

CONSUMERS' PERCEPTION ON ISLAMIC HOME FINANCING: EMPIRICAL EVIDENCES ON BAI BITHAMAN AJIL (BBA) and DIMINISHING PARTNERSHIP (DP) IN MALAYSIA

Dzuljastri Abdul Razak¹ and Fauziah Md Taib²

¹International Islamic University Malaysia, ²Universiti Sains Malaysia

ABSTRACT

The *Bai Bithaman Ajil* (BBA) or Deferred Installment Sales facility is the most predominant mode of home financing in Malaysia since the introduction of Islamic banking in 1983. It is based on the debt financing where the bank buys the property from the customer and sells it back to the customer inclusive of profit. Customers make repayments at end of each month. This research examines the impact of using the prevailing debt concept which is claimed to have caused high price, customers' dissatisfaction, injustice and criticism by international scholars. In order to address these issues an alternative concept known as *Musharakah Mutanaqisah* or the Diminishing Partnership (DP) is also examined. In DP, bank and customers purchase the house jointly. The bank leases the house to the customers and rental payments are shared between them based on profit sharing ratio. The customer redeems the bank's share on monthly basis until full settlement after which the house is transferred to the customer. The study investigates the perceptions of customers between BBA and DP home financing products. A survey questionnaire was conducted on 300 owners and potential house owners to gauge their features and operations. The result of paired t-test indicated significant differences between these two products. DP home financing is a viable alternative to BBA home financing measured from the descriptive results and hypothesis testing. The actual implementation of DP is a challenge for the banks and requires a paradigm shift from their present role as traditional financiers.

Keywords: Islamic Home Financing, Consumer's Perception, Bai Bithaman Ajil, Diminishing Partnership, Empirical Evidences.

INTRODUCTION

The growth of Islamic banking and finance in Malaysia is indeed very encouraging. The annual average rate of growth was between 18-20 percent per annum (<http://www.bnm.gov.my>, accessed 5 December 2007). The central bank of Malaysia, Bank Negara Malaysia (BNM), has set a target of 20 per cent of all deposits and financing in the banking industry to be under Islamic banking by 2010. This is mainly attributed to demand for financing products in the retail banking sector. The development of Islamic products began in 1962 with the implementation of the savings account by *Tabung Haji* based on the concept of *Wadiah* (guaranteed custody). With the establishment Bank Islam Malaysia Berhad (BIMB) in 1983, more products were developed utilizing other concepts such as *Murabahah* (cost plus) for working capital, *Bai Bithaman Ajil* (deferred installment sale) for house financing, *Ijarah* (leasing) for equipment and vehicle financing. The concepts of *Mudharabah* (trustee profit sharing) and *Musharakah* (joint venture profit and sharing) are mainly used for project financing. More products are being developed to date to meet the rapid growth of the Islamic banking and finance industry.

There was an increase in outstanding loans for residential property in commercial banks by 10% from RM 174 billion as at 31 December 2007 to RM 192 billion as at 31 December 2008 (BNM: 2008). Based on this back drop, commercial banks continue to play a major role in providing home financing products to meet the increasing demand of customers for conventional loans and Islamic financing. The motivation for this research is to examine the impact of using the current debt model for Islamic home financing based on the *Bai Bithaman Ajil* (BBA) home financing which remained the major financing product for past 26 years. The existing BBA operations raised several issues regarding the application of its concept, method of computation and pricing, *Shariah* compliant, justice, societal well being and customers' preference. Given these issues the study explore an alternative mode of home financing known as Diminishing Partnership (DP) based on equity and examine whether it can address the salient issues faced by BBA home financing. The DP model has been practiced by Islamic financial institutions and cooperatives in UK, Canada, US, Middle East and Australia to avoid Muslim community from engaging in *riba* (usury) and *gharar* (uncertainty) and was introduced in Malaysia by Kuwait Finance House (KFH) in 2005.

This paper specifically will examine customers' perceptions of BBA and DP home financing with regards to the concepts used, methods of computation and pricing, *Shariah* compliant, justice, societal well being and

customers' preference. Results of the study indicate that there are indeed differences in the perceptions of customers between BBA and DP home financing. There is general feeling of dissatisfaction over the BBA operations where a great majority of respondents feel that the debt concept in BBA home financing is similar to conventional home financing. The paper is organized in the following manner. The immediate section discusses the relevant literature and issues confronting the conventional and BBA home financing. This is followed by the hypotheses development before the study design is discussed. The following section covers the analysis and results before conclusions are offered.

LITERATURE REVIEW

Islamic law (*Shariah*) of commercial transaction is fundamentally rooted on the premise of total eradication of *riba* (usury) and *gharar* (uncertainty). It balances the moral and material needs of a society to achieve socio-economic justice. The very objective of the *Shariah* is to promote the welfare of the people, which lies in safeguarding the faith, life, intellect, posterity and property (Al-Ghazali, 1937). The primary goal of Islamic economics is equal distribution. Islam views that inequity is created by mass exploitation of resources to obtain maximum profit. Principles of Islamic commercial transaction are nurtured to check exploitation, inequities and the creation of economic imbalances in society by means of various concepts and principles to eradicate unjust enrichment. Central to the Islamic concept is justice. All transactions whether it is judicial, political or private are subject to this concept (Al Quran, Al-Hijr: 85).

Islamic economic principles share risk and rewards in wealth creation via equity rather than debt. It promotes entrepreneurship and creativity in the economic cycle. In the Islamic economic model, each individual is involved in the economic activity. This differs from modern capitalism where profit maximization is the sole motive and the bank is broadly content with earning interest on the loan regardless of the social and financial implications of the business. In addition, the orientation of modern capitalism does not include God and society as its integral part of acquiring wealth. As such, it does not have any restriction in the way wealth is obtained. The different approaches in world view between Islam and modern capitalism is reflected in the practice of Islamic banking and finance of which the salient feature is the prohibition of *riba* (usury) and *gharar* (uncertainty)

The concept of financing in Islam differs with that of conventional financing. Loan is the main mode of financing under conventional financing using interest as a time factor for borrowed money. The Quranic injunction prohibits financial activities that has interest element and/or has no genuine nexus to trading activities under the *Shariah* law. This implies that money in itself has no intrinsic value and can only serve as a medium of exchange. Hence, money cannot be traded as a commodity in Islam. This differs from conventional financing where money is treated as a commodity and loans are lent out with interest as its pricing mechanism. Trading "money with money" tantamount to *riba* (usury) which is strictly prohibited in Islam. *Riba* literally means an increase, addition, expansion or growth (Al Zubaydi, 1306). In *Shariah*, *riba* (usury) technically refers to the 'premium' that must be paid by the borrower to the lender with the principal amount as a condition for the loan or for an extension in its maturity. Ibn Manzur (1990) specifies that "what is prohibited is the extra amount, benefit or advantage received on any loan".

