The influence of socio-demographic factors and product attributes on attitudes toward purchasing special rice among Malaysian consumers

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Abstract: The study investigated socio-demographic factors and product attributes affecting purchase decision of special rice by Malaysian consumer. The primary data were analyzed by using binary logit model. Demographic factors and consumer preference for special rice (with reference to basmati rice) attributes were identified to affect purchasing behavior for special rice. Size of household, marital status, number of children, household income and gender of consumers are the main socio-demographic factors that significantly influence households' choices of special rice for home consumption in the Klang Valley area. The findings also suggest that product attributes such as flavor and aroma, availability, brand name and quality also influence the frequent purchasing of Basmati rice among the Malaysian consumers. However price and easy preparation are not significant in influencing the frequent purchasing of Basmati rice since most consumers are aware that special rice such as Basmati is expensive and all rice has to be prepared in a usual way.

Keywords: Basmati rice, binary logit, socio-demographic, preference and attitude, rice attributes

Introduction

Rice is a staple food for Malaysians. Despite the introduction of other food item, rice has remained as the main source of food energy for the majority of the Malaysian population. Malaysia's domestic rice production for the last 10 years accounted for about 77% of total domestic consumption while the remaining 23% were imported from international market. This makes Malaysia the world's ninth biggest rice buyer and consumes about 2.2 million tons of rice annually. Total rice demand for the domestic market is projected to increase from 2.1 million tons in 2008 to 2.4 million tons in 2011 due to population growth. However, there is substantial empirical evidence indicate that per capita rice consumption in Malaysia has declined over the years. According to recent data from Malaysian Ministry of Agriculture and Agro-Based Industry (MOA, 2008), per capita consumption of rice has declined from 85.7 kg in 2000 to 82.8 kg in 2008 and it is further anticipated to decline to 80.4 kg in 2010. Some factors contributing to the decrease include the rising income, changing in life style and urbanization (Haung and David, 1993; Mad Nasir and Adnan, 2004). Other studies have indicated globalization, openness to fast food restaurants and occupation may have negative influence on rice consumption (Pingali and Rosegant, 1998; Ito *et al.*, 1989). Similar situation can be observed in major rice eating countries such as Thailand, Japan, Korea, Taiwan and Indonesia (Chataigner, 1992; Jikun and Cristina, 1993; Suwannaporn *et al.*, 2008a). Recent studies conducted in these countries found that rice consumption has dwindled in an apparent change of dietary patterns with the flood of Western fast food. Beside the influx of Western fast food restaurants, the mushrooming of local hawkers with mostly wheat based cook food such as noodles and 'roti canai' has also contributed to the changes in dietary intake of rice. Needless to say that the health conscious consumers are now taking less and less high carbohydrate food such as rice might also contribute to the lower per capita consumption of rice. Thus the substitutions effect can be clearly seen in this part of the world including Malaysia. For the last 10 years one can see an increase in wheat and frozen potatoes import in this country (DOS, 2008) and the consumption of alternative foods like bread, noodles, meats and other cereal products has sharply increased.

However, the consumption of rice is not homogeneously distributed among consumers and some researchers have observed a gradual change to towards higher quality rice (Pingali *et al.*, 1997). In a recent study carried out in China by Hsu *et al.* (2001) found that Chinese consumers differentiate rice according to quality and other attributes such as stickiness, fragrance, gluten and protein content with widely varying prices, reflecting high income elasticity for these type of rice. In Japan, japonica' varieties, characterized by adhesive and softer texture, are the most valued (Kako *et al.*, 1997; Heinemann *et al.*, 2005). Similar patterns have been observed in Malaysia as consumers go for quality rice. This is more apparent in the rice markets for presence of different types and quality of rice. The famous brands in the market are Sakura, Jasmine, Sunflower, Jati,

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Sun White, Golden Peonies, Pearl, Faiza and others that offer different grades of rice and different types of rice such as long grain rice, fragrant rice, brown rice, parboiled rice and basmati rice. Basmati rice which has special characteristics such as sweet aroma, long grain, non-stickiness make it a prefer rice for special occasion for household consumption. For example, basmati rice is being cook as Brainyi Rice or chicken rice. When properly cooked, most long grain rice has dry and fluffy kernels. Basmati rice has a distinctive odor; grains are double their length after cooking and remain separate and claim to be less in carbohydrate. Furthermore this type of rice is relatively more expensive compare to the regular rice. Although per capita basmati consumption in 2007 was nearly three times that of 1970 (DOS, 2008), little is known on the level of consumer acceptance or preference. Thus this study attempt to understand the basmati rice attributes and consumer segments associated with the consumption of such rice. Specifically the objective of this paper is to identify the socio-demographic factors and product attributes that affect the frequent purchasing decisions of this special rice focusing on Basmati rice among Malaysian consumers. Binary logit model were used to identify the socio-demographic profiles that are highly to influence consumer purchasing behavior of this special rice.

Material and Methods

A number of recent studies have assessed different aspects of rice marketing and demand. They have identified a variety of economic, demographic and attitudinal factors which affect rice consumption and purchasing decision. The most important factors were income, demographic characteristics (i.e. race, religion, education level, number of the household, marital status, etc), price, brand, type of rice and grade as well as place (Peterson *et al.*, 1991; Rajasekaran and Witeford, 1993; Moutou *et al.*, 1998; Hartini *et al.*, 2003; Lançon *et al.*, 2003, Mad Nasir and Adnan, 2003; Batres-Marquez and Jensen, 2009; Behrens *et al.*, 2007). In reviewing the findings of these studies, the paper will focus on analyzing recent consumer-level data on consumption of Basmati rice among Klang Valley consumers in Malaysia.

Survey designs and data collection

The primary data used in this study was based on 600 respondents of rice consumers in Klang Valley areas in Malaysia. The data were collected in a survey which was conducted over a 2-week period in June 2009. The questionnaire had three distinct sections. Section one incorporated socio-economic and demographic characteristics of the consumers that may affect households' purchasing decisions such as age, sex, marital status, household size, number of children, income, occupation, family influence or choice, education level and frequency of purchase of Basmati rice. These socio-demographic factors are hypotheses to influence the consumption or purchasing or Basmati rice. Section two included questions related to product attributes that were likely to influence the purchase intentions of the respondents. The final section consisted of consumer perception towards Basmati rice attributes. Respondents were asked to rank the importance on scale of 1 to 5, of attributes such as quality, grade, brand, texture, flavor and aroma, price and taste in their rice purchasing decisions.

The question related to the frequency of buying for basmati rice was selected to serve as a dependent variable in this research. Following Redkar and Bose (2004), the frequency of basmati rice purchase was arranged into four possible alternatives and asked the respondents to choose one of them, which are: 1) on special occasion only; (2) two times per month; (3) monthly; (4) occasionally (less than 12 time per year) .

The dependent variable for each observation takes on a value of one (1) if the respondent had bought rice more than one time per month and a value of zero (0) if the respondent had not. The independent variables are the socio-demographical factors such as education, age, religion, ethnicity, occupation, number of household, gender, place and also the product attributes (taste, color, price, etc). Since the analysis was based on frequency of buying Basmati rice, the dependent variable is dichotomous. Therefore, a logistic regression model (logit model) was used to examine the effect of the factor that influences the purchasing behavior of consumers on Basmati rice. Table 1 shows the definition of the variables used in the logistic regression model.

Model and estimation

Frequent purchasers for rice are important to sellers because of their repeat purchases. To explore the factors that are likely to increase frequency of purchasing Basmati rice, the study used all possible surveyed variables of socio-demographic factors and product attributes as independent variables. The standard dichotomous logit model was developed for identifying consumer attitudes associated with home purchases of Basmati rice. The logistic model is aim to determine the probability of the respondents socio-

Table 1. Definition of variables used in estimation of logistic regression model

Symbol	Description
Freq	1 if household purchases basmati rice for home consumption at least once every month, 0 otherwise
qlt	1 if respondent regarded Quality as an important factor in purchasing basmati rice, 0 otherwise
tst	1 if respondent regarded Taste as an important factor in purchasing basmati rice, 0 otherwise
bp	1 if respondent regarded price as an important factor in purchasing basmati rice, 0 otherwise
ep	1 if respondent regarded Easy preparation of the basmati rice, as an important factor in purchasing basmati rice, 0 otherwise
ava	1 if respondent regarded availability of the basmati rice, as an important factor in purchasing basmati rice, 0 otherwise
aroma	1 if respondent regarded Flavor and aroma of the basmati rice, as an important factor in purchasing basmati rice, 0 otherwise
clor	1 if respondent regarded color of the basmati rice, as an important factor in purchasing basmati rice, 0 otherwise
grade	1 if respondent regarded grade of the basmati rice, as an important factor in purchasing basmati rice, 0 otherwise
brand	1 if respondent regarded brand of the basmati rice, as an important factor in purchasing basmati rice, 0 otherwise
fc	1 if respondent regarded family choice of the basmati rice, as an important factor in purchasing basmati rice, 0 otherwise
ocup	1 if respondent works in public sector, 0 otherwise
gen	1 if respondent is Female, 0 otherwise
marit	1 if respondent is married, 0 otherwise
age	Age of the respondent
edu	Number of family members with primary education or does have any formal education
hsize	Size of household, > 4 is 1, 0 otherwise
nchild	Number of children in the household
hinc	Average household income > RM2000 is 1, 0 otherwise

demographic background and product attributes that have a positive impact on increasing the frequency in purchasing basmati rice. Under the dichotomous choice scenario, suppose that P_i and $1-P_i$, are respectively, the probabilities associated with two events, frequent purchase and non-frequent purchase of basmati rice (Herrmann *et al*, 1994; Gujarati and Porter, 2009; Redkar and Bose, 2004). Therefore, the logit model for the representative household 'i' can be expressed as follows:

$$P_i = \frac{1}{1+e^{-(\sum \beta x_i)}} = \frac{1}{1+e^{-z_i}} = \frac{e^z}{1+e^{z_i}} \qquad (1)$$

Where $\quad z_i = a + \sum_{j-1}^{n} \beta x_i + e_i$

If P_i, the probability of purchasing basmati rice is given by equation (1), then $1-P_i$, the probability of not buying basmati rice, is

$$1-P_i = \frac{1}{1+e^{z_i}} \qquad (2)$$

Which we can write

$$\frac{p_i}{1-p_i} = \frac{1+e^{z_i}}{1+e^{-z_i}} = e^{z_i} \qquad (3)$$

Now $P_i / 1-P_i$ is simply the odd-ratio in favor of purchasing basmati rice, the ratio of the probability that a family/household member will purchase basmati rice to the probability that it will not purchase. In logistic regression, the dependent variable is a logit, which is the natural log of the odds, that is

$$log(odd) = log(\frac{p_i}{1-p_i}) = Z_i \qquad (4)$$

For estimation purpose the equation (4), logit model can be write as (Herrmann *et al*, 1994; Gujarati and Porter, 2009; Redkar and Bose, 2004).

$$Z_i = log(\frac{p_i}{1-p_i}) = a + \sum_{j-1}^{n} \beta x_i + e_i \qquad (5)$$

Where Z_i is an unobservable dependent variable that characterized the representative household's frequency of purchasing basmati rice for home consumption at least more than one time per month which take the value of 1(Z_i=1) and 0 (Z_i=0) otherwise. The variable x_i represents the socio-demographic variables and different attributes of basmati rice affecting the representative household's choice to purchase basmati rice at least more than one time per month. In this regression model, the vector x_i consists of socio-demographic variables such as family, gender, size of household, age of the family members, family income and education levels of the family members and product attribute such as quality, taste, color, flavor and aroma, brand name, grade, after cook texture and price. e_i is the error term.

The final logit model for analysis our data can be written as:

$$Z_i = log(\frac{p_i}{1-p_i}) = a + \beta_1 edu + \beta_2 grade + \beta_3 brand + \beta_4 marit + \beta_5 ocup$$
$$+ \beta_6 age + \beta_7 clor + \beta_8 aroma + \beta_9 hsize + \beta_{10} hinc + \beta_{11} nchild + \beta_{12} bp$$
$$+ \beta_{13} tst + \beta_{14} gen + \beta_{15} ep + \beta_{16} ava + \beta_{17} qlt + \beta_{18} fc + e_i \qquad (6)$$

Where, the definition of the variables is shown in Table 1.

Results and Discussion

Descriptive analysis

The descriptive analysis was used to discuss the results of the socio-demographic profile of the respondents, perception and preferences of the consumers' towards purchasing rice. The selected demographic variables employed in the analysis are shown in Table 2, which includes household income, household size, number of children, gender, age, occupation, ethnic group and education level of the respondents.

Table 2. Socio-demographics profile of the respondents

Characteristics	Frequency	Percent	Cumulative Percent
Age			
<18	10	1.67	1.67
18 -35	211	35.17	36.83
36 --45	187	31.17	68.00
46 - 55	133	22.17	90.17
>55	59	9.83	100.00
Education level			
No formal education	14	2.33	2.33
Primary school	111	18.50	20.83
Secondary school	361	60.17	81.00
Institute/ University	114	19.00	100.00
Ethnic			
Malay	328	54.67	54.67
Chinese	192	32.17	86.83
Indian	73	12.17	99.00
Others	6	1.00	100.00
Gender			
Male	216	34.29	34.29
Female	384	65.71	100.00
Household income			
RM500 - RM1000	133	22.17	22.17
RM1001 - RM 2000	193	32.17	54.33
RM2001 - RM3000	146	24.33	78.67
RM3001 - RM4000	53	12.50	91.17
> RM 4000	75	8.83	100.00
Occupation			
Government sector	107	17.83	17.83
Own business/ Private sector	230	38.33	56.17
Retired	17	2.83	59.00
Housewife	237	39.50	98.50
Student	9	1.50	100.00
Marital			
Single	123	20.41	20.41
Married	477	79.59	100.00
Number of household resident			
1 -3	43	7.17	7.17
4-6	327	54.50	61.67
7 - 9	208	34.67	96.33
10 and more	22	3.67	100.00

Note: $1.00 equale RM3

The respondents varied in age group, employment, ethnic and income status. The largest portion of the respondents, (35.17%) were in the 18-35 years age group, while one-third was aged more than 46, indicating the elder persons of the family commonly make a decision on buy in essential food such as basmati rice. About 66% of respondents interviewed were female. More than half of the respondents (60.2%) have obtained schooling up to secondary level, while just around 18.5% graduated from primary school. The majority of the respondents were married (79.6%) and they predominantly identified themselves as Malay which made up 54.67% of the total respondents, followed by Chinese (32.17%), Indians (12.17%) and remaining of 1% were of other ethnic background. About 32.2% of the respondents had monthly household incomes between RM 1001 to RM 2000, another 24.3% were in the range of RM 2001 to RM 3000 and 21.3% had monthly income greater than RM 3000. Household size was calculated by totaling the number of occupants residing in the house. For household size, the smallest was one person and the largest was ten or more. Over 54.50% of the respondents reported their household size between four to six persons, while 34.67% were seven to nine persons and 7.17% were only one to three persons. This shows that Malaysian family is traditional and the family tie is still strong. This type of family prefers cooking at home instead eating out at restaurants which is costly.

Table 3 shows some additional information on respondent's rice purchasing decision. As shown in Table 3 the majority of the decisions when purchasing rice were made by housewife (59.67%) and other member of family (31%). This indicates that housewife were responsible for the basmati rice purchases in their households. Their food choices may also be influenced by other family members, particularly children, since most of these women reported living in households with three to five, or even more people. Verbeke (2005) stated that the presence of children in households may have positive impact on food choices. The remaining 9.26 % of the decision were made by husband. During the survey, the respondents were asked about the frequency of buying basmati rice. Nearly 10% of the respondents bought basmati rice on special occasion only (Table 3). Over one-third of the respondents (31.8%) purchased basmati rice twice a month while 35 % of the respondents indicated that they bought once a month. While 35% purchase Basmati rice less than 12 times per year. The frequency of purchasing Basmati rice indicates that at least more than 50% of the respondents do in fact purchase Basmati rice quite often although it is

Table 3. Basmati rice purchasing decision

Items	*Frequency*	*Percentage (%)*
Household		
Housewife	361	59.67
Husband	56	9.26
Family members	188	31.07
Total	*600*	*100*
Frequency of purchasing		
On special occasion only	60	10
Two times per month	115	19.17
Monthly	191	31.83
Occasional (less than 12 times per year)	210	35
Total	*600*	*100*
Shopping Place		
Supermarket/hypermarket	385	64.1
Provisional/grocery shop	175	29.2
Others	30	6.7
Total	*600*	*100*
Stick same brand, type and grade of rice		
Yes	350	58.4
No	250	41.6
Total	*600*	*100*

Source: Survey results

an expensive rice compare to regular rice.

Given the importance of retail grocery stores as sellers of products in general, identifying the specific outlets used by respondents to purchase rice is important. These choices are affected by the availability of the product, changes in lifestyle, such as busy schedules, and the additional time constraints on women in the workforce. About 64.1 % of respondents purchased rice in supermarket or hypermarket while 29.2% purchased from grocery or provisional shop (Table 3). Only about 6.7% of respondents who purchased rice shopped at other direct marketing outlets. Finally 58.4% of the consumers pointed out that they stick with the same brand name and grade whenever they are buying basmati rice, while 41.6% did not stick with the same brand name and grade of basmati rice.

Factors influence consumer purchasing decision

As indicated earlier the main objective of this study was to evaluate the effects of socio-demographic and attitudinal factors in purchasing of Basmati rice. The respondents were asked to indicate their agreement and disagreement with five attitudinal scale (1 equal to strongly agreed and 5 equal to strong disagreed) on their attitudes toward basmati rice attributes which

include quality, ease of preparation, availability, flavor and aroma, brand name, grade, price, taste, family choice, availability, color and after cook texture when purchasing Basmati rice. The data employed in this study represent attitudes toward Basmati rice, rather than the broader category of all rice. Table 4 shows frequency of distribution factor in purchasing decision of Basmati rice attributes by the respondents.

Quality and after cook texture are the most important attributes affecting consumer purchasing decisions for Basmati rice (87.7% and 84.2% respectively). The emphasis on quality and after cook texture implies that the promotional on this kind of rice (special rice) should be done on taste test and the physical appearance of after cook rice. Promotion also should emphasis on teaching consumer how to cook the rice as such the after cook texture is at its best. The result also shows that consumers in Malaysia paid more attention to the quality of the rice than other factors such as price. Surprisingly the respondents also indicated that availability (79.5%) of the rice in the market were also very important factors in their decision making. Since Basmati is special rice it might not be available in all stores especially the provision shop.

Price is also one of the important criteria for selecting the grade and type of basmati rice. About 77.8% of the respondents agreed that price is one of the factors to be considered in purchasing decision. Prices can also be considered by most customers as a reliable indicator of rice quality attributes; thus high prices would be synonymous with high quality rice and therefore it is used as a criterion for selecting the quality rice. Since basmati within a category of special rice that are considered as one of the most expensive rice vis-a-vis other types of rice, it also has different quality and grade. Therefore consumer will look at the price tag as a proxy of quality rice. Apart from quality and after cook texture, the consumers also demanded that rice should have good flavor and aroma (76.8%) and the color must be right (white) (75.3%).

Brand of basmati rice also play very important role and have a positive impact on purchasing decision. Seventy five (74.8%) of the consumers pointed out that brand name implies quality and it seem that they thrust a certain brand that will provide them with the quality of basmati rice that they are looking for. Hence packer of basmati rice which promotes a certain brand should be more cautious in changing the grade and quality of basmati rice. This result is consistent with brand loyalty as almost 60% of respondents stick to the same brand name in purchasing Basmati

rice. While taste, family choice and easy to prepare are not important criteria in purchasing decision of Basmati rice in term of their ranking of importance attribute of Basmati rice.

Table 4. Factors influencing consumer purchase decision of special rice

Items		Important	Neutral	Unimportant	Total
Quality	Frequency	526	44	30	600
	%	87.7	7.3	5	100
After cook texture (long grain)	Frequency	505	68	27	600
	%	84.2	11.3	4.5	100
Availability	Frequency	477	85	38	600
	%	79.5	14.2	6.3	100
Price	Frequency	467	102	31	600
	%	77.8	17	5.1	100
Grade	Frequency	462	93	45	600
	%	77	15.5	7.5	100
Flavor and Aroma	Frequency	461	62	77	600
	%	76.8	10.3	12.9	100
Color	Frequency	452	80	68	600
	%	75.3	13.3	11.4	100
Brand name	Frequency	449	108	43	600
	%	74.8	18	7.2	100
Taste	Frequency	445	122	33	600
	%	74.1	20.3	5.5	100
Family choice	Frequency	406	186	40	600
	%	64.3	29.4	6.3	100
Easy preparation	Frequency	351	229	52	600
	%	55.5	36.2	8.3	100

Results of logit model

As noted earlier, heavy users and frequent purchases are important to sellers because of their repeat purchases. In this study a logit regression model of frequent basmati rice purchasers was employed to identify the determinants of consumer's socio-demographic characteristics and product attributes on purchasing behavior of basmati rice. The estimated result from the logit model is presented in Table 5. It should be noted that the discussion of the results would be based on the odds ratio, as the logit model estimates do not have a straightforward interpretation. In addition, most of the variables, except those for age and number of children are binary (see Table 1). The odds ratios for the regressions include both socio-demographic and attitudinal variables show that certain factors were notably more likely to be frequent purchasers of basmati rice. As can be seen in Table 5, the household's frequency rice purchasing

Table 5: Logistic Regression Results

Variables	Coefficient	Std. Error	z-Statistic	Prob.	Odd-ration
C	0.560	1.331	0.421	0.674	1.75
bp	0.055	0.100	0.546	0.585	1.06
fc	0.384*	0.121	3.189	0.001	1.47
qlt	0.389*	0.156	2.493	0.013	1.48
ep	0.142	0.145	0.978	0.328	0.87
ava	0.212**	0.124	1.711	0.087	1.81
color	0.062	0.115	0.535	0.593	1.06
froma	1.339*	0.110	12.229	0.001	3.82
tst	0.379*	0.169	2.249	0.018	1.46
brand	0.992*	0.113	8.808	0.003	2.70
grade	0.116	0.126	0.918	0.359	1.12
age	0.229	0.156	1.470	0.142	0.79
educ	0.001	0.016	0.072	0.942	1.00
hinc	0.844*	0.112	7.642	0.002	2.30
hs	0.384*	0.120	3.204	0.001	1.47
marit	0.227	0.209	1.087	0.277	1.25
nchild	0.294*	0.125	2.346	0.019	1.34
gender	0.744*	0.217	3.428	0.001	2.10
occup	0.069	0.084	0.825	0.410	1.07
McFadden R-squared	0.409	Log likelihood		-324.77	
Akaike info criterion	1.14	Restr. log likelihood		-381.03	
Schwarz criterion	1.26	Avg. log likelihood		-0.54	
Hannan-Quinn criter.	1.18				
LR statistic	38.52*				
Prob(LR statistic)	0.00				

*significant at 5%, **significant at 10%

decisions are significantly (level of confidence 5%) influenced by the size of household, flavor and aroma, brand name, quality, family choice, education, availability, number of children, gender and taste of respondents.

The interpretation of each of the above-mentioned significant variables will be based on the odds ratio as shown in Table 5 below. Together all variables have a significant impact on the frequency purchase of basmati rice, as LR statistics is 38.52 with a *p* value of about 0.001, which is very small.

The odd ratios for the household income (*hinc*), household size (*hsize*), family choice (*fc*) and gender variables were found to be 2.30, 1.47, 1.47 and 2.10, respectively. Higher household income however tend to increase the frequent purchase of Basmati rice at least once a month more than 2.3 times than lower income group. While being female or housewives tend to increase the purchase Basmati rice 2.1 times then their male counterpart. This could be due to the fact that most housewives do most of the purchasing of household groceries.

The odds ratio for product attributes such as flavor and aroma (*aroma*), taste (*tst*), quality of rice (*qlt*)

and brand are found to be significant in influencing the frequency of purchasing basmati rice and the likelihood in increasing purchasing of basmati rice at least once every month are positive at 3.82, 1.46, 1.48 and 2.70 times higher respectively. The results indicate that product attributes are the main features in attracting consumers to have repeated purchase. For consumers in Malaysia, basmati rice's aroma was a unique characteristic and an important quality trait. Therefore, good quality and after cook texture and enhancing aroma are the main attributes that consumer are looking for when purchasing Basmati rice for special occasion. Beside gender, household size, number of children and household income, other socio demographic factors such as marital status (*marit*), occupation (*occup*), education (*educ*) and age are not significant in explaining the frequent purchase of Basmati rice. The insignificant of some of the demographics variables could be due to the fact that Basmati rice is not being consumed on a regular basis as normal rice in a household. It only being consumed once in a while for certain purpose or occasion

Conclusions

This study analyzed the effect of socio-demographic factors toward special rice with special reference to Basmati rice purchases for home consumption. Consumer level survey for Klang Valley area in Peninsular Malaysia was conducted to gauge the determinants that will likely to have some positive impact on frequent purchase of Basmati rice by the respondents. Among the main factors, which influence the consumers' decisions in increasing purchasing at least once a month of Basmati rice are quality, flavor and aroma, family choice, brand, availability and taste. However, product attributes such as color, grade, easy preparation and price are not important determinants in frequent purchasing of Basmati rice. Thus in case of price and quality attributes we may observed that price segmentation of quality Basmati rice market among the Malaysian consumers is very important as many consumers are willing to pay higher prices for quality products. Thus consumers are aware that Basmati rice is expensive rice and yet because of it quality, price is not a factor to be considered in increasing the frequent purchase of Basmati rice at least once a month. Similarly brand of rice is also an important attribute that consumer are looking for. Consumers seem to thrust the brand of Basmati rice and brand with consistent quality are likely to increase the purchase of Basmati rice. This is consistent with the results that about 60% of

consumers stick to the same brand when purchasing Basmati Rice. Thus promotion of Basmati rice should capitalize on the quality, taste and flavor and aroma and branding attributes. This is very important in relation to the demographic factors that are likely to increase the purchasing of Basmati rice. These factors include household income, household size, number of children, family choice and gender. Market segmentation for household consumption of Basmati rice should focus on the middle income and housewives seems to have greater influence in increasing the purchasing of Basmati rice. Hence marketing strategies focusing on the selected product attributes and segmented it to right consumers group could increase the purchase of Basmati rice more than once a month.

Again, the flavor and aroma of basmati rice seems to have high impact on purchasing decision by consumers. Thus it is important for packer and supplier not to mix or adulterate Basmati rice with other rice that might cause loss of the after cook aroma and texture of Basmati rice. Brand and brand loyalty is one of the attribute which also have biggest impact on purchasing decision of Basmati rice. There are few well known brand of basmati rice in the market. Thus is easier for consumer to attach brand with quality or attribute of Basmati rice that they are looking for. Hence promotional campaigns may prove useful marketing tools as they may improve the purchasing decision by Malaysian households through increased knowledge of product forms available in the market. Tying brand with quality may improve product positioning of Basmati rice among Basmati rice consumers and could increase the demand of Basmati rice although it is use for special occasion only in the household.

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