

CONSUMERS' INTENTION TO PURCHASE DATES: APPLICATION OF THEORY OF REASONED ACTION (TRA)

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Abstract

For years, dates are known for its numerous health advantages in both modern and traditional medicinal articles. Apart from its benefits, hypothetically, the consumption of dates is increasing due to the rising income level caused by economic growth. On that note, this paper investigates the role of attitude and subjective norms in determining consumers' intention to purchase dates. Also, this study examines the role of demographic variables as moderating factors. Using purposive sampling method, a total number of 1,354 completed survey questionnaires were collected from eight (8) selected states in Malaysia. Descriptive analysis, Exploratory Factor Analysis (EFA) and Structural Equation Modeling (SEM) were performed. The results indicate that attitude and subjective norms influence consumers' intention in purchasing while consumers' marital status and income moderate the relationship between attitude, subjective norms and consumers' intention. Findings from this study is useful for policymakers in encouraging and promoting daily consumption of dates as a food commodity in Malaysia.

Keywords: Dates, consumers' intention, subjective norms, attitudes, structural equation modeling (SEM)

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Introduction

The rapid growth in Malaysian economy has changed the lifestyle of the community towards consuming healthy products. A study by Quah & Tan (2010) showed that food consumption pattern has changed as consumers have become more educated and conscious about health and wellness issues, particularly related to food choices and diet. As such, this development leads to the prospect of demand for premium food such as dates fruit. Dates, or its scientific name is *Phoenix Dactylifera*, is among the main top fruit crop of the Middle East. Today, large quantities of many dates varieties are commercially produced in countries such as Algeria, China, Egypt, Iran, Iraq, Pakistan, Saudi Arabia, Sudan and the United Arab Emirates (Ismail et al., 2006).

Dates are rich in vitamins, minerals and fibre. It contains oil, calcium, sulphur, iron, potassium, phosphorus, manganese, copper and magnesium. Dates consumption can also provide relief from constipation, intestinal disorders, heart problems, anaemia, diarrhoea, abdominal cancer and many other conditions. It is also identified as having antioxidant and anti-mutagenic properties and reduces heart disease (Ismail et al., 2006). The Food and Agriculture Organization (FAO) estimated the daily per capita supplies of dates are around 50g. A more recent study by Ismail et al., (2006) suggested that average daily consumption per capita is 114g. The authors

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posited that the degree of dates consumption reflects their importance and the economic feasibility of their production. Another study states that the consumption of a 100g portion of dates flesh from dates palm has been reported to meet approximately half the daily dietary recommended intake to prevent micronutrients deficiency (Shabani et al., 2015).

In 2001, the top five dates producing countries were Egypt, Iran, Saudi Arabia, Pakistan and Iraq; accounting for about 69% of total production (Botes, A. & A. Zaid, 2002). The Kingdom of Saudi Arabia is among the top three dates producing countries of the world, accounting for nearly 15% of the global dates production. In Europe, particularly, the European Union (EU) is a key market for dates exporters. The EU imports of dates represented 10% of world imports in volume, but they account for some 30% in value (Liu, 2003). One interesting case is in France. The country re-exports dates mainly to other European countries using the strategy of importing good quality fruit in bulk and then re-pack the fruits in Marseilles for the higher income market. Meanwhile, Iran and Pakistan are the major exporting countries in terms of volume, with India as the target market (FAO, 2000).

As for the imports of dates, the main importers are India, the United Arab Emirates (UAE) and Europe. Besides that, the top five countries to import dates during 1996-2000 were India, Pakistan, Malaysia, the UAE and the EU (Botes, A. & Zaid, 2002). However, on top of that, Economic Complexity Index (ECI) reported that Malaysia is the 19th largest export economy in the world and the 25th most complex economy. It is postulated that Malaysia could learn from France's success in becoming a re-export packing house for dates fruits. Especially as an Islamic country, the demand of dates fruits among consumers as they consume them regularly, would be an advantage for Malaysia's economic growth.

