

Normative Dimensions' Preferences Towards Intention to Purchase Green Food Product

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Abstract: Normative dimensions constitute one of the important elements in the Theory of Reasoned Action (TORA) model. However, the changes of lifestyle over period and different societies have spurred the TORA model constitution and also to vary interpretation of the model itself towards intention to purchase the green food product. Therefore, this paper aims to explore the underlying dimensions of normative factor that may have the relationships with consumers' intention behavior to purchase the green food product and determine the relationships among Malaysian consumers through the questions, both on salient referents, motivation to comply and intention subject to the green food product using six-point Likert scale (1 representing definitely disagree, unimportant and not purchase while 6 representing definitely agree, important and purchase). A total of 600 respondents were interviewed via structured questionnaire where they need to rank their agreement and importance level of statements given in the questionnaire to gather information of the normative dimensions that influence them to purchase the green food product. Based on the analyses of the study, the underlying dimensions from the factorization of norms have been found to be positively correlated to the Malaysian consumers' intention to purchase the green food products among the Malaysian consumers.

Key words: Environmental friendly • Factor analysis • Green food and Normative dimensions

INTRODUCTION

Consumer's interest in environmental friendly or green food products has grown tremendously in many industrialized countries during the past ten years. Malaysia as a developing country also experienced a continuous development of environmental concern behavior among the Malaysian people described by the increasing demand towards environmental friendly food product and more safety food choices, respectively. The increasing of the green consumer segment consequently resulted from the changes of lifestyle and purchasing power ignited from the good economic performance in recent period. An environmental friendly or green food product can be described as goods that have more environmentally sound contents or packaging or both [1]. This study will focus on no chemical in raw material or environmental friendly food products, to be called green food. Parallel to the objectives of Malaysian government

in reducing the pollution and emission to the environment, the idea of environmental friendly or green food products should be considered as one of the appropriate solution to the environmental problems occurred.

Most of the time, stricter environmental regulations were judged negatively by producers, who complain about cost increases, income reduction and product competitiveness in the new global environment [2, 3]. On the other hand, consumers who claim to be environmentally conscious put additional standards on manufacturers, distributors, retailers and policy-makers. People always use organic food term to refer to the environmental food products or green food. Basically, the different pronunciations of green food stood the same meaning and definition of green food. Different pronunciations respectively out of the matter as the main objective of the environmental friendly or green or organic products concern with the minimization of pollution

emission. Despite that, consumers that increasingly concern and realize the essentials of environmental issues should be pronounced as green consumers and the marketing practice that has the environmentally responsible function should be understood as green marketing.

Moreover, the green concept implementation readily applied aggressively during recent years. The Malaysia governments' efforts by introducing the schemes such as Hazard Malaysian Certification Scheme for Hazard Analysis and Critical Control Point system (MCS HACCP) and Good Agricultural Practices (GAPs) which comprising many schemes that specifying towards many field of agriculture (SALM, SPLAM and SALT) should be seen as an action of the concern and responsibility of policy maker to the society and environment. Although the implementation of HACCP, ISO 22000 certification, Good Agricultural Practices which was internalizing the SALM, SPLAM, SALT and SOM practices were not truly direct in developing the green food production, this initiatives can be seen as an effort to introduce and expanding the idea of producing the new beneficial food consumption called the environmental friendly or green food products, which were reconsidering the social welfare of society and the expectation impacts for sure to overcome the problem occurred between polluters-producers and environment.

Norms and Green Food Product: The normative factor, or subjective norm, represents another major variable that has been considered in context of environmentally responsible behavior. Norms were basically discussed in terms of the motivation of the individual to visibly comply with the group norm and behavior in order to achieve rewards or avoid punishment [4]. Most research finds that normative influences have positive impact on green purchasing behavior [5-8]. If the consumption of a particular product threatens the welfare of a large number of people and/or it is possible to directly identify the parties responsible for the hazard, the normative pressure to purchase green products will be greater [9].