Bai Bithaman Ajil (BBA) is among the earliest attempts in Islamic home financing products. It is by far the most predominant and widely used concept by financial institutions in Malaysia. Its concept is based on deferred installment sale whereby the banks purchase the house and later sell it to the consumer inclusive of profit margin. Bank capitalizes its profit up front in the sale of the property to the customer who in turn is required to pay a fixed sum until the tenure ends. It is similar to debt financing which resulted in high cost and posed a burden to one family's budget. Critics of this concept have accused that the BBA practiced in Malaysia is seen not to be in compliant with the *Shariah* principle as the bank does not take the risk of ownership and liability on the property (Rosly, 2005) and thus it is not acceptable by international scholars. Besides, the reliance on interest rate as a benchmark when determining the margin to be charged defeats the 'interest free' concept.

The *Musarakah Mutanakisah* or Diminishing Partnership (DP) concept was introduced to overcome the main criticisms of BBA. The DP model is based on the highly successful Islamic Cooperative Housing Corporation (IHC) in Toronto, Canada established in 1981 out of necessity to avoid the Muslim community from engaging in *riba* (usury). It is based on an equity model different from the traditional debt-based mortgage. DP focuses on joint purchase of property between customers and banks. There are four portions to the contract. First, the customer enters into a partnership (*musharakah*) under the concept of 'Shirkat-al-Milik' (joint ownership) agreement with the bank (Usmani, 2007). Customer pays, for example, 10% as the initial share to co-own the

house whilst the bank provides for the balance of 90%. Secondly, the customer promises to purchase the units of share. Thirdly, the bank leases its share (90%) in the house ownership to the customer under the concept of *ijarah*, i.e. by charging rent; and the customer agrees to pay the rental to the bank for using its share of the property. The periodic rental amounts will be jointly shared between the customer and the bank according to the percentage of share holding at the particular time. Finally, the customer redeems the financier's 90% portion through the purchase of shares until the house is fully owned by the customer. Bank takes ownership and assumes responsibility of the property until the financing amount is fully settled and customer takes possession of the property.

The DP concept is *Shariah* compliant as it promotes true spirit of Islamic banking by emphasizing on the welfare of the people and takes care of the well being of society (Ahmad, 2000; Siddiqui, 2001; Rosly and Bakar, 2003). Since the DP rests on profit and loss sharing and not on debt as in BBA, DP is seen as not causing hardship and harm to customers. Bank takes ownership and assumes responsibility of the property until the financing amount is fully settled and customer takes possession of the property. This addresses the principle that should be observed in Islamic sale transaction; the seller must have possession of the goods and takes liability of it before it is sold to the buyer. The concept also handles the issue over fixed interest which has been criticized under BBA with rental rates. The differences between DP over BBA are that the customer is not indebted to the bank over a long period and rental is based on the value of property. It avoids the use of interest which is forbidden in Islam. DP is also flexible and the customer can own the house earlier by purchasing additional bank's share.

There were three previous studies that evaluate the perception of customers on BBA and DP. Junaidi (2003) conducted a survey of four banks and 35 customers in Brunei. The result indicated that banks have mixed feeling in the implementation of DP. Conversely, customers were eager to replace BBA with the DP concept. Two studies were conducted in Malaysia. Umar (2006) studied the perception of Muslims academic and non academic staff on both products in IIUM using survey method based on 66 useable samples. The descriptive results indicated that there was a stronger preference for DP home financing compared to BBA. However, no hypothesis testing was carried out to find out the differences between BBA and DP. Smolo (2007) carried an on line survey using 78 bank officers and customers as samples. The result indicated that there was a stronger preference for DP compared to BBA. Results further indicated that the BBA practiced in Malaysia was similar to contentious sale known as *Bai Inah* (sale and buy back). Respondents preferred DP as it was reflective of the *Maqasid Shariah* (purpose of *Shariah*). Similar to the previous study conducted by Umar (2006), the results obtained were only descriptive without any hypothesis to support the differences between BBA and DP.

HYPOTHESIS DEVELOPMENT

Based on the literature review seven hypotheses were developed to test the perception of customers on home financing based on BBA and DP home financing concepts.

Concept - Debt versus Equity

Debt concept in Islam is based on actual buying and selling and is classified under the contract of *Murabaha and Bai- Baithman Ajil (BBA)*. The difference between debt financing in Islam and conventional loan is that there is real purchase of asset otherwise it means that the bank is using money as the asset (commodity) in the buying and selling transaction which tantamount to *riba* (usury) The equity concept differs from debt as it falls under the contract of partnership such as *Mudharabah, Musharakah and Musharakah Mutanaqisah*. Under this arrangement, customer and bank share their capital to purchase the asset. Profit is not determined up front as in debt financing but realized gradually based on the profit sharing ratio agreed between them. Hence, the customer is not indebted to the bank at the onset as in conventional and BBA home financing. The purpose of asking the respondents' opinion on the differences between debt and equity concept is to evaluate their preference between these two concepts in their choice for home financing. Hence the first hypothesis used to test this concept is:-

H1: There is a difference in customers' perception on the concept of debt and equity between BBA and DP home financing

Method of computation and pricing between BBA and DP

The profit rate for BBA home financing is benchmarked on market interest rate or Based Lending Rate (BLR) which price money as a commodity. We take an example of a customer who wishes to purchase a house for RM

250,000 and paid (10% of the purchase price) to the developer as down payment. The bank provides financing for the balance of RM 225,000 for 20 years at profit rate of 10 % per annum. Using the present value of annuities formula similar to conventional financing, the monthly installment computed is RM 2,171.30¹ payable for 240 months and the selling price to the customer amounted to RM 521,112. The difference between RM 521,112 and the original financing of RM 225,000 i.e. RM 296,112 is the total profit earned by the Islamic bank in this transaction. The profit amount is capitalized upfront and remained fixed unlike under conventional loan, where the interest varies and unearned until the elapse of time. In the case of DP home financing, rental rate replaces interest rate as the benchmark to determine the profit. Rental rate is based upon the actual market value of the property. The rental rate differs between each type of house e.g. (Single storey house, Double Storey and Condominium) and locations² for example rural, town or city areas and not predetermined upfront based on interest rate (BLR) Using the same example, we assumed that customer owns 10 percent shares of the house amounting to RM25, 000 initially. The bank owns the remaining 90 percent, i.e. RM 225, 000. The rental rate agreed was RM 1,744.42 i.e. 8.37%³ The customer pays another RM 190.17 monthly⁴ to redeem the bank's share in 20 years (Meera and Abdul Razak, 2005). This gives the total monthly payment as RM 1,934.59. The payment schedule for the DP home financing facility is indicated in table 1 below:-

Table 1: Payments Schedule for Diminishing Partnership Home Financing

Month	Monthly Rent (RM)	Monthly Redemption (RM)	Total Payment (RM)	Customer's Ratio (%)	Rental Division		Customer's Equity (RM)	Financier's Equity (RM)	Financier's Cash flow (RM)
					Customer	Financier			
	A	B	C=A+B	D	E	F	G	H	
0							25,000.00	225,000.00	(225,000)
1	1,744.42	190.17	1,934.59	10.00	174.44	1,569.98	25,364.61	224,635.39	1,934.59
2	1,744.42	190.17	1,934.59	10.10	176.98	1,567.44	25,731.76	224,268.24	1,934.59
3	1,744.42	190.17	1,934.59	10.29	179.55	1,564.87	26,101.48	223,898.52	1,934.59
-	-	-	-	-	-	-	-	-	-
240	1,744.42	190.17	1,934.59	0.991	1,446.60	11.73	250,000	0	2,022.36