On that note, as to support the fact of suggesting dates fruit product could upsurge Malaysia's economy growth, the objective of this paper is to investigate the factors that are potentially affecting consumers' intention to purchase dates in Malaysia. The study designed is adapted based on the work of Fishbein & Ajzen (1975), Ajzen & Fishbein (1980) and Evans et al. (2009). In order to achieve the objectives, Theory of Reason Actions (TRA) is adopted by investigating behavioural intention and its important antecedents, including attitude and subjective norm.

Theory of Reasoned Action (TRA)

Theory of Reasoned Action (TRA) was proposed by Fishbein & Ajzen (1975) and Ajzen & Fishbein (1980). As shown in Figure 1, the theory explains the relationship between attitudes and behaviours with human action. This theory is often used to predict how individuals will behave based on their pre-existing attitudes and behavioural intentions. According to Fishbein & Ajzen (1975), behavioural intention is determined by two major factors; a personal or "attitudinal" factor and a social or "normative" factor. The application of this theory in understanding consumers' behaviour focuses on the attitude of the customers towards a product, a brand, a person or an issue (Evans et al., 2009). Based on the information obtained from the environment, the consumer will then interpret and evaluate this information to form beliefs, attitude and intention towards a brand and respond towards their intentional stance (whether to purchase/trial and to reject or accept a product/brand).

Consequently, purchase intention is defined as consumer preference to buy a product or service because he or she finds that he or she needs a particular product or service, or even attitude towards a product and awareness of product (Ahmad, 2014).

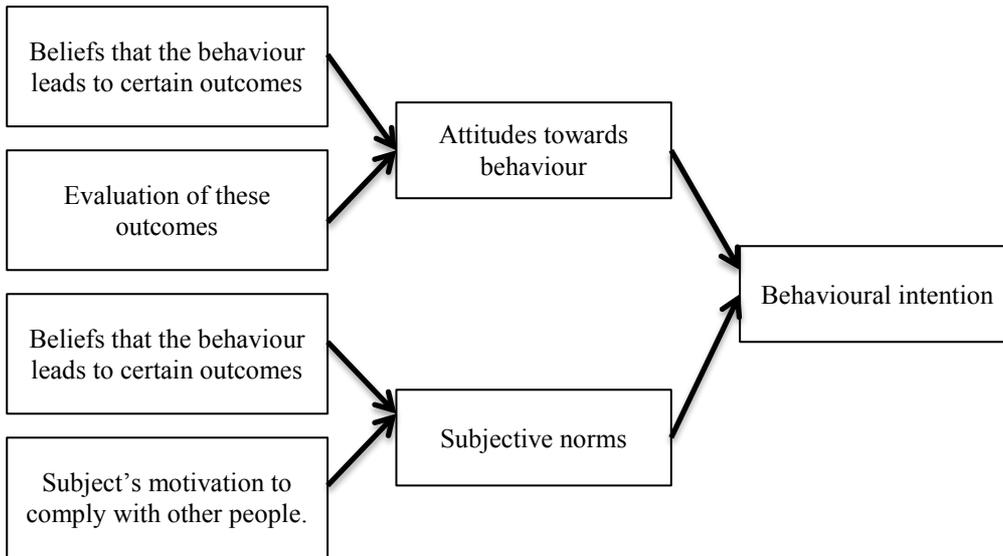


Figure 1: Fishbein & Ajzen (1975) and Ajzen & Fishbein (1980)

In understanding an individual's attitude, Loudon & Della Bitta (1993) define attitude as an enduring organisation of motivational, emotional, perceptual and cognitive process with respect to some aspects of an individual's world. Meanwhile, Kahle (1984) defines attitude as adaptation of abstractions or generalizations about functioning in the environment that are expressed as predispositions to evaluate an object, concept, or symbol. This abstraction process emerges continuously from the assimilation, accommodation, and organization of environmental information by individuals, to promote interchanges between the individual and the environment that, from the individual's perspective, are favourable to preservation and optimal functioning.