The green food product can be determine as a product of food that were produced according to certain production standards, meaning they were grown without the use of conventional pesticides, artificial fertilizers, human waste, or sewage sludge and that they were processed without ionizing radiation or food additives. Livestock then were reared without the routine use of antibiotics and without the use of growth hormones. In most countries, organic produce must not be genetically modified. Basically, the understanding of benefits and

impacts to the environment from the green food products consumption could change the consumer's purchasing behavior from the conventional one to the alternative, green food products. Consequently, consumers accepted the green products when their primary needs for performance, quality, convenience and affordability were met and when they also understood how a green product could help to solve environmental problems [10]. The green consumers always consider the effects to the environment have the correlation or associated with the product purchasing. Such changes as Westernization, the Asian countries were also consuming similar foods and quantities like western countries [11]. The changes consumption patterns were considerably triggered from the behavior of environmental concern in food consumption among the developed countries.

The literature had identified two types of subjective norms; social norms and personal norms [12, 13, 9]. Personal and social norms were distinct in terms of sources of motivation and have different effects on behavioral intentions. The social norms could be defined as the motivation that comes from external sources such as monetary rewards or recognition [14]. Additionally, different types of social norms, such as injunctive norms (what others approve or disapprove) and descriptive or personal norms (what others do) have influenced littering behavior [15]. These previous findings directly point out the relationships and the effects between normative dimensions with the environmental friendly behavior. However, there was a dispute between two schools of social psychology regarding the usefulness of social norms to predict and explain behavior [16]. One school of thought criticized social norms as having little explanatory or predictive value to the intention behavior [17, 18]. Another school of thought views social norms as critical components for understanding human social behavior [12, 19, 20]. There were, therefore, many studies try to prove empirically which school of thought is more likely to be valid.

The following studies presented the positive effects of norms on environmentally responsible behavior. Norms basically could influence energy use in various neighborhood contexts [21]. It was found that respondent's perceptions of neighbors keeping thermostats low were positively correlated with natural gas conservation patterns. Consistently found, that normative factors were important determinants of environmentally responsible behavior [22]. Moreover, it had been confirmed that changing the intentions of non-adopters of energy conservation behavior depends upon

changing social norms, not attitudes [23]. It also indicated that social norms were better predictors of littering behavior than attitudes under conditions of low attitude accessibility [24]. By using the casual modeling to test the effects of a general attitude of environmental concern in the Theory of Reasoned Action, it had been found that direct effect of attitude of the environmental concern on the behavioral intention to vote for container laws as well as indirect effects through cognitive and normative structures, attitude toward voting and the subjective norm for voting [6]. The indirect effect of social norms on recycling behavior existed through persona norms which was purported to shape pro-social or altruistic behaviors [25]. As discussed, the relationships between the norms dimensions and intention behavior cannot be ignored in the determination of people either towards the intention behavioral or actual behavior itself.

Benefits gained from the green food consumption consequently bring out the positive advantages and output of deducting the environmental pollution and emission. Literature in contribution from the normative dimensions towards intention to purchase the green food product showed different findings in this issue. Undeniably, it is important to study theoretically and empirically the Malaysian consumers' intention towards purchasing the green food product to enhance the environmental friendly behavior among them and how the factors of norms affecting the intention among Malaysian consumers. Conceptually, this study focused in the study and exploration of the normative underlying dimensions among consumers and how the dimensions or factors could affect the intention to purchase the green food product whether in direct or indirect manner.

Objectives and Concept of Study: The basic concept of this study was implemented from the Theory of Reasoned Action (TORA) model. However, the investigation of normative dimensions among people towards a subject is just a part of the whole model. This study focused in investigating the sub-dimensions of consumers' normative factors and the relationships between those dimensions to the intention to purchase the green food product. Studies on consumers' norms have adopted various different measures in capturing the factors of subjective norm itself. The study objectives were firstly, to assess the reliability of the developed instrument, secondly to explore the underlying dimensions of subjective norms among consumers towards green food product and finally to determine the direct relationships between the normative dimensions and intention to purchase the green food product.