Table 2 below compares the differences between BBA home financing and DP. As can be seen, the balance after 10 years in BBA was higher than DP because bank capitalized its profit upfront in BBA

¹ Computed using the standard formula for present value of annuities (based on time value of money) as computation for conventional housing loan, i.e. $PV = \frac{Pmt}{i} \left[1 - \frac{1}{(1+i)^n} \right]$ which

gives $Pmt = \frac{i(1+i)^n PV}{(1+i)^n - 1}$

² See Market valuation report issued by Valuation & Property Services Department, Ministry of Finance, and Malaysia. www.jp-ph.gov.my

³ 8.37% p.a obtained by $RM 1,744.42 \times 12 / RM 250,000$

⁴ RM 190.17 obtained by i.e. $\frac{0.0069 \{250,000 - (1.0069)^{240} \times 25,000\}}{(1.0069)^{240} - 1} = RM 190.17$

Table 2: Comparison between BBA and DP

	BBA Financing	DP Financing
Profit rate / Rental Rate	10% per annum	8.37 % per annum
Financing amount	RM 225,000	RM 225,000
Monthly payment	RM 2,171.30	RM 1,934.59
Total cost of payment in 20 years	RM 521,112	RM 464,301
Total profit earned by bank ⁵	RM 296,112	RM 239,301
Balance after 10 years	RM 260,556	RM 156,889

Thus, it would be appropriate to examine the perception of customers on the method of computation and pricing between BBA and DP home financing using the next two hypotheses:-

H2: There is a difference in customers' perception on the method of computing profit between BBA and DP home financing

H3: There is a difference in customers' perception on the use of profit and rental in pricing between BBA and DP home financing

Shariah compliant

The current practice of home financing in Malaysia does not genuinely fall under the concept of buying and selling required by the *Shariah* as the banks do not buy the house directly from the developer and hence do not have possession of the property. Instead, it falls under the contentious sale of *Bai Inah* (sale and buy back) as the customer first purchase the house from the developer and sells the house to the bank for cash. The bank then sells the same house to the customer inclusive of its profit on deferred payment basis. This practice of *Bai Inah* has subjected BBA mode of financing to criticism from international *Shariah* scholars. In contrast, the DP home financing, does not involve *Bai Inah* as in this mode of financing, both the bank and customer jointly purchase the house and own it. Hence, bank takes possession and risk of ownership meeting the *Shariah* requirement of *iwad* (equivalent counter value) for a bona fide sale. Thus, the following hypothesis is developed to investigate customers' awareness on issues regarding *Shariah* compliant between BBA and DP home financing:-

H4: There is a difference in customers' perception over the belief that bank's real purchase and ownership risk between BBA and DP home financing is Shariah compliant

Justice and equality

The *Quran* and *Sunnah* have both placed tremendous emphasis on justice, making it one of the central objectives of the *Shariah* (Chapra 2000). As BBA is a form of debt financing, customer is obligated to pay the bank for the full amount owed as computation is based on predetermined profit rate similar to interest rate. In addition, debt financing is also used to finance houses which are in progress of completion. If the house is abandoned, the customer is still required to pay his monthly installment to the bank (Rosly 2005). Hence, the customers will be facing financial difficulties which cause injustice and inequality as the customer need to secure another house for his family to stay. This taints the transaction as *riba* (usury) following the view of Abu Bakar Ibn Al-Arabi, "every excess in return for which no reward is paid is *riba*" (Afzal-Ur-Rahman, 1990). It also implies gains from exploiting situation. The Diminishing Partnership concept is based on a lease contract where the customer pays rental gradually to own the house. He does not commence monthly installment until the property is fully completed. The customer is also allowed to purchase additional bank's share to own the property earlier. Thus, there is more justice and lesser hardship faced by the customer under DP home financing compared to BBA. We can evaluate customers' perception on the existence of justice and equality based on the hypotheses below:-

H5: There is difference in customers' perception between BBA and DP home financing with regards to justice and equality.

⁵ Total cost of payment minus Financing amount

Promotion of societal well being and equitable distribution of wealth

The major objective of an Islamic economic system is to ensure fairness and equitable distribution of income (Nik Yusoff 2002 pg 27). According to Chapra 2000, living with moral values helps to promote a balance between individual and concern for society which actualize the *Maqasid Al Shariah* (Al-Ghazali, 1937) Two of the most important values are socio economic justice and well being of all God's creature's (Chapra, 1992) The DP concept is based on profit and loss sharing which have more concerned for societal well being and equitable distribution of wealth. This can be seen as the rental received is shared between the bank and the customer which is not the practice in BBA home financing. The profit sharing mode creates stability in the economic system. Conversely, wealth is not equally distributed in debt financing and creates instability in the economy. Thus, we can test the hypotheses on societal well being and equal distribution of wealth from the following hypotheses:-

H6: There is a difference in customers' perception between BBA and DP home financing in meeting the true spirit of Islam and promoting the well being of society.

Customer preference for the type of home financing

Customer's preference to select the type of house would depend on their perception of the concepts, features and operations of the products. Hence the acid test to find out which concept is the preferred choice by customers would be tested in the last hypothesis:-

H7: There is a difference in customers' perception in seriously considering applying for BBA and DP home financing

METHODOLOGY

Research Instrument

The research instrument used was by means of questionnaire. A pilot study was carried out on 30 post graduate students in IIUM to test its validity. The questionnaires were also given to *Shariah* scholars and five lecturers to go through to ensure that the concepts used were clear and relevant. The questionnaire contained a total of 30 questions i.e. 15 each for BBA and DP measuring six variables namely concepts used, method of computation and pricing, *Shariah* compliant, justice, societal well being and customers' preference. The measurement was by means of Likert scale based on 5 point that is. Scale 1 = strongly disagree, 5 = strongly agree.

Data collection

The research was carried over a period of two months from August to September 2007. A total sample size of 300 respondents was targeted based on past studies Haron *et al* (1994) and Metawa *et al* (1998). pertaining to customers' perception This study adopted a convenience sampling technique using post graduate students because of the need to explain the product features for BBA and DP home financing. This is very important especially for the later product as it was newly introduced. Hence all the respondents have the knowledge and clarity of the product features before filling the questionnaires. The choice for post graduate students was appropriate due to their income level and working experience, were representative of existing and potential house buyers. According to Singhapakdi *et al* (1966), students are considered a valid sample for exploratory study and when items in the questionnaires are relevant to the respondents who answer.