Others argue that attitude refers to people's evaluation of some concepts (Bagozzi, 1988). The TRA assumes that individuals act rationally and they do consider the implications of their actions before planning to act (Fishbein & Ajzen, 1975). It also assumes that an individual's subjective norm is determined by normative beliefs, which is a function of perceived expectations of specific referent individuals or groups, and his or her motivation to comply with their expectations (Fishbein & Ajzen, 1975). Thus, in this study, attitude and subjective norms towards the purchase of dates will be analysed.

Several studies have been conducted using TRA in understanding consumer's attitudinal and normative factors on purchase intention particularly on food purchase

and consumption (Rana & Paul, 2017; Yadav & Pathak, 2016, Bianchi & Mortimer, 2015, Matheny et al., 1987; Rutter & Bunce, 1989; Towler & Shepherd, 1992). Although shopping for food products can be considered as a routine purchase, food consumption choices are often symbolic in nature and they can signify a lot to consumers and to some significant others in their lives (Warde, 1997; Douglas, 1984; Mennell, 1985). Using the TRA, Choo et al. (2004) found that subjective norms play a major role in consumer purchase decisions of new food products in India. This result is in tandem with the belief that people living in a collective culture (like India) place more importance in conforming to social norms. However, in Eves & Cheng's (2007) study which compares consumers in China and England found that attitude, when compared with subjective norms, is a more important factor for consumers in both countries when predicting the intention to buy new food products. This result contrasts with the belief that in a collectivist culture, such as China, subjective norms are more likely to influence behavioural intention. However, on further investigation one finds that the differences can probably be attributed to the different demographics of the samples used in the studies; as the study in India depicts that they recruit samples from both urban and rural areas, while in China only samples from some major cities were taken. Eves & Cheng (2007) acknowledged this and confer that the results might be different if they include samples from rural areas in their study.

Moderating Factors

Previous studies have analysed various individual factors that moderate consumer intention to consume food. With regards to income, some research has indicated that income level does not affect organic food purchases (Jolly, 1991), whereas other research has suggested that consumers earning higher incomes were more likely to have purchased locally produced foods (Misra et al., 1991) and to have purchased foods produced with reduced pesticides (Ross et al., 2000; Govindasamy & Italia, 1998). In another study, Richardson et al. (1996) proposed that higher education may act as a surrogate measure of income. They found that higher-income consumers to be less deal prone, less impulsive, smarter in their purchase and more brand loyal on purchasing dates.

In other studies, Homburg & Giering (2001) and Baltas (2003) found that women are more involved in purchasing activities as compared to men. Also, Ailawadi et al. (2001) found that women value self-expression and exploration more in comparison with men. Similarly, Sherman et al. (2001) observed that in regard to shopping environment, women are more deal prone, have a higher sense of adventure and have more market knowledge.

As intention is a part of psychological behaviour, marital status may be identified as one of the moderating variables in explaining purchase intention. Studies consistently show that the married status consumer possesses lower degrees of psychological distress than the non-married status across a variety of outcomes (Simon, 2002; Williams, 2003). Research seeking to explain these differences has typically examined the economic, social, and psychological resources that marriage may provide (Bierman & Milkie, 2006). These arguments thus urged researchers to further analyse the moderating effects of three demographic factors namely; gender,

marital status, and income. The proposed theoretical framework is shown in Figure 2 and the followings are hypothesis developed in this study:

- H1 : An individual's attitude is positively related to intention in purchasing dates.
- H2 : An individual's subjective norm is positively related to intention in purchasing dates.
- H3 : An individual's demographic variables (i.e. gender, marital status, income) moderate the relationship between attitude, subjective norms and intention in purchasing dates.