MATERIALS AND METHODS

Sample Procedure: The structured questionnaires were distributed to the respondents from main city of all states in Malaysia using stratified random sampling with help from 3 trained enumerators. Every single respondent got a simple explanation from interviewers about the study purposes or objectives and guidelines in answering the questionnaires. Six hundred set of questionnaires were used after data screening processes and proceed to perform the exploratory factor analysis. The determination of respondents was determined from the significant assessment of the appropriate sample size in performing the exploratory factor analysis used in this study which summarizes and provides a crude yardstick for determining the sample size. Due to the status of multiracial country of Malaysia, the participation of respondents for this study varies among Malays, Chinese and Indians. The races and other socio-economic profiles proportion were based on the statistics prepared by the Department of Statistics, Malaysia. Respondents were asked using a structured build questionnaire which implies both Malay language and English language. Revision and pilot study indicated no discrepancies between the English and Malay version of questionnaire. The content and items of the questionnaire also have been discussed with experts and the reliabilities of the questionnaires were also estimated by Cronbach's Alpha Coefficient, indicating their high validity.

Measurement of Variables: Based on the modified TORA model, the attitude divided to 2 major components namely salient referents and motivation to comply. Both attitude components in the questionnaire consists of ten questions that related to the consumers' attitude which was focusing the attributes towards environmental issues such as the quality, taste and price of green food products. A few other issues such as the avoidance of poisonous or hazardous food ingredients, allergic effects of green food products and the convenience in purchasing the green food consumption also have been asked in the questionnaire. In order to conduct the analyses, the salient referents items were rated using six-point Likert scale, namely 1 = Definitely disagree, 2 = Quite disagree, 3 = Slightly disagree, 4 = Slightly agree, 5 = Quite agree, 6 = Definitely agree. While in obtaining the motivation to comply items were rated using six-point Likert scale, namely 1 = Definitely unimportant, 2 = Quite unimportant, 3 = Slightly unimportant, 4 = Slightly important, 5 = Quite important, 6 = Definitely important.

The other important measurement was the intention items that were rated also using six-point Likert scale, namely 1 = Definitely not purchase, 2 = Most likely not to purchase, 3 = Unlikely to purchase, 4 = Likely to purchase, 5 = Most likely to purchase, 6 = Definitely purchase. The intention variables were measured based on 5 questions which likely to know the intention to purchase the green food product on the next shopping trip with certain conditions and differences such as 1) *If the price of green food products is decreased 10%, which response best reflects your intentions to purchase it for the purpose of helping to protect the environment on your next shopping trip*, 2) *Which response best reflects your intentions to purchase a green food product for the purpose of helping to protect the environment on your next shopping trip*, 3) *If the price of green food product is increased 10%, which response best reflects your intentions to purchase it for the purpose of helping to protect the environment on your next shopping trip*, 4) *If the price of green food products is 10% higher than the conventionally produce food product, which response best reflects your intentions to purchase it for the purpose of helping to protect the environment on your next shopping trip* and 5) *If the price of green food products steadily same as the conventionally produce food product, which response best reflects your intentions to purchase it for the purpose of helping to protect the environment on your next shopping trip*, respectively. A value came out from the sum of all items in intention represented the intention variable value in further analysis of correlation in order to determine the correlation between the normative dimensions with intention to purchase the green food product.

Method of Analysis: The Cronbach's alpha coefficient was used to assess the reliability of the Likert scale in the survey by investigating the internal consistency of the responses for both items in salient referents and motivation to comply variables concerning the affection of normative factors towards intention to purchase the green food product. Further to the analysis, exploratory factor analysis was performed to identify common threads linking the 18 items (including both variables) for affection of normative factors towards intention. Factor analysis is a suitable statistical tool for estimating the underlying factor pattern for a number of attributes which have been consolidated into a manageable sort for analysis [26]. Principal component analysis was used as the factor extraction method and Varimax Normalization was used as the rotation method only after the Kaiser-Mayer-Olkin

(KMO) test was conducted to satisfy the analysis needs and requirements. Bartlett's test of Sphericity and KMO test of sampling adequacy were initially performed on the data to confirm the appropriateness of conducting factor analysis [27]. The underlying dimensions occurred in the previous analysis then were analyzed using the Pearson Product-Moment Correlation to determine the positive or negative relationships between the variables as stated both from salient referents and motivation to comply with the intention to purchase the green food product.