RESULTS

Profile of respondents

A total of 320 respondents participated in the survey, however only 300 questionnaires i.e. 94% were useable and the remaining 20 were excluded from the analysis. The respondents' distribution by universities indicated that 47% were from IIUM (n= 140), 30% from UiTM (n= 90) and 23 % from UPM (n= 70) 40% of the respondents were house owners while the remaining 60% indicated that they intend to buy a house in future. The demographic breakdowns of the respondents were as follows:-

Table 3: Demographic breakdown of the respondents

Profile of Respondents	Frequency	Percentage (%)
Gender		
Male	164	54.7
Female	136	45.3
Marital status		
Single	158	52.7
Married	137	45.7
Divorced	5	1.6
Age		
Below 20	-	-
20-30	166	55.3
31-40	98	32.7
41 and above	36	12
Race		
Malay	183	61
Chinese	45	15
Indian	7	2.3
Others	65	21.7
Religion		
Islam	250	83.3
Buddha	41	13.7
Hindu	4	1.3
Christian	5	1.7
Qualification		
Diploma	3	1
Degree	251	83.7
Master	46	15.3
Working experience		
< 1 year	63	21
1- 5 years	87	29
6-10 years	74	24.7
11-20 years	69	23
> 20 years	7	2.3
Monthly Income		
< 3000	134	44.7
3001-5000	96	32
5001-10,000	53	17.7
10,001-20,000	13	4.3
>20,000	4	1.3
Job designation		
Officer	86	28.7
Manager	48	16
Senior Manager and above	17	5.7
Lecturers	39	13
Others	110	36.6

Analysis of customers' perceptions on BBA and DP Home Financing

Table 4 A and 4B provided the descriptive results of the survey:-

Table 4 A: Customers' perception of the features and operations of BBA home financing

Level of measurement / Percentage		Disagree (%)	Neutral (%)	Agree (%)	Mean	Std Dev.
1	The debt concept used in BBA home financing is similar to that in conventional home financing	36.3	16	47.7	3.16	1.22
2	The method of computing profit in BBA home financing is similar to conventional home financing.	34	15.7	50.3	3.26	1.20
3	The pricing for BBA home financing is similar to conventional home financing except that profit rates replace interest rates	19.7	18.3	62	3.58	1.11
4	BBA home financing is not <i>Shariah</i> compliant because there is no real purchase of property and bank does not take ownership risk	13.3	22.7	64	3.69	1.05
5	BBA home financing product is based on justice and equality	46.3	34.3	19.4	2.57	1.05
6	BBA home financing does not reflect the true spirit of Islam in promoting the well being of society	15.3	27.3	57.4	3.65	1.15
7	If I apply for home financing, I would seriously consider taking BBA home financing	44.7	35	20.3	2.58	1.17

Table 4B: Customers' perception of the features and operations of DP home financing

Level of measurement / Percentage		Disagree (%)	Neutral (%)	Agree (%)	Mean	Std Dev.
1	The profit sharing concept in DP home financing is not similar to that in conventional home financing	7	15	78	3.98	0.90
2	The method of computing profit in DP home financing is not similar to conventional home financing.	9	14.7	76.3	3.91	0.90
3	The pricing of DP home financing is not similar to conventional home financing as rental rates replace interest rates	6.4	16.0	77.6	3.96	0.85
4	DP home financing is <i>Shariah</i> compliant because there is real purchase of property and bank takes ownership risk	3.3	21	75.7	3.99	0.80
5	DP home financing product is based on justice and equality	4.0	23.0	73	3.90	0.78
6	DP home financing reflects the true spirit of Islam in promoting the well being of society	4.6	26.0	69.4	3.86	0.85
7	If I apply for home financing, I would seriously consider taking DP home financing	6.3	21.7	72	3.99	0.95

Reliability Analysis

Measure of reliability was determined by means of cronbach alpha coefficient test which indicated acceptable internal consistency between 0.70 to 0.80 (Nunnally, 1978) There was only one value at 0.61 which was still acceptable (Moss *et al.*, 1998) One of the possible explanation for the lower alpha value was because the scale consisted of a smaller number of items (Moss *et al.*, 1998). Please refer to Table 5 for details.

Table 5: Cronbach Alpha Values

Description	No of items	BBA home Financing	DP home financing
Method and pricing	4	0.70	0.74
<i>Shariah</i> compliant	2	0.70	0.61
Justice and equality	4	0.70	0.82
Societal well being	3	0.82	0.84

Hypothesis Testing

Statistical paired t- tests were used to test the seven hypotheses that had been developed for BBA and DP

Table 6: Differences in perceptions between BBA and DP home financing

No	Hypothesis	Mean BBA	Mean DP	Mean Diff	T	p-value
H1	There is a difference in customers' perception on the concept of debt and equity between BBA and DP home financing	3.166	2.013	1.153	11.705	0.000
H2	There is a difference in customers' perception on the method of computing profit between BBA and DP home financing	3.256	2.090	1.166	12.935	0.000
H3	There is a difference in customers' perception on the use of profit and rental in pricing between BBA and DP home financing	3.583	2.043	1.540	16.573	0.000
H4	There is a difference in customers' perception over the belief that bank's real purchase and ownership risk between BBA and DP home financing is <i>Shariah</i> compliant	2.310	3.990	-1.680	-19.537	0.000
H5	There is difference in customers' perception between BBA and DP home financing with regards to justice and equality.	2.573	3.900	-1.327	-16.851	0.000
H6	There is a difference in customers' perception between BBA and DP home financing in meeting the true spirit of Islam and promoting the well being of society.	2.346	3.860	-1.514	-17.095	0.000
H7	There is a difference in customers' perception in seriously considering to apply for BBA and DP home financing	2.580	3.996	-1.416	-16.095	0.000

$p < 0.05$

DISCUSSION AND IMPLICATION

The result indicated differences in customers' perception between BBA and DP home financing. The analysis of the descriptive statistic confirmed that there were issues in BBA home financing measured by the six variables investigated namely concepts used, methods of computation and pricing, *Shariah* compliant, justice, societal well being and preference for the products. There was a general feeling of dissatisfaction in BBA home financing as only 20% of the customers would seriously consider taking the product even though it had been implemented for 26 years. Conversely, 72% of the customers would seriously consider taking DP home financing although the product it is relatively new in the market.

The result implies that customers could not see much difference between BBA home financing and conventional home financing as both methods of computation increase the principal amount based on time. In the case of BBA, the profit amount is capitalized upfront and remained fixed until the end of tenure. The customers

observed that DP home financing provides flexibility in their monthly instalment. It is further based on the actual rental value and not interest rate. The profit sharing arrangement enables them to shorten their period of financing by purchasing more of the bank's share. Hence, there is more justice and equality in DP home financing which is based on equity concept rather than BBA home financing which is based on debt.

