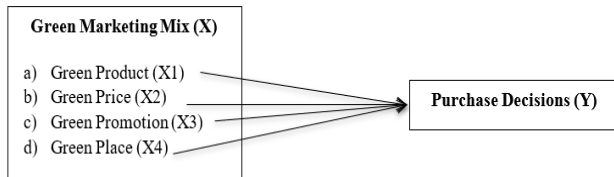


Fig. 1. Research Framework

- H1: Green Product has significant effect on Purchase Decisions
- H2: Green Price has significant effect on Purchase Decisions
- H3: Green Promotions has significant effect on Purchase Decisions
- H4: Green Place has significant effect on Purchase Decisions
- H5: Green Marketing Mix (4Ps) has significant effect on Purchase Decisions

D. Methodology

The type of research used in this study is quantitative methods. The data used in this study are primary data and secondary data. Primary data in this study were obtained from the results of distributing questionnaires to Panasonic electronic products consumers in West Java. This secondary data is obtained indirectly from websites, journals, books, and previous research related to this research. The data analysis method used is Partial Least Square (PLS). Analysis of inferential statistical data was measured using Smart-PLS 3.0 software starting from the measurement model (outer model), model structure (inner model), and hypothesis testing.

The population used in this study was all Panasonic electronic products consumers in West Java. The total population is unknown, therefore sampling using Bernoulli formula. The sample used in this study was 250 respondents. Research using an error rate of 5% α , β error rate of 10%, and the probability of correct or incorrect questionnaires respectively 0.5.

The analysis technique will use a structural model that shows the specification of causal relationships between latent variables. Through the bootstrapping process, T-statistic test parameters are obtained to predict the causality relationship. The structural equation model is written as follows:

$$\eta = \beta_0 + \beta\eta + \Gamma\xi + \zeta$$

η represents the dependent variable vector, ξ is an independent variable vector, and ζ is a residual variable vector. To describe and test the causal relationship model of exogenous variables to endogenous variables, data processing will use Smart-PLS 3.0.

Before the data is processed, an instrument testing is needed first, where an instrument is said to be valid if the data expresses the data of the variable being studied appropriately. Valid means that the instrument can be used to measure what should be measured.

A construct or variable is said to be reliable if it gives a Cronbach alpha value > 0.60. The convergent validity of the measurement model can be seen from the correlation between the indicator score and the variable score. The indicator is considered valid if it has a AVE value > 0.5 or sufficient cross loading, i.e above 0.5 to 0.6, or high > 0.7. The reliability (reliability) is a measure of the stability and consistency of the respondent in answering matters relating to the contract constructs which are the dimensions of a variable. The reliability test can be done together with all questions. Reliability test shows the accuracy, consistency, and accuracy of a measuring instrument in making measurements. If the Alpha value > 0.60, then stated that the variable is reliable.

Partial Least Square (PLS) is a variance-based SEM development that is more oriented to predictions, and to explain the presence or absence of relationships between latent variables. If the structural model and measurement model hypothesized to be correct in the queue explain the covariance of all indicators and the condition of the data and sample size are met, then the covariance based SEM provides an optimal estimate of the model parameters [13].

PLS can simultaneously conduct measurement model testing as well as structural model testing. The measurement model is used to test the validity and reliability, while the structural model is used to test causality (hypothesis testing with predictive models). Furthermore, the fundamental difference between PLS which is a variant-based SEM with LISREL or AMOS-based covariance is the intended use. Covariance-based SEM aims to estimate the model for testing or confirmation of the theory, while SEM variants aim to predict the model for theory development [14].

There are several reasons why PLS is used in a study, namely: first, PLS is a method of analyzing data based on the assumption that the sample does not have to be large. Second, PLS can be used to analyze theories that are still said to be weak, because PLS can be used for predictions. Third, PLS allows algorithm to use series ordinary least square (OLS) analysis to avoid the problem of identifying non-recursive models (reciprocal models between dependent and independent variables). Fourth, in the PLS approach, it is assumed that all variant sizes can be used to explain [15].

III. RESULTS

Based on the distribution of questionnaires in this study, the characteristics of respondents as shown in Table 2 are as follows.

TABLE 2. CHARACTERISTICS OF RESPONDENTS

No	Characteristics of Respondents	Information	%
1	Gender	Female	53.8
2	Age	24-34 Years	38.5
3	Current Education	Bachelor	51
4	Occupation	Private Workers	46.2
5	Level of income	5.000.000 – 10.500.000 IDR	46.15
6	Purchase Intensity	1 time ≤	57.7
7	Domicile	West Java	28.84

Structural model in PLS was evaluated by using the R-square for the dependent variable and the coefficient on a path on the significance of independent variables based on the value of t-statistic of each path. Table 3. below shows the R-square values for the dependent variable.

TABLE 3. R-SQUARE

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Purchase Decision	0.968	0.969	0.004	239.943	0.000

The test results of questionnaires on research through the bootstrapping process Smart-PLS 3.0 program can be seen in Fig. 2.

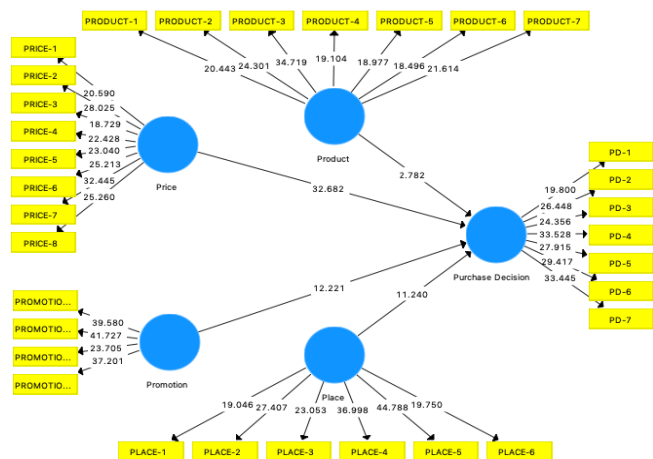


Fig. 2. Results of PLS Algorithm data processing

Based on Fig. 2 the bootstrapping test results show that the T-count of each relationship between indicators in forming the latent variable is greater than the T-Table which is 1.96, this shows that all indicators of green marketing variables and indicators of purchasing decisions are valid and reliable in constructing both of these variables with a significant level of 5%.

Furthermore, in bootstrapping testing the output results in tabular form can be obtained by selecting Open Report> Path Coefficients. In this output, it can be seen the magnitude of the coefficient of direct influence between variables. The output results in this study are shown in Table 4.

IV. DISCUSSION AND CONCLUSION

The results showed the changes in green marketing mix (green product, green price, promotion green, green place) will be able to influence the purchase decisions of Panasonic electronic products amounted to 96.8%, the remaining 3.2% is influenced by other factors. Table 4 shows partially the four sub-variables of the green marketing mix show the influence on purchasing decisions for Panasonic electronic products. Consequently, the most dominant influences in purchasing decisions: price, place, promotion and the product itself.

Green Product is the weakest relationship with purchasing decisions among three other green marketing mix sub-variables green (green price, green promotion, green place).

Green Price has a positive and significant effect on Purchasing Decisions on AC Panasonic Consumers. Green price is the most dominant sub-variable because it has a very strong relationship with the purchase decision. This indicates AC electronic product is a product that is still considered expensive, so the consumer is in the purchase price consideration.

Green Place has a negative influence on Panasonic AC Consumer purchasing decisions. This is due to the strategic lack of product sales locations, the lack of shops that sell Panasonic air conditioners, or the installation of less flexible product installations, so consumers are perceived to be unfavorable.

Green Promotion has a positive and significant influence on Purchasing Decisions on AC Panasonic Consumers. This shows the promotion in this product is successful in instilling its products that are safer or do not have a negative impact on the minds of consumers.

TABLE 4. PATH COEFFICIENTS

	Mean, STDEV, T-Values, P-Values	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Place → Purchase Decision		-0.322	-0.324	0.028	11.633	0.000
Price → Purchase Decision		0.925	0.922	0.027	34.764	0.000
Product → Purchase Decision		0.073	0.075	0.028	2.626	0.009
Promotion → Purchase Decision		0.295	0.297	0.024	12.267	0.000

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