RESULTS AND DISCUSSIONS

Socio-Economic Profiles of Respondents: In the 600 filled questionnaires, about 60 percent of respondents were female and 62 percent of respondents were Malays. The results also indicated that 47.7 percent of respondents' age was between 22-30 years. The average age of respondents was about 27 with standard deviation of 7.980. The results also presented that 60.3 percent of respondents were single, 49.7 percent of respondents had family members in range between 4 to 6 members and 54.2 percent of respondents had family members below 12 years in range 1 to 3. This study also presented 54.8 percent of respondents were passed secondary school graduation, 51.5 percent of respondents were in private sector and 29.3 percent of respondents earned a monthly household income more than RM5000.

Dimensionality: The reliability analysis was conducted to ensure the internal consistency was at least maintained if not improved. According to Table 1, the alpha if item deleted for all of the items did not exceed alpha standardized item. The Cronbach's alpha based on standardized items showed a reliable and stable value $\alpha = .910$ and $\alpha = .876$ for both salient referents and motivation to comply.

As can be seen in Table 2, Kaiser Mayer-Olkin measure of sampling adequacy test for the set of predetermined items, salient referents and motivation to comply reached values of at least 0.856 and 0.837 while Bartlett's test of Sphericity was statistically significant, $\chi^2 = 3765.677$, $p = 0.000$ and $\chi^2 = 2891.693$, $p = 0.000$. The KMO values mean that the degrees of common variance among the items are meritorious [28].

Based on the cross-factor loadings in the rotated component matrix in, the interpretation of the factors was summarized. The advantages of varimax rotation were the stabilization and unaffected on eigenvalue and the percentage of total variance (dimensions of factors)

Table 1: Item Reliability Analysis for Normative Scales

	Cronbach's Alpha if Item Deleted	
	Salient Referents	Motivation to Comply
Item 1	.894	.869
Item 2	.906	.875
Item 3	.904	.869
Item 4	.899	.860
Item 5	.893	.863
Item 6	.899	.856
Item 7	.889	.849
Item 8	.891	.854
Item 9	.896	.857
Cronbach's Alpha Based on Standardized Items	.910	.876

Note: Cronbach's Alpha, $\alpha > 0.70$ considered satisfactory

Table 2: Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity

Variables	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity and Significance
Salient referents	0.856	3765.677 p = 0.000
Motivation	0.837	2891.693 p = 0.000

Note: Bartlett's Test of Sphericity significant level $p < 0.000$ and Kaiser-Meyer-Olkin measure of sampling adequacy > 0.60

Table 3: Factor Loadings for Salient Referents

Items	Component	
	1	2
Q1.1		.673
Q1.2		.930
Q1.3		.854
Q1.4	.870	
Q1.5		.687
Q1.6	.786	
Q1.7	.781	
Q1.8	.838	
Q1.9	.751	
Eigenvalue	5.261	1.379
Variance Explained	58.454	15.325

Note: Factor loading > 0.40 , eigenvalue > 1 and total variance explained > 60 percent

because the angle of each factor remain and not change by the rotation. Two components from both of salient referents and evaluation of the outcomes were adapted for further analysis which succeed the suppress value of factor loading based on sample size [29].

Salient Referents: According to Table 3, the Exploratory Factor Analysis (EFA) in data extraction performed 2 factors namely; *Non-Family (NF)* and *Family (F)* with eigenvalue above 1.0 and total variance explained 73.779 percent. Eigenvalue is the column sum of squares for a factor; it also presents the mount of variance accounted for by a factor [29]. The analysis identified two latent factors or dimensions that may have the relationships with consumers' intention to purchase the green food products as follows:

The Non-family (NF) was recognized as the first factor. This factor consists of 5 sub-variables and has a total variance of 58.454 percent; item Q1.4 *Government thinks that I should purchase green food products* has the highest factor loading (0.870). This was followed by item Q1.8 *Mass media think that I should purchase green food products* (0.838), item Q1.6 *Environmentalists think that I should purchase green food products* (0.786), item Q1.7 *My teachers or professors think that I should purchase green food products* (0.781) and lastly item Q1.9 *Politicians think that I should purchase green food products* with the lowest factor loading (0.751). The result of this factor suggests that non-family in salient referents variable may contribute to the awareness and related to the intention to purchase the green food products.