The concept on *Murabahah* and BBA is allowed by the *Shariah* provided that there is a real asset in the trading transaction and not treating money as the commodity which make is similar to conventional loan. Majority of the customers perceived that DP home financing is not similar to loan because bank and customer jointly share their capital to purchase the house until the customer fully owned the property. The results of the survey supported many literatures on Islamic finance (Zaman, 2001; Iqbal and Molyneux, 2005) and provided empirical evidences that practices of Islamic financial institutions are currently similar to fixing interest rate in debt financing. It also supported the analysis made by (Naqvi 2000 page 41) who agreed that although Islamic Banking has moved rapidly, "it is not run exclusively on the basis of the *Shariah*- favored profit and loss sharing; rather, the fixed-rate type of financial instruments" The results of this study also enhance previous studies (Junaidi, 2003; Umar, 2006; Smolo 2007) which revealed customers' preference of DP home financing over BBA.

CONCLUSION

The main motivation for this paper is to examine customers' perceptions of BBA and DP home financing with regards to the concepts used, methods of computation and pricing, *Shariah* compliant, justice, societal well being and customers' preference. Results of the study confirmed that there are indeed differences in customers' perception between these two products. Hence it provides a vast opportunity for banks to develop DP home financing product at it provides greater satisfaction to the customers as well as meeting the objective of the *Maqasid Al Shariah* that promote the welfare of the people, which lies in *safeguarding the faith, life, intellect, posterity and property*, Al Ghazali (1937)

This research provided empirical evidences on customers' perceptions between the concepts of debt and equity financing utilizing the underpinning theories in Islamic financing. Theoretically, the study extends the body of knowledge on the use of equity in home financing. and provide an alternative to the existing debt based models. The Diminishing Partnership model strengthens the application of the *Musharakah* concept in home financing. Further research can be conducted to extend the model for the purchase of equipment, vehicle and other types of assets. It can also be utilized in joint ventures and private equity arrangements.

Practically, the research serves as a useful guideline for Islamic banks in its products development. The result indicated that the equity concept meets both customer satisfaction and *Shariah* requirements. Banks make use of the benefits in DP as a marketing tool to differentiate the product with conventional and BBA home financing. The departure from debt financing is also timely as the local Islamic finance is becoming integrated into the international financial system. Hence, there is need to conform to the requisite *Shariah* principles to preserve the resilience of Islamic financial transactions as can be seen from the aftermath of the global financial crisis. Additionally, the research suggested the use of actual rental rate in place of market interest rate addressing the issue of *riba* (usury). This would place Islamic finance closer to the perspective of justice and fairness which epitomize the true spirit of Islam.

The move towards greater usage of the profit and loss sharing concept requires regulators and policy makers to reexamine existing acts and law to accommodate for Islamic banking and finance transaction, training of bankers on the real Islamic financing concept and support events to promote public awareness on Islamic finance. There is also a need to examine banks' risk structure, capital adequacy requirements and other infrastructural support needed to boost the growth of the Islamic banking and finance industry.

REFERENCES

- Al Quran, Al Hijr: 85
Afzal-Ur-Rahman, (1990) *Economics Doctrines of Islam Vol IV (Banking and Insurance)*, Islamic Publications Ltd.
Ahmad, K. (2000), Islamic Finance and Banking: The Challenge and Prospects, *Review of Islamic Economics. Vol 9*, pp 57-82.
Al-Ghazali, M (1937), *Al-Mustafa Cairo: al-Maktabah al-Tijariyyah al-Kubra*, Vol. 1, pp 139-40.
Al-Zubaydi, M. (1306), *Taj al- 'Aras*, Vol. 10, Al-Marba'ah al-Khairiyyah, Cairo, pp. 142-3.
Bank Negara Malaysia Annual Report (2008)

- Chapra, M.U (1992). *Islam and the Economic Challenge*. United Kingdom: The Islamic Foundation, 1992
- Chapra, M. U (2000), *The Future of Economics: An Islamic Perspective*, Leicester, UK: The Islamic Foundation, 2000
- Ibn Manzur, M. I.M. (1990), *Lisan al-Arab*, Beirut: Dar Sadir, Vol 8, pp 208-212
- Iqbal, M and Molyneux, P (2005,) *Thirty Years of Islamic Banking, History, Performance and Prospects*, Palgrave Macmillan, New York
- Meera, A.K.A and Abdul Razak, D (2005). *Musharakah Mutanaqisah and Al Bay' Bithaman Ajil Contracts As Means For Home Ownership: A Conceptual Comparison*, *Review of Islamic Economics*, Vol. 9 No 2, 2005 pp 5-30
- Moss, S., Prosser, H., Costello, H (1998). Reliability and validity of the PASS-ADD Checklist for detecting psychiatric disorders in adults with intellectual disability, *Journal of Intellectual Disability Research*
- Naqvi, S.N.H (2000), Islamic Banking: An Evaluation, *IJUM Journal of Economics and Management* 8, No 1 (2000): pp 41-70
- Nik Yusof, N.M (2007), *Islam and Business*, Pelanduk Publications (M) Sdn. Bhd
- Nunnally, J.C. (1978), *Psychometric Theory*, 2nd Ed. New York: McGraw Hill.
- Rosly, S.A and Bakar, M.A.A. (2003), "Performance of Islamic and mainstream banks in Malaysia", *International Journal of Social Economics*, 30 No 12, pp 1249-1265
- Rosly, S.A. (2005), *Critical Issues on Islamic Banking and Financial Markets*, Dinamas Publishing, Kuala Lumpur.
- Siddiqui, S.H. (2001), Islamic banking: true modes of financing, *New Horizon*, May-June p. 109.
- Singhapakdi, A., Vitell, S.J J, Rallapalli, K.C and Kraft, K. (1996), "The perceived role of ethics and social responsibility: a scale development", *Journal of Business Ethics*, Vol 15 No 11, pp 1131-41.
- Usmani, M.T (2007). *Islamic Finance*. Karachi: Maktaba Ma'ariful Qur'an. 2002
- Zaman, M.R (2001) Islamic Banking A Performance Analysis. *The Journal of Global Business*, pp 31-38

INTENTION TO PURCHASE GREEN ELECTRONIC PRODUCTS: THE SEQUENCES OF PERCEIVED GOVERNMENT LEGISLATION, SAFETY AND HEALTH CONCERN, SELF-EFFICACY AND THE ROLE OF ATTITUDE AS MEDIATOR.

Iman Khalid A. Qader and Yuserrie Zainuddin
Universiti Sains Malaysia

ABSTRACT

The purpose of this study is to contribute to the body of knowledge in the area of green product purchase intention. Within the domain of Green marketing, where all activities are designed to generate and to facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs or wants occurs, with minimal detrimental impact on the natural environment. Therefore, this study intends to identify the influence of three independent variables including; perceived government legislations, safety and health concerns, and self-efficacy on the mediating variable of environmental attitude. The study will also investigate the mediating effect of environmental attitude and the dependent variable of the study purchase intention of lead-free electronic products. Through a self-administered questionnaire among 170 lecturers, from USM main campus and USM engineering campus the study found some revealing insights. Through the results of this study, safety and health concerns and self-efficacy had a significant positive influence on lecturers' environmental attitude. While perceived government legislation had a positive direct influence on purchase intention. As for environmental attitude the mediating variable of this study, it did not act as a mediator between the independent variables and the dependent variable of purchase intention.