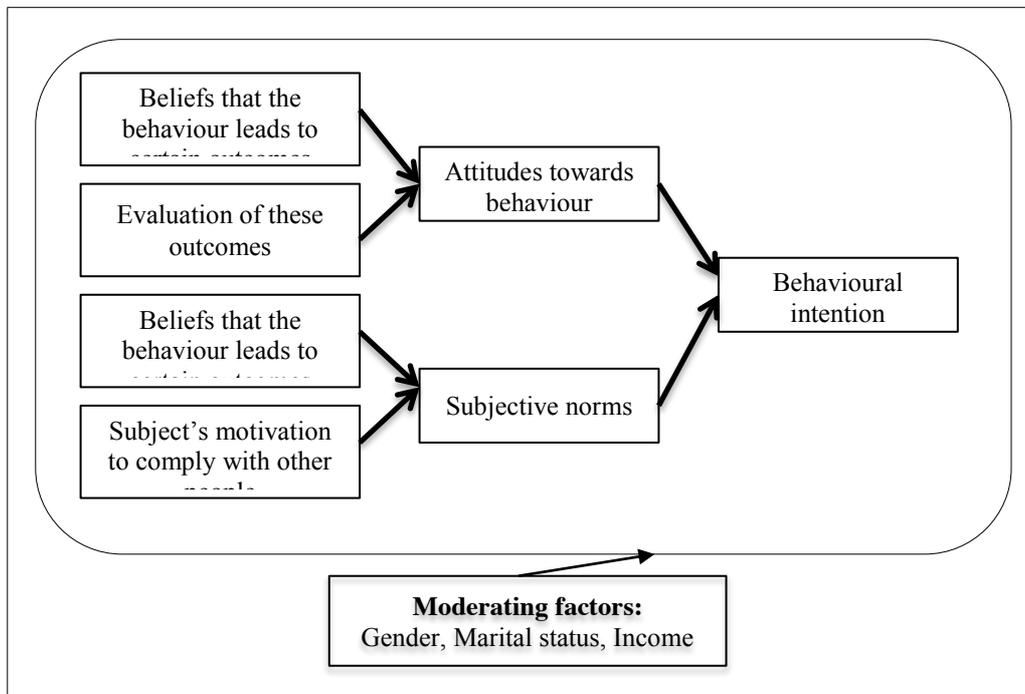


Figure 2: Proposed Theoretical Framework

Research Methodology

For the purpose of this study, purposive sampling method has been used in data collection. A total of 1,354 completed survey questionnaires have been collected from eight (8) states which have been identified by two criteria; monthly household income and population size. Kuala Lumpur, Putrajaya and Selangor represent the highest income states, while Kedah, Perlis, Kelantan capture the lowest income population states, and two (2) states that represent middle income states; Negeri Sembilan and

Pahang. Thus, on the total number of population in accordance to the highest, middle and lowest income, 30 districts have been selected for questionnaire distributions.

The survey questionnaire contains questions on attitude, intention, and subjective norms adapted from Evans, Jamal, and Foxall (2009). Respondents were also asked on demographic information. The survey questionnaire was constructed based on the findings of focus group analysis conducted at an earlier stage of this study. Respondents of this research presented their degree of agreement on each item in section five by using a five-point likert scale, rating from (1) "Strongly disagree" to (5) "Strongly agree". To verify the reliability of the questionnaire, pilot study was conducted with a small group of consumers randomly. No major changes were made based on the pilot study exercise. The data analysis involves descriptive analysis, Exploratory Factor Analysis (EFA) and later Structural Equation Modeling (SEM).

Results and Discussion

Demographic profile of respondents

Table 1 illustrates the respondents' profile. 59.5% of the respondents were female while 40.5% were male. 42.3% of the respondents aged below 35 years old while 57.7% aged above 40 years old. The information on marital status demonstrated that more than half (59.8%) were married or divorced and 40.3% of the respondents were reported single. In regard to educational background, 8.9% had LCE/SRP/PMR and below, 46.8% had MCE/SPM/STPM/STAM, 20.8% had a diploma while others (23.5%) obtained at least a degree. On respondents' occupation, the largest group comprised of private company staff (29.0%), followed by government staff (21.6%), businessmen/women (15.8%), students (10.4%), housewives/husbands (4.7%), pensioners (3.4%), and others (5.5%). In terms of the respondents' income, majority (74.0%) of the respondents earned below RM3,000 while 26.0% of the respondents earned above RM3,000 monthly.

Table 1: Respondents' Profile

Demographic Variables	Category	Sample (n=1354)	
		Frequency	(%)
Gender	Male	549	40.5
	Female	805	59.5
Age	16-20 years old	79	5.8
	21-25 years old	162	12.0
	26-30 years old	148	10.9
	31-35 years old	105	7.8
	36-40 years old	624	46.1
	41-45 years old	63	4.7
	46-50 years old	58	4.3

Demographic Variables	Category	Sample (n=1354)	
		Frequency	(%)
	51 and above	115	8.5
Marital Status	Single	545	40.3
	Married/Divorced	801	59.8
Education	LCE/SRP/PMR and below	120	8.9
	MCE/SPM/STPM/STAM	634	46.8
	Diploma	282	20.8
	Degree and above	318	23.5
Occupation	Government staff	293	21.6
	Private company staff	393	29.0
	Self-employed	344	25.4
	Housewife/husband	63	4.7
	Pensioner	46	3.4
	Student	141	10.4
	Others	74	5.5
Monthly Income	Below RM900	292	21.6
	RM900-RM1,500	379	28.0
	RM1,501-RM3,000	330	24.4
	RM3,001-RM4,500	193	14.3
	RM4,501-RM6,000	104	7.7
	RM6,001 and above	56	4.1

Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA)

Exploratory Factor Analysis (EFA) was first conducted to identify the underlying relationships between measured variables. The EFA involving four-item scale for attitudes extracted a single factor solution and four-item scale for subjective norms construct. This is in line with expectations, intention to purchase dates also emerged as a single factor.

Then, Confirmatory Factor Analysis (CFA) was performed using AMOS to confirm the factorial structure of all constructs appearing in the conceptual model (Byrne, 2010). CFA could produce empirical evidence of construct validity (Anderson & Gerbing, 1982). The CFA includes all three constructs excluding the moderating variables. In arriving at the final set of items for each construct, modification indices recommend to apply error covariance between item SN1 (My family and friends love to consume dates) and SN2 (My family and friends think I should consume dates) to increase the model fit. Consequently, items SN1 and SNI2 were summed and

transformed into mean value to avoid complexity and multicollinearity (Lee, 2005) and the new item for the mean score for item SN1 and SN2 is New SN.

The resulting measurement model is $\chi^2 = 304.980$ with 32 degrees of freedom, $p=0.001$, Comparative-Fit-Index (CFI) = 0.973; Incremental Fit Index (IFI) = 0.973; Root Mean Square Error of Approximation (RMSEA) = 0.08, Tucker Lewis Fit (TLI) = 0.962, which indicates a good fit. The measurement model and the standardized loadings along with critical ratios are presented in Table 2.

Table 2: The Measurement Model

Items	Standardized loadings	Critical ratios
Attitude		
A1. I believe dates have health benefits.	.834	Fixed
A2. I believe dates prices are affordable.	.567	21.546
A3. I believe consuming dates is good.	.908	37.213
A4. I believe dates are tasty.	.716	28.841
Subjective Norms		
NewSN. My family and friends love to consume dates and my family and friends think I should consume dates	.674	25.991
SN4. It is important for me to eat dates.	.864	34.024
SN5. It is important for me to ensure my family and friends eat dates.	.837	Fixed
Intention		
I1. I will buy dates in the near future.	.924	Fixed
I2. I intend to buy dates in the near future.	.975	73.509
I3. I plan to buy dates in the near future.	.938	64.751
Fit Indices		
Chi-Square Statistics		304.980
Degrees of Freedom (df)		32
Root Mean Squared Error of Approximation (RMSEA)		.079
Comparative Fit Index (CFI)		.973
Incremental Fit Index (IFI)		.973
Tucker Lewis Index (TLI)		.962

Structural Equation Modelling

For hypothesis testing, the proposed model with all measurement items from the CFA was estimated. The results in Table 3 revealed acceptable fit indices of the model; $\chi^2 = 304.980$, $p < 0.001$, degrees of freedom = 32; parsimony fit (χ^2/df) = 9.531; GFI = 0.956; AGFI = 0.925; CFI = 0.973; IFI = 0.973; RMSEA = 0.079. Hypothesis 1 states that attitude is positively related to intention to purchase dates. This hypothesis is supported (critical ratio = 3.470, $p < 0.001$). Hypothesis 2 proposes that subjective norms is positively related to intention to purchase dates, and this hypothesis is also supported (critical ratio = 19.189, $p < 0.001$). Intention to purchase dates is significantly predicted by attitude and subjective norms and 46.4% of the variance associated with intention to purchase dates is explained by attitude and subjective norms.

Table 3: Structural Model Results

Hypothesed Paths		Estimate	Critical Ratio (t-value)	Results
H1	Attitude → Intention	0.160	3.470***	Supported
H2	Subjective Norms → Intention	0.651	19.189***	Supported
Goodness of Fit Statistics				Results
Absolute fit	Chi square (χ^2) of estimate model			304.980
Incremental fit	Root Mean Square Error of Approximation (RMSEA)			0.079
	Tucker Lewis Fit (TLI)			0.962
	Bollen's Incremental Fit Index (IFI)			0.973
	Comparative Fit Index (CFI)			0.973
Parsimonious fit	Parsimony fit (χ^2/df)			9.531

*significant at $p < 0.05$, **significant at $p < 0.01$, ***significant at $p < 0.001$, NS-not significant

The second stage of the statistical analysis involved conducting multiple group analysis of three individual differences; gender, marital status, and income. The study used multiple group analysis recommended by Kline (1998) in order to achieve this end. It requires the researchers to impose cross-group equality constraints on the path coefficients. The χ^2 of the model with its path coefficients constrained to equality is contrasted against that of the unconstrained model. If the relative fit of the constrained model is much worse than that of the unconstrained model, one concludes that the direct effects differ across the groups.

The data set for gender and marital status was divided into two; for gender, the first group is male ($n=549$) and the second is female ($n=805$) while the first group for marital status is single ($n=545$) and second group is married or divorced ($n=809$). The data set for income level was divided into three groups; the first group earned less

than RM1,500 (n=671), the second group earned between RM1,501 and RM4,500 (n=523) while the third group earned above RM4,501 (n=160).

The results in Table 3 represent results of multiple group analysis for the three individual differences. The results show that gender has no moderation effect on the overall model. However, marital status and income moderate the relationship between attitude and intention as well as the relationship between subjective norms and intention. As for marital status, the effect of attitude on intention was significant for married individuals (t=4.095, $p < 0.001$) while effect of subjective norms on intention was stronger for single individuals (t=13.537, $p < 0.001$). For income, the effect of attitude on intention was significant for individuals who earned between RM1,500 and RM4,500 (t=4.298, $p < 0.001$) while effect of subjective norms on intention was stronger for individuals who earned less than RM1,500 (t=12.749, $p < 0.001$).

Table 3: Results of Multiple Group Analysis on Basis of Gender, Marital Status, and Income

	Estimate		Critical ratio (t-value)				
	Male (n=549)	Female (n=805)	Male (n=549)	Female (n=805)			
Attitude → Intention	0.239	0.118	3.546***	1.863(NS)			
Subjective Norm → Intention	0.571	0.686	11.330***	14.954***			
Goodness of Fit Statistics							
Model	χ^2	df	χ^2/df	CFI	IFI	RMSEA	Results
Unconstrained	391.093	64	6.111	0.968	0.968	0.061	
Constrained	394.020	66	5.970	0.968	0.968	0.061	
Δ	2.927	2					NS
<i>*significant at $p < 0.05$, **significant at $p < 0.01$, ***significant at $p < 0.001$, NS-not significant</i>							
	Estimate		Critical ratio (t-value)				
	Single (n=546)	Married/Divorced (n=809)	Single (n=546)	Married/Divorced (n=809)			
Attitude → Intention	0.049	0.061	0.708 (NS)	4.095***			
Subjective Norm	0.735	0.043	13.537***	13.349***			

→ Intention

Goodness of Fit Statistics							
Model	χ^2	df	χ^2/df	CFI	IFI	RMSEA	Results
Unconstrained	366.118	64	5.721	0.970	0.971	0.059	
Constrained	372.290	66	5.641	0.970	0.970	0.059	
Δ	6.172	2					Significant at $p < 0.05$

*significant at $p < 0.05$, **significant at $p < 0.01$, NS-not significant

	Estimate			Critical ratio (t-value)		
	<RM1,500 (n=671)	RM1,501- 4,500 (n=523)	>4,501 (n=160)	<RM1,500 (n=671)	RM1,501- 4,500 (n=523)	>4,501 (n=160)
Attitude → Intention	0.098	0.284	-0.077	1.434 (NS)	4.298***	-0.381 (NS)
Subjective Norm → Intention	0.724	0.513	0.886	12.749***	11.555***	6.965***

Goodness of Fit Statistics							
Model	χ^2	Df	χ^2/df	CFI	IFI	RMSEA	Results
Unconstrained	416.754	96	4.341	0.969	0.969	0.050	
Constrained	431.055	100	4.311	0.968	0.968	0.050	
Δ	14.301	4					Significant at $p < 0.01$

*significant at $p < 0.05$, **significant at $p < 0.01$, NS-not significant

Discussion and Conclusion

This study investigates the role of attitude and subjective norms in determining intention to purchase dates. The results indicated that attitude and subjective norms were positively related to intention in purchasing dates. In particular, subjective norms was found to be more important factor in determining intention to purchase dates. The result is consistent with findings from Choo et al.'s (2004) study that shows social influence was an important factor in determining collective society decision making.

The moderation analysis result showed that an individual's marital status and income influence the relationship between attitude, subjective norm, and intention to purchase dates. Married individuals showed a stronger relationship between attitude and intention to purchase dates while single individuals showed a stronger relationship between subjective norms and intention to purchase dates. In this study, majority of single individuals are young people. This result is in tandem with the belief that young people were more likely to be influenced by social influence (Mangleburg, Doney and Bristol, 2004).

Furthermore, on income, the effect of attitude on intention was stronger for individuals who earned between RM1,500 and RM4,500 and effect of subjective norms on intention was stronger among individuals who earned less than RM1,500. This result shows that lower income individuals decision making is likely to be influenced by social influence while higher income individuals decision making is influenced by their attitude towards purchasing dates.

Domestic market development that allows increased consumption would help sustain growth in the long-run. The literature suggests that in the last two decades, China's consumption share in GDP averaged 57% compared with India's 75%, and China's household consumption averaged only 43% compared with India's 64%. Another report suggests that the average household final consumption expenditure is 59.5% for the period 2000 to 2011. In turn, the declining household consumption rate might indicate the followings. Firstly, the economic growth has not brought synchronic improvement in terms of living standards to households. Second, the momentum of economic development will slow down due to inadequate domestic demand and weak export market, which might lead to surplus liquidity, investment inefficiency and economic instability (Qi and Prime, 2009). Therefore, it is important to investigate the patterns of household consumption as an important source of domestic demand.

In promoting dates fruits as a food commodity for consumers to purchase especially among consumers who have households, then, this would be a good plan for Malaysia's potential economic growth. Particularly, consumers dictate a mandatory role in economic system. Their role is compelling as consumers are the resource of which the success of business depends. It is hoped that in propose to elevate Malaysia's economic growth as France, through dates fruits industry, policymakers should consider on certain strategies in regard from this study's findings respectively.

The findings would be useful to policy makers since consumption has become an increasingly important source of domestic demand and can act as the engine of growth. Therefore, to achieve balanced and sustainable growth, policies should be geared towards domestic market development that supports consumption-led growth policies. Among the *Maqasid al-Shariah* objectives are to eliminate poverty, provide basic human needs, circulate wealth and achieve equitable and sustainable growth. Examining consumption pattern and how it contributes to economic growth is consistent with most of the *maqasid shariah's* objectives. Raising consumption growth rate would be one of the policy instruments to help economies expand their output and contribute more to the world's GDP.

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