The Family (F) was the other factor which has a total variance of 15.325 percent and comprises of 4 sub-variables; the highest factor loading in this factor was item Q1.2 *My parent think that I should purchase green food products* (0.930) followed by item Q1.3 *My family think that I should purchase green food products* (0.854), item Q1.5 *My relatives think that I should purchase green food products* (0.687) and item Q1.1 *My friends think that I should purchase green food products* (0.673). The family in salient referents variable may have relationships among Malaysian consumers' intention to purchase the green food products.

Motivation to Comply: Based on Table 4, two components emerged from the factorization of motivation to comply namely *Non-Family Importance (NFI)* and *Family Importance (FI)* with eigenvalue above 1.0 and total variance explained 67.871 percent. The Non-Family Importance (NFI) was recognized as a first factor. This factor consists of 5 sub-variables and has a total variance of 50.698 percent; item Q2.9 *The advice of politicians often influences my decision to purchase green food product is* (0.873). This was followed by item Q2.4 *The advice of government often influences my decision to purchase green food product is* (0.851),

Table 4: Factor Loadings for Motivation to Comply

Items	Component	
	1	2
Q2.1		.604
Q2.2		.902
Q2.3		.855
Q2.4	.851	
Q2.5		.589
Q2.6	.716	
Q2.7	.712	
Q2.8	.838	
Q2.9	.873	
Eigenvalue	4.563	1.546
Variance Explained	50.698	17.173

Note: Factor loading > 0.40, eigenvalue > 1 and total variance explained > 60 percent

Table 5: Pearson Product-Moment Correlation of Salient Beliefs

Dimension	Intention	
	Pearson Correlation	Sig. (2-tailed)
Salient Referents		
Non-Family (NF)	0.602**	0.000
Family (F)	0.246**	0.000
Motivation to Comply		
Non-Family Importance (NFI)	0.557**	0.000
Family Importance (FI)	0.186**	0.000

Note: ** Correlation is significant at the .01(2-tailed) and the numbers in parenthesis are alpha coefficient

item Q2.8 *The advice of mass media often influences my decision to purchase green food product is* (0.838), item Q2.6 *The advice of the environmentalists often influences my decision to purchase green product is* (0.716) and lastly item Q2.7 *The advice of my teachers or professors often influences my decision to purchase product is* with the lowest factor loading (0.712). The result of this factor suggests that non-family influence may have relationships with intention to purchase the green food products.

The Family Influence (FI) was the other factor which has a total variance of 17.173 percent and comprises of 4 sub-variables; the highest factor loading in this factor was item Q2.2 *The advice of my parent often influences my decision to purchase green food product is* (0.902) followed by item Q2.3 *The advice of my family often influences my decision to purchase green food product is* (0.855), item Q2.1 *The advice of my friends often influences my decision to purchase green food product*

is (0.604) and item Q2.5 *The advice of my relative often influences my decision to purchase green food product is* (0.589). The family influence in salient referents variable may have relationship towards intention among Malaysian consumers to purchase the green food products.

Relationships Between the Dimensions and Intention:

The correlation analysis had been employed to determine the existing of relationships between the salient beliefs and evaluation of the outcomes dimensions selected with intention to purchase the green food products.

As can be seen in Table 5, the coefficient of correlation between Non-Family (NF) and intention was 0.602. Based upon a t-statistics value and a 1-tailed test, the null hypothesis can be rejected at the .01 significance level ($r = .602$, $p = .000$). This shows that there was a positive correlation between the consumers' salient referents of non-family dimension and his or her intention to purchase the green food products. While the coefficient of correlation between Family (F) and intention was 0.246. Based upon a t-statistics value and a 1-tailed test, the null hypothesis failed to reject at the .01 significance level ($r = .246$, $p = .000$). This shows that there was a positive correlation between the consumers' salient referents of family with his or her intention to purchase the green food products.

Coefficient of correlation between Non-Family Importance (NFI) and intention was 0.557. So, the null hypothesis can be rejected at the .01 significance level ($r = .557$, $p = .000$). This shows that surely there was a positive correlation between the consumers' salient referents of non-family importance with his or her intention to purchase the green food products. The results also indicated that the coefficient of correlation between Family Importance (FI) and intention was 0.186. Null hypothesis can be rejected at the .01 significance level ($r = .186$, $p = .000$). This shows that there was a positive correlation between the consumers' salient referents of family importance dimension with his or her intention to purchase the green food products.

DISCUSSION

This study found positive relationships between all normative dimensions; NF, F, NFI and FI with intention to purchase the green food product. This study identified the relationship between subjective norms with respect to purchase the green food product and intention to purchase the green food was positive as proposed by

previous researchers [21, 6]. These two early conclusions can be accepted based on the findings in hypothesis-testing analysis. Two basic determinants that represent subjective norm with sub-factors existed as significant factors or underlying dimensions in determining the intention to purchase the green food product among Malaysian consumers.

From the results, Non-Family Importance (NFI) which was the representative of motivation to comply dimension has been identified as the highest factor that has positive relationship with the intention to purchase the green food product. The Non-Family (NF) that represents the salient referents also showed some high correlation to the intention. In both of the normative determinants (salient referents and motivation to comply) the family roles of influencing the intention to purchase the green food products positively correlated to the intention in weaker manner. However, all of dimensions exist as normative factor determinants considered satisfy in determining the norms that have the positive relationships with intention to purchase the green food product among Malaysian consumers. This study findings yield the same results as the previous norm-intention relationship research in the area of environmental responsible behavior [22][24]. They found that the normative factors were more important determinants of environmental responsible behavior using the Theory of Reasoned Action (TORA) model. The social context alone was sufficient to produce the behavior. The highly visible, widespread and socially desirable nature of the program means that on a neighborhood basis, the norm for recycling probably changed and persons with positive attitudes towards environmental concern will recycle if given an opportunity, but more importantly, the results show that unconcerned individuals in the strong recycling community reported high levels of recycling [30].

Consistent with the results of this study, the preferences from the normative dimensions positively correlated to the intention to purchase the green food product. Respectively, Malaysian consumers' actions were depending on the environment or people surrounding them and belonging to a certain group. In other words, their intention to purchase the green food product were more influenced by the collectivism activities which represents the level of mental programming which is shared with some people [31]. In this case, the supposition of the interaction between the people in a group to gain knowledge and information is high.

CONCLUSION

This study enriches existing intention behavior theory originated from the Theory of Reasoned Action (TORA) model. This study sought to determine the Malaysian consumers' normative factors and identify the underlying dimensions that will influence consumers' intention to purchase green food product in order to enhance the implementation of sustainable or environmental friendly food production, marketing and formulate policies in improving Malaysia's food industry. Basically the normative dimensions play some major role in developing the group of consumers that intent to consume the green food product. The results consistently agree with the determination of many researchers about the norms preferences resulted in influencing the intention behavior either it was direct or indirectly related with each other. Depend on the findings of the study which accomplished the objectives of dimensions identification and determination of relationships between normative dimensions and intention behavior, few suggestion have been remarks in term of theoretical and practical efforts. The principles for implementing green specifications have been discussed based on literature related to food production. Economically, the implementation of green principle in food production should be internalizing the social welfare concept which directly benefits the consumers in terms of healthier and safer food product. From the factor analysis, two factors emerged as important success factors, including "Family" and "Non-Family" from the factorization of salient referents determinant, as well as "Family Importance" and "Non-Family Importance" from motivation to comply determinant. In parallel with green technology and techniques, the study has identified that involvement by non-family factor of normative dimensions should be the most important factor for the enhancement of intention to purchase the green food product among consumers. The importance of influence level among underlying dimensions which were occurred from normative determinant in explaining the intention behavior may trigger some changes in consumers' practice and intention. Surprisingly, the study findings showed high positively correlated of non-family dimensions with intention to purchase the green food product compare to the family factors. With contribution from different level of society from relatives to the politicians, the success of green food consumption among Malaysian consumers can enhance the demand of

green market depend on how the people playing their characters to achieve greener and healthier society which undoubted will conserve and take a good care to the environment.

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