Keywords: Green Electronic Products, Perceived government legislations, Media Exposure, Safety and health, Attitude.

INTRODUCTION

The use of vast amounts of hazardous materials in the high-tech industry in fueling its global expansion of the rapidly changing product lines is significantly depleting natural resources. Therefore, society is becoming more concerned with the natural environment and businesses have begun to modify their behavior in an attempt to address society's new concerns Cannis (2001). Hence, Polonsky (1994) defines green or environmental marketing as all activities that are designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment. Therefore, the phenomena of this study reveals the dark side of high technology, polluted drinking water, waste discharges that harm fish and wildlife, high rates of miscarriages, birth defects, and cancer clusters in another word it has a direct impact on the environment and an indirect impact on the consumer via drinking water (Napp,1995). However, this study intends to identify the problem of pollution, which is caused by the disposal of high-tech electronic products at the end of the products life cycle. Hence, lecturers are considered relatively heavy users of electronic products; therefore, their intention to purchase green electronic products and in this case Lead-free electronic products is the focus of the study.

In Malaysia, the electronic industry accounts for around 60% of the country's manufacturing exports and is the leading industrial sector in terms of investment, industrial output and employment. Major export products were electrical & electronic products with a total value of US\$ 69.9 billion, representing 49.6% of Malaysia's global export. In terms of products, Malaysia's main imports were electrical & electronic amounted to US\$ 51 billion representing 44.5% of Malaysia's global import. Although Malaysia is a major exporter of electrical and electronic products, at the same time Malaysia imports electric and electronic products into the country. The products are used and disposed off as regular garbage at the end of the products life-cycle. (Malaysia's Global Trade accessed on-line <http://www.koima.or.kr/jiran/korea/magazine>, May.2006).

Hatija (2003) Research Officer Consumers Association of Penang, stated in PCBs symposium in Malaysia, "Given the many applications of PCBs in industries it is likely that products and equipment that contained PCBs would be disposed off as regular garbage. This is because there has not been much concern given to the disposal of hazardous household waste such as electrical equipment or products which are likely to contain PCBs in Malaysia". PCBs are made up of more than 200 related compounds these manufactured substances exhibits many ideal characteristics such as fire resistance, high stability. They also do not conduct electricity and have low volatility at normal temperature. These and other properties have made them desirable components in a wide range of industrial and consumer products. These same properties make the PCBs environmentally

hazardous- especially their extreme resistance to chemical and biological breakdown by natural process in the environment. Due to their stability, PCBs have a high potential for bioaccumulation it is able to accumulate in aquatic environments such as lakes and rivers.

As early as 1985 tests conducted on shellfish collected from sea bed around Penang island showed PCBs content to be in the range of 400 - 600 ppb. The amount of PCBs detected exceeded the permitted level set by the Food and Drug Authority (FDA) of 300 ppb. In 1992, tests conducted on 25 rivers in Peninsular Malaysia for PCBs residue showed that the amount was higher in the rivers that flow through industrial or densely populated area. The amount of PCBs detected was found to be in the range of 2.1 - 0.9 milligram per liter. This exceeds the level in the Proposed Interim National Quality Standards for Malaysia, which sets a standard of 0.044 milligram per liter of PCBs in effluents (Hatija, 2003). Hence, this study intends to explore firstly, the factors that influence lecturers' environmental attitudes, which is measured by three independent variables; perceived government legislations, safety and health concerns, and self-efficacy. Secondly, to examine the mediating effect of environmental attitude on the relationship between the three independent variables and the dependent variable of purchase intention.

LITERATURE REVIEW

Behavioral Intention

Behavioral intention has been defined by Azjen (2002) as human actions that are guided by three kinds of considerations; beliefs about the likely outcomes of the behavior and the evaluation of these outcomes (behavioral beliefs), beliefs about the normative expectations of others and motivation to comply with these expectations (normative beliefs), and beliefs about the presence of factors that may facilitate or impede performance of the behavior and the perceived power of these factors (control beliefs). As a general rule, the more favorable the attitude and subjective norm, and the greater the perceived control, the stronger should be the persons' intention to perform the behavior in question. As for consumers' purchase decision, Kotler and Armstrong (2001) argued that, in the evaluation stage, the consumer ranks brands and forms purchase intentions. Generally, the consumer's purchase decision will be to buy the most preferred brand. However, two factors can come between purchase intention and purchase decision the first factor is the attitude of others and the second factor is unexpected situational factors for example; the consumer may form a purchase intention based on factors such as expected income, expected price, and expected product benefits. In addition, Miller (2005) identifies behavioral intention as a function of both attitudes toward a behavior and subjective norms toward that behavior, which has been found to predict actual behavior. Hence, this study conceptualized purchase intention as a persons plan to engage in some action within a specified period of time and the probability that he or she will perform a behavior. Therefore, lecturers purchase intention of lead-free electronic products will be investigated through three independent variables; perceived government legislations, safety and health concerns, and self-efficacy and one mediating variable of environmental attitude.

Perceived Government Legislations

According to Peck and Gibson (2000) anticipating rising world demand for environmental marketing, services and systems is also an obligation and opportunity for government. Indeed, there is a crucial role for government in facilitating the transition to an economy that is much more efficient, much fairer and much less damaging. Governments that lead will be in a stronger position to set the agenda and establish advanced positions for their industries and their citizens. Countries that lag behind will inevitably face increasing competitive disadvantage and lost opportunity. Cyrus (2003) argued that growing public concern over the environment creates an enormous amount of pressure on governments to act whether this action is based on market initiative and cost effectiveness or legislatively mandated command and control will make a huge difference in the ramifications for the industry, consumer and the general economy. As with all marketing related activities according to (Polonsky, 1994) governments want to "protect" consumers and society; this protection has significant green marketing implications. Governmental regulations relating to environmental marketing are designed to protect consumers in several ways;

- 1) Reduce production of harmful goods or by-products.
- 2) Modify consumer and industry's use and/or consumption of harmful goods.
- 3) Ensure that all types of consumers have the ability to evaluate the environmental composition of goods. In some cases governments try to persuade consumers to become more responsible. For example, in the United States of America governments have introduced voluntary curb-side recycling programs, making it easier for consumers to act responsibly. In other cases governments tax individuals who act in an irresponsible fashion. For example in Australia there is a higher gas tax associated with leaded petrol.

Safety and Health Concerns

Safety and health concerns are conceptualized as the consumer's concern for quality of life, health issues and the environment for humans and non-human species. However, it seems that given the broad problems that are defined as environmental issues, the probability that individuals will be affected by one or more of these issues is high (Dunlap, 1989, Mitchell, 1990). In addition, there is also evidence to suggest that people believe environmental conditions are worsening for example, (water pollution, and air pollution) (Dunlap, 1990; Dunlap & Scarce, 1991). Hence, Concern for quality of life has given way, in many cases, to concern about health issues, and life itself, for human and non-human species (Dunlap, 1991). Thus, the diversity and intensity of environmental problems as experienced by the public, are themselves proposed as an explanation for the widespread nature of environmental concern. According to Wall (1995), safety and health concerns are considered the strongest predictor of attitude and behavior; her findings lend support to those researchers who claim that increasing concern with health and safety are becoming prominent factor in shaping people's attitudes towards the environment. However, Rundmo (1999) carried out a study aiming to analyze how health attitudes, environmental concern and behavior are influenced by risk perception. The findings of the study concluded that the respondents felt most unsafe regarding chemical food additives, infected food, industrial pollution and risks related to traffic behavior.

Self-Efficacy

Motivation research has established that self-efficacy is strongly related to performance. Self-efficacy refers to a person's belief in his or her capability to perform a task as referred to by Bandura (1997), Wood, and Bandura (1989). The relation between self-efficacy and individual performance is quite robust. Carvone and Peak (1986) has related self-efficacy to diverse outcomes such as problem solving, learning achievements (Campbell & Hackett, 1986), adaptability to new technology (Hill, Smith, & Mann, 1987), and training effectiveness (Earley, 1994 and Gist, 1987). According to Grab (1988) and Hays (1987) efficacy/interest incorporates both lack of interest in things and lack of hope about the future in general. Closely related to the sense of ability to make a difference is the interest and energy to do so. Both apathy and political powerlessness have been both connected to social class and to lack of participation in environmental behaviors, the socially and economically advantaged have greater access to resources, and more experience with success, which lend to both greater sense of power and more interest in devoting energy to the issue. Thus, self-efficacy beliefs can be useful in understanding and predicting behavior.

Environmental Attitude

Widespread environmental concern has not disappeared among the public as predicted by social scientists, such as Downs, in the early 1970s. Instead, it rose dramatically in the 1980s, and by the spring of 1990, public environmental concern had reached unsurpassed levels (Dunlap & Scarce, 1991). However, recent research suggests that despite high levels of "green attitudes" environmental concern has failed to translate into widespread environmental action (Roper organization, 1990; Dunlap, 1991; Wall, 1995). More than two decades of environmental attitude, research has resulted in a multitude of studies dedicated to discovering the social determinants of environmental attitudes (Van Liere & Dunlap, 1980; Buttel, 1987). In addition, Maloney and Ward (1973) argued that during the last few decades, the relationship between human beings and the environment has been an important issue because natural resources have been used up at a faster pace than they can be restored. However, it seems that much less consistency has been found between environmental concern and environmental behavior (Olli, Grendstad, & Wollebaek, 2001). That is, individuals expressing high levels of environmental concern and pro-environment attitudes often display behaviors and actions that have low levels of congruency with their expressed views. Moreover, many of the variables that shows some consistency with respect to environmental attitudes, display weak or inconsistent relationships to environmental behaviors (Diekmann & Preisendorfer, 1998; Kraus, 1995).

Framework and Hypothesis

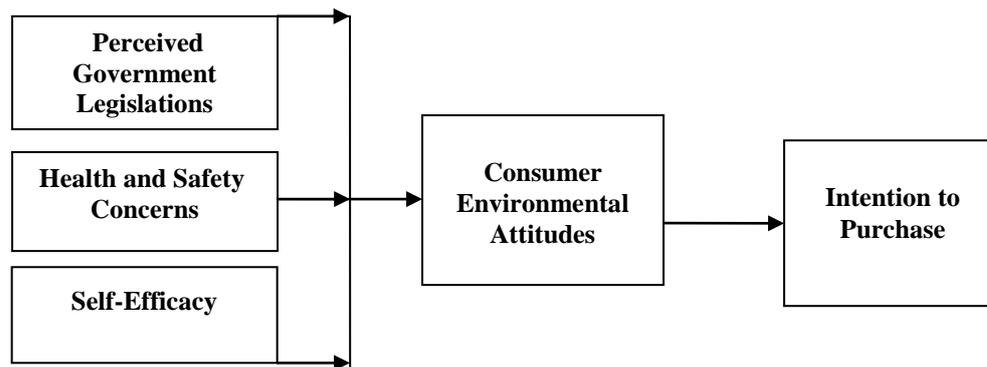


Figure 1: Research Model of Factors Influencing Environmental Attitude and Purchase intention

Based on the foregoing literature, it can be argued that perceived government legislations, safety and health concerns, and self-efficacy are all important predictors of environmental attitude and purchase intention. Hence, on the whole the following hypothesis was developed:

- H1. *Perceived government legislation has a significant positive influence on the consumer's purchase intentions.*
- H2. *Safety and health concerns has a significant positive influence on consumer's purchase intentions.*
- H3. *Self-efficacy has a significant positive influence on the consumer's purchase intentions.*
- H4. *Perceived government legislation has a significant positive influence on the consumer's environmental attitude.*
- H5. *Safety and health concerns has a significant positive influence on consumer's environmental attitudes.*
- H6. *Self-efficacy has a significant positive influence on the consumer's environment attitude.*

Mediating Role of Consumers' Environmental Attitudes between the Independent Variables and the Dependent Variable

- H7. *Consumer's environmental attitude mediates the influence of the perceived government legislations on the purchase intention.*
- H8. *Consumer's environmental attitude mediates the influence of safety and health concerns on purchase intention.*
- H9. *Consumer's environmental attitude mediates the influence of self-efficacy on purchase intention.*

METHODOLOGY

Sample

The population for this study consists of full time university lecturers from University Sains Malaysia which has been considered the second oldest university and has emerged as the country's largest universities in terms of academic programs, student enrollment, and infrastructure. Respondents will be full time university lecturers from the university's main campus and from the university's engineering campus, based on academic staff statistics obtained from the University chancellery on January (2007) there are 898 full time university academic staff working on main and engineering campus. Therefore, by using the stratified proportionate sampling method a list of names of lecturers working in each school was obtained either from the university directory book or from USM website and once the population has been stratified into 25 major schools, 20% of the total number of academic staff working in each school will be drawn. Therefore, the target number of questionnaires need to be collected is 179. However, 175 were returned, 4 questionnaires were not returned and 5 were rejected due to incompleteness and were unusable. Hence, 170 completed sets will be used for the data analysis in this study there by giving a total of 95%.

Measurement of variables

Independent variable- perceived government legislations: Perceived government legislations was measured by using the adapted measurements from (Cordano & Frieze, 2002) and (Nielsen, 1999); this means the respondents will have to give answers to 6 items for this variable. A five point Likert scale ranging from 1= strongly disagree to 5= strongly agree will be employed to measure perceived government legislations.

Independent variable- safety and health concerns: Health and safety concerns was measured by Wall (1995) using 1 statement stating “ Our food is becoming unsafe because of food additives “ respondents were asked to give answers from 1= strongly disagree to 7= strongly agree. Rundmo (1999) used 3 items to measure health and safety, respondents were asked to give answers from 1= most unsafe to 5= extremely safe. However, the measurements for this variable will be adapted from (Wall 1995 & Rundmo 1999); this means the respondents will have to give answers to 4 items on a scale ranging from 1= strongly disagree to 5= strongly agree.

Independent variable- Self-efficacy: Self- efficacy was measured by Hill et al (1987) respondents will give answers ranging from 1= not at all true to 4 = exactly true. However, the measurements for this variable will be adapted from Hill et al (1987) this means the respondents will have to give answers to 4 items for this variable on a scale ranging from 1= strongly disagree to 5= strongly agree.

Mediating variable- environmental attitude: The measurement environmental attitude will be adapted from Maloney and Ward (1973). This means the respondents will have to give answers to 10 items for this variable. A five point Likert scale ranging from 1= strongly disagree to 5= strongly agree will be employed to measure environmental attitudes.

Dependent variable-Purchase intention: Azjen (2002) used three statements to measure intention” I intend to ...” “I will try to” and “I plan to...”. However, the measurements for this variable will be adapted from Azjen (2002) there will be a slight change in the wording of the statements, so it will be better understood by the respondents who in turn, will have to give answers to 3 statements for this variable. The dichotomous scale will be used to measure purchase intention.

Results and Findings

A total of 200 sets of questionnaires were distributed to academic staff working in 25 major schools in University Sains Malaysia main campus and engineering campus. The drop and pick technique method was used in distributing and collecting the questionnaires. The total of full time university academic staff working on main and engineering campus is 898. Therefore, by using the stratified proportionate sampling method a list of names of lecturers working in each school was obtained either from the university directory book or from USM website and once the population has been stratified into 25 major schools, 20% of the total number of academic staff working in each school was drawn. Two hundred questionnaires were distributed, target number of questionnaires (sample size) needed to be collected was 179, however, 175 were returned, 4 questionnaires were not returned and 5 were rejected due to incompleteness and were unusable. Hence 170 complete sets will be used for the data analysis in this study thereby giving a total response rate of 95%. Based on Hair et al., (2006) a sample size of 100 is considered sufficient to carry out the analysis. Table1 below shows the response rate description and result.

Profile of Respondents

In terms of gender, 39.4% of respondents were females and 60.6% were male respondents, this indicates that the majority of respondents were male lecturers. In terms of age, 1.2% of respondents were below the age of 29 years old, while the majority of respondents 41.2% aged between 40 to 49 years old, followed by 38.2% of respondents were between the age of 30 to 39 years old, and the remaining 19.4% of respondents were above 50 years old. From ethnic back ground perspective, 72.4% of respondents were Malay, 11.2% were Chinese, 8.2% were Indians and 8.2% were other races. In terms of professional status, the majority 48.2% were lecturers, followed by 33.5% were associate professors, 17.1% were senior lectures and 1.2% were professors. Therefore, from the analysis it is apparent that the majority of respondents are in the lecturer category which are young and potentially holding more funds for research in future.

In terms of years of experience, 31.8% of respondents had working experience lower than 5 years, 17.6% of respondents had working experience between 5 to 10 years, followed by 31.8% of respondents had working experience between 11 to 20 years, and 16.5% of respondents had working experience between 21 to 30 years.

Lastly, 2.4% of respondents had working experience above 30 years. From this analysis, it appears that the majority of respondents had medium to high number of years of experience; this reflects that during respondents' years of experience on the job they will be liable to a number of research grants which will enable them to purchase electronic products for research purposes. This is supported by the following analysis on lecturers' number of research grants awarded to them during their years of experience. However, in terms of research grants, from the analysis it appears that 81% of respondents have a research grant ranging from 1 to 32. This means that lecturers tendency to use computers and other electronics is high, this can be shown from the number of research grants awarded to them, which enables them to purchase electronics equipment and add on peripherals such as; printer, modem, storage system, which works in conjunction with a computer.

Factor Analysis – Perceived Government Legislations

The following analysis is to analyze the construct of perceived government legislations. Confirmatory factor analysis was conducted and items were forced into one factor therefore, results regarding perceived government legislations revealed that all items dropped on a single component, explaining 43.87% of the total variance in the variable. In the current study, the mean for perceived government legislations is 2.11 which indicate that respondents' believe governments aren't imposing strict laws and regulations in protecting the environment and controlling pollution. The Kaiser-Meyer-Olkin measure of sampling is .71 which is considered meritorious, meaning excellent. The Bartlett's test of sphericity is significant at $p < 0.01$. Table 1 below illustrates the range of factor loadings for perceived government legislations.

Table 1: Variables and factor loadings

Variables	Loadings
Perceived Government Legislations	.71- .86
Safety and Health Concerns	.81- .88
Self-Efficacy	.68- .86
Environmental Attitude	Factor 1 : .57- .66
	Factor 2 : .68- .79

Factor Analysis – Safety and Health Concerns

The construct of safety and health concerns was analyzed using confirmatory factor analysis and items were forced into one factor. All items were accepted for safety and health concerns and all items dropped on a single component, explaining 70.04% of the total variance in the variable. Hence, non of the items were dropped and the mean for safety and health concerns was 4.20 which indicate that respondent's safety and health concerns are high. The Kaiser-Meyer- Olkin measure of sampling is .82 which is considered marvelous. The Bartlett's test of sphericity is significant at $p < 0.01$. Table 1 above illustrates the range of factor loadings for safety and Health concerns.

Factor Analysis – Self-Efficacy

The following analysis was to analyze the construct of self-efficacy, confirmatory factor analysis was conducted and items were forced into one factor. All items were accepted for self-efficacy and all items dropped on a single component, explaining 60.15% of the total variance in the variable. Hence, no item was dropped, and the mean for self-efficacy is 4.05 which indicate that respondent's self-efficacy are high. The Kaiser-Meyer- Olkin measure of sampling is .75 which is considered meritorious, meaning excellent and the Bartlett's test of sphericity is significant at $p < 0.01$. Table 1 above illustrates the range of factor loadings.

Factor Analysis – Environmental Attitude

The measurement for environmental attitude was adapted and modified to the Malaysian context to establish the dimensions of the study. Hence, this study utilized exploratory factor analysis was run twice to analyze the construct of environmental attitude, which will help establish grouping of items based on respondents' perceptions i.e. USM lecturers. After running the first factor analysis two items were eliminated due to cross loading. In the second running of factor analysis another two items were eliminated. The remaining six items grouped under a single component, explaining the total variance of (30.64%) in the variable, the mean value for environmental attitude is of 3.67 which indicate that respondents' environmental attitude is above average.

The Kaiser-Meyer- Olkin measure of sampling is .77 which is considered meritorious, meaning excellent and the Bartlett's test of sphericity is significant at $p < 0.01$. Table 1 above illustrates the range of factor loadings.

Reliability Analysis

The data obtained were tested for reliability using cronbach's Alpha. The variables that were tested include perceived government legislations, Safety and health concerns, self efficacy and environmental attitude. In this test, any item that was not significant will be deleted. According to Sekaran (2003) the closer Cronbach's alpha is to 1, the higher the internal consistency reliability therefore, a reliability coefficient of 0.5 and higher is acceptable. The Cronbach's alