

# Attitude and Purchasing Intention of Malaysian Consumers toward Green Packaged Foods

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**Abstract**—The interaction of business and environment has been an issue since early 70s. The study of consumers' attitude and purchasing intention toward green packaged foods helps marketers and providers to understand how to improve their green products, what type of green packaging they need and how to attract consumers to buy their products. Packaging as the final tool to reach the consumers has a salient role to transfer the message of green foods. In so far as green packaging is concerned, it is a very new concept in Malaysia. As of today there has been no empirical research on Malaysians attitudes and purchasing behavior toward green packaging. Subsequently the aim of this research would be toward this issue. For the purpose of the study a survey was conducted through mall-intercept personal survey. A total of 134 questionnaires were collected within the Klang Valley in Malaysia. Result of the study indicated that consumers' positive attitude along with demographics can shape the marketing strategy of green food providers.

**Index Terms**—Attitude, intention, green package, food.

## I. INTRODUCTION

The interaction of business and environment has been an issue since 40 years ago when some of the researchers started to write about Ecological Marketing. Nowadays consumers are becoming more educated about their environmental responsibility and have more willingness to choose a green product over a conventional one. Marketers realized that packaging performs an important role in marketing communications and could be one of the most important factors influencing consumer purchase decision. The combination of green and packaging would be a new choice of consumers in developing markets like Malaysia. Marketers who are targeting a green segment of the market should avoid any marketing gimmicks in order to make loyal customers to purchase their green products. Marketers should also notice to subjective norms of consumers, since Malaysian notice to the opinion of the "important others" in making green purchasing decisions.

The customer and product is the challenge of every business, and meeting customer needs is a motive of good manufacturing practice. In order to meet the consumers' needs and wants and for a product to be acceptable to customers, quality and cost of product, the product's performance and even environmental issues should be considered. Malaysia, like many other developing countries,

in the early days of abundant resources and minimal development pressures, little attention was paid to growing environment protection and conversation. The concept of green packaging is relatively new to the Malaysian industry. But the green products' consumption is getting popular among Malaysian consumers and the market is emerging tremendously, a similar trend facing by other countries in other parts of the world [1]. Indeed, providers of the green practices are mainly large companies with the headquarters from the UK, USA, Japan and other developed countries. On the other side, most of the local providers are still in the wait and see stage.

There are many different groups force businesses to be environmentally responsible. These groups can be consumers, the Environmental Protection Agencies, local and state governments, trade associations and other groups. Some consumers have changed their taste and purchase behavior in favor of those who claim to make green products and/or engage in green policies. Indeed, if consumers are truly concerned about environmental protection issues, adopting green packaging may help the firms to retain their customer base, while adding new ones.

At this time, green marketing activities amongst the manufacturing industries including the SMIs in Malaysia is almost non-existent. It would be because the green concept is still new to most of them. As of today there has been no empirical research on Malaysians attitudes and purchasing intention toward green packaging of foods. Subsequently the aim of this research would be toward this issue. The scarcity of green packaging researches in Asian countries is due to the improper perception of green products' providers from consumers green purchase behavior.

## II. GREEN PACKAGING; A NOVEL MARKETING TREND

Packaging has an essential role in marketing and distribution of products. At the point of sale, packaging of products can be a crucial issue in a consumer's purchase decision. It also can impact the consumer's mindset of product by its exposure. Even after the purchase, the package of the product can continue to impact the consumption experience. Scientific studies indicate that packaging allow to attract consumer's attention, transfer valuable product information, position the product in the consumer's mind and differentiate the product from others. Therefore, understanding how packaging variables, such as color, design, and graphics, impact consumer realization, evaluation, and behavior is of theoretical and managerial importance. Recently, marketing researchers have focused on the effects of package shape on volume perception, package preference, choice, and consumption (e.g., [2]- [7]).

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The study of Ampero and Vila (2006) highlighted that the packaging undertake as one of the most effective marketing communication tool, due to:

- It grasps almost all consumers of current category of product;
- It communicates with consumers in essential moment- when the purchasing decision is made;
- Consumer is actively involved in communication process, because they examine the package to acquire proper information.

Nowadays, packaging is becoming the most salient and the final tool to attract consumers, transfer the information and influence the decision making process. The studies of Ampero, Vila (2006), Voyles (2005) and Wade (2005) emphasized these main reasons to determine the importance of product packaging:

- formation of product added value
- boost requirements for product safety and consumer safety
- boost requirements for product quality and its preservation
- improve requirements for presentation of information about the product to customer
- decrease of brands differentiation in consumer consciousness and increase of the importance of package a differentiation and identification tool
- decrease of traditional promotion tools efficiency while communicating with consumer and increase of efficiency of the package as a communication tool
- redistribution of marketing communication tools importance from traditional advertising to the communication in selling place

These reasons confirmed the significance of packaging for the both parties of provider and consumer. The package should be considered as an element of communication oriented to the message and to the behavior in scientific literature [8]. The packaging impact can be strong and weak depending on consumer level of involvement. Therefore, packaging, which is communicating with the consumer and influencing decision making process, is the important marketing communication tool, which is connected with promotion elements [9].

Sustainable Packaging Coalition (SPC) and Packaging Digest investigated the viewpoint of 1255 respondents involved in packaging in 2007. More than 73% of the respondents reported that their companies have put emphasized on packaging sustainability during the last year. Once companies in relation to packaging become aware of the need for sustainable practices, the survey shows, they confront some difficulties defining “sustainability” and how to develop and implement practices that make it a reality. Respondents of all groups profess that sustainability should meet market demands for performance and cost regarding to the packaging.

More than 73 percent of purchase decisions are taking in the selling places such as supermarkets and hypermarkets [8]. As a result, consumers assess different brands alternatives only in selling places. It is estimated that consumers spend approximately 20 minutes in the shop and inspecting 20 products a second which means that

consumers has to decide from 24000 brands [8]. All these evidences prove the importance of communication in selling places is increasing and shows an increasing significance of product package as a communication of brand and a tool to be differentiated. The packaging impact can be strong and weak related with consumer level of involvement. Therefore, packaging, which is communicating with the consumer and impacting decision making process, is the prominent marketing communication tool, which is connected with promotion elements [9]. As a novel trend in the marketplace, the package of a product becomes one of the most predominant features to reach the consumer and transfer the valuable information with the strong decision making process influence.

### III. THE ROLE OF ATTITUDE AS A PREDICTOR OF PRO-ENVIRONMENTAL BEHAVIOR

The green movement has a strong impetus as the term “going green” had 15.6 Million hits on Google in January 2008 [10]. And 31 million hits just over two months later. Academicians along with marketing practitioners struggle to identify and realize consumer attitude towards green products, the needs of them and to expand market offerings that meet these needs [11].

Nowadays, a number of consumers comprehend that their purchasing behavior has a direct impact on many ecological problems [12]. Concern for environmental issues represent predilection of human beings which affects their behavior in a positive or negative manner [13]. These predispositions are commonly referred to as attitudes and beliefs [14] and environmental concern is a strong attitude towards preserving the environment (Crosby et al., 1981). A series of beliefs with the combination of cognitive or evaluation create an attitude [15]. One person may hold a lot of beliefs about an object, but researches shows that a relatively small number of those beliefs can contribute as attitude. Previous studies indicate that an individual is capable of attending to or processing only five to nine items of information at a time [16]. It can be argued that consumer’s attitude toward a product or its packaging is primary determined by around five to nine beliefs about the target. These can be considered as salient beliefs at a given point in time. These salient beliefs may be weakened and strengthened or replaced by a new belief; therefore they are subject to change. Ajzen (1985, 1988), Ajzen and Fishbein (1980) explained the link of attitude, intention and behavior which implies that people normally act in accordance with their intentions. In contrast, the study of LaPiere (1934) indicates that the cognitive and effective components of any behavior don’t always match with behavior. However, these studies are not only ones to challenge the assumption that consumers generally behave according to their attitude.

Iversen and Rundmo (2002) investigated the viewpoint of Norwegian people to examine whether attitudes on safety and risk issues are related to safety related behavior. They found that environmental attitudes have a strong relationship with environmental behavior. Their study indicates that health behavior through health attitude indirectly influences environmental behavior and also environmental concern strongly influences green purchasing behavior. The main

reason of losing to establish a link between attitude and behavior may be a multitude of factors concurrently influence specific behaviors. Studies with the focus of probing the impact of single measure are established on optimistic assumptions about the impact of these measures. Therefore the influence of specific attitudes, when measured solely, can be expected to have a soft influence on corresponding behaviors.

Given the range of findings, it seems to be clear that the link of attitude and behavior has to be approached differently and tested deeply. The attitude of consumer toward a green product or service can be a major deciding factor for a positive purchase decision. Interaction between consumers with positive attitude towards green products (including green packaging) and high market mavenship with the high product availability will create a favorable attitude towards purchase behavior, which would result in a stronger intention to purchase leading to a higher purchase of green products [17].

#### IV. THE LINK OF CONSUMER'S PURCHASING INTENTION AND BEHAVIOR

There are some studies investigated the influences of marketing variables and external stimulus including advertisement, promotion and packaging on consumer behavior. Although these studies aid to better understand the comparison between different brands, goods and services, but they don't clarified whether these comparisons lead to purchase decision.

To fill up the gap and introduce an extensive model to explain consumer behavior some studies presented this concept from social psychological point of view and formation of attitudes [18]. As a result, a series of psychological based studies named with expectancy-value models [19] with the focusing on the relationship between evaluation criteria and attitude came to special interest. The expectancy-value model of Fishbein (1963) has been developed by Theory of Reasoned Action [3] and eventually Theory of Planned Behavior [20], [21].

Ajzen (1985) elucidates the link of perception, intention and behavior. Ajzen claimed that a behavior is a function of compatible intentions and perceptions of behavioral control in which perceived behavioral control is expected to moderate the influence of intention on a particular behavior. One of the widely used theories to study consumers' purchasing behavior is Theory of Planned Behavior [20], [21]. This theory is the extension of the Theory of Reasoned Action (TRA) introduced by Ajzen and Fishbein (1980). This theory implies that intention can be predicted by two factors of personal in nature and social influence. Personal determinant is the individual's assessment of performing an action which called attitude toward the behavior [21]. The factor of social influence deals with the perception of an individual on external social pressures put on him to make a decision. Relative importance of both determinants depends on the intention under consideration, but frequently both determinants are important predictors of intention [21]. Furthermore, Theory of Reasoned Action can explain volitional behavior with the use of very simple concepts.

Ajzen (1985) overture that this expected volitional control

can be impacted by two determinants; internal and external factors. Based on the Teich (2001) study, TRA's strength is mostly for its ability to demonstrate how particular internal and external factors interact, which in turn explains why people will or will not perform the general behavior. He also cites multiple empirical studies showing TRA's ability to accurately predict behavior in diverse situations.

The study of Kalafatis et al (1999) emphasizes on two objectives: the first one is pertain to credibility and appropriateness of theory of planned behavior in the context of green marketing and the second one is to realize the different antecedents of consumer purchasing decision in the UK and Greece markets. This study's result shows a support of appropriateness of the theory of planned behavior in predicting purchase intention of green products. The merit of this theory was its worthiness to explain the formation and improvement of attitudes. This model provides a good fit for UK sample while some challenges existed for Greek sample.

Theory of Reasoned Action can interpret volitional behavior with the use of very simple concepts. With the use of intervening steps the model traces back causes of behavior to salient beliefs. With each step from behavior to belief the Theory of Reasoned Action provides more comprehensive details about factors affecting the behavior.

#### V. SOCIO-DEMOGRAPHICS AND PURCHASING INTENTION OF GREEN PACKAGED FOODS

To investigate the impacts of green packaging on consumers' attitude and purchasing intention, the influence of socio-demographic variables is unavoidable. The socio-demographic variables allow describing the tendencies and the preferences of consumers towards green packaged foods [22]. Furthermore, demographic analysis can be useful in three ways: it can be used in trend analysis, used as market segment descriptors and it can also provide helpful information for policy questions related to macro marketing [23]. In general, many researchers have found a strong correlation between environmental purchase behavior and the level of income, education and gender [24]. Therefore, it would be beneficial to investigate the impacts of demographic and cultural influences on consumers purchasing behavior. In this study we investigate 4 main socio-demographic variables: Age, Gender, Level of income and Race.

The factor of age has been explored by many studies since the early studies of green purchasing behavior of consumers emerged. For instance, Magnusson et al. (2001) found that young consumers who are in the age 18-25 years compare to older respondents have a more positive attitude towards green food, and perceived it more likely that they would buy a green alternative.

The development of special sex roles, abilities, and attitudes has brought most researchers to argue that women are more likely to hold favorable environmental attitudes than men since, as a result of social development and unique sex roles; women are more aware of the impact of their behavior on others [25].

The scarcity of the researches to investigate the relationship of green purchasing behavior and race is evident. This study

aimed to examine the role of race to choose a green packaged food among Malaysian people. The investigation of this factor is important as Malaysia encompass 3 different race residents which are Malay, Chinese and Indian.

VI. RESEARCH DESIGN

A. Sampling and the Measurement Instruments

The survey was conducted through mall-intercept personal survey. A total of 134 survey questionnaires are collected within the Klang Valley in Malaysia used for data analysis. The respondents asked to fill up the questionnaire and return in immediately. The questionnaire distributed through mall-intercept personal survey. Prior to collect data, availability of green packaged foods in the location is approved.

B. Data Analysis

The data was analyzed using the Statistical Package of the Social Science (SPSS), employed both the descriptive and inferential analysis techniques (correlation analysis, multiple regression analysis and ANOVA). The statistical analysis was used is SPSS package 16.0.

VII. RESULTS AND DISCUSSIONS

In order to measure the consumer’s attitude toward green packaged foods the subjects used a semantic scale with the asking to fill up the statement by rating a pair of adjective, on 5- point bipolar scales: “I would be pleasant if I purchase a green packaged food in the coming month” [26]. The item is scored from -2 to 2. Ajzen (1991) suggested to use bipolar in compare to unipolar scales to measure the attitude component. A summary of questionnaire shows that 45.5% of the respondents were agreeing to the question of “I would be pleasant if I purchase a green packaged food in the coming month.” In addition, 42.5% were strongly agree for the question of “green packaged food may reduce environmental harm.” It demonstrates the high awareness of Malaysian consumers about the environmental issues.

A. Respondents’ Demographic Analysis

There were 134 respondents of the questionnaire that all indicated their demographics. Majority of them were male (54.5%) and 75.3% of respondents were in the age of 18-45. The sample was predominantly Chinese (38.8%) followed Malays (35.1%). TABLE I demonstrates a summary of Respondents’ demographic.

B. Correlation Test

Pearson correlation test were used to identify the relationship between attitude and purchasing intention. According to the analysis, attitude of consumers significantly impact consumer purchasing intention of green packaged foods. Also, the stepwise regression analysis results show that the most important factor to predict purchase intention is attitude. The result of this study supports the theory of Ajzen (1985, 1988), Ajzen and Fishbein (1980) which explained the link of attitude, intention and behavior. The theory implies that people normally act in accordance with their intentions. Table 2

indicates a summary of the results.

TABLE I: DEMOGRAPHIC PROFILE OF RESPONDENTS (N=134)

Characteristic	Percentage (%)
<b>Gender</b>	
Male	54.5
Female	45.5
<b>Marital Status</b>	
Single	41.8
Married	58.2
<b>Age</b>	
18-25	24.6
26-35	23.1
36-45	27.6
46-55	14.9
56 or above	9.7
<b>Income</b>	
<1500	20.9
1500-2999	24.6
3000-4499	23.9
4500-5999	17.9
6000 and above	12.7
<b>Race</b>	
Chinese	38.8
Indian	14.9
Malay	35.1
Others	11.2

TABLE II: RELATIONSHIP BETWEEN ATTITUDE AND PURCHASING INTENTION OF GREEN PACKAGED FOODS

Independent variable	R	P value
Attitude	0.374	0.000*

\*P-value is significant at 0.05

A summary of the correlation of demographic variables and purchasing intention of green packaged foods indicates that age, gender and race have positive correlation and only income level do not have significant relationship with purchase intention of green packaged foods in Malaysia.

C. Regression Test

In this study, multiple regression analysis is used to provide pattern of relationship between the set of predictors and the outcome factor (purchase intention). To meet the objective of the study two models are developed. The first model included only attitude as independent variable and the second model encompasses 5 independent variables (gender, age, income level, race and attitude) and one dependent variable (purchasing intention).

TABLE III: VARIANCE EXPLAINED BY FACTORS IN PURCHASING INTENTION OF GREEN PACKAGED FOODS

model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.374 <sup>a</sup>	.140	.133	.55654
2	.463 <sup>b</sup>	.215	.184	.53996

a. Predictors: (Constant), Attitude

b. Predictors: (Constant), Attitude, Age, Gender, Race, Income

The first iteration indicates R<sup>2</sup> of 14% while the second iteration’s R<sup>2</sup> is 21.5% as shown in table 5. In the second model, demographic factors have been added which caused to an increase in R<sup>2</sup>. It can be interpreted that 21.5% of the variance in purchase intention of consumers is significantly

explained by the independent variable of gender, age, income level, race and attitude.

The coefficient table indicates attitude as the most important factor in purchasing intention of green packaged foods followed by race. The two variables of attitude and race were significant factors to predict purchasing intention of green packaged foods among Malaysian consumers. The result implies that consumers with different attitudes and races may have different intention to purchase green packaged foods. The three main races of Malaysia that have been studied (Chinese, Malay and Indian) may have different attitude and perception toward green packaged foods.

TABLE IV: FACTORS PREDICTING PURCHASE INTENTION OF GREEN PACKAGED FOODS

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.678	.219		12.221	.000
	Attitude	.274	.059	.374	4.627	.000
2	(Constant)	2.399	.311		7.709	.000
	Gender	-.194	.113	-.162	1.713	.089
	Age	-.085	.049	-.181	1.727	.87
	Income	-.084	.054	.184	1.538	.127
	Race	.152	.053	.273	2.874	.005
	Attitude	.336	.066	.457	5.078	.000

VIII. CONCLUSION

The number of established packaging suppliers is increasing by selling a vast variety of green products. Although the concept of green packaging of foods is relatively new to Malaysian manufacturers but the consumption of green packaged foods is getting popular in Malaysia and the market is emerging dramatically similar to developed countries' trends. Packaging as the final tool to reach the consumers, transfers the message of green providers. The number of green packaging suppliers is increasing especially in food industry in Malaysia. These suppliers provide sustainable packaging by using recyclable and eco-friendly materials.

In order to segment the market of Malaysia for green packaged foods, marketers should be aware of demographics. The three factors of age, gender and race are predominant factors to segment and target consumers. Marketers will be able to seize the opportunity of "go green" in Malaysia by emphasizing on these three factors along with consumers attitude. Targeting consumers based on their attitude is a recommended strategy to be a green prior company in Malaysia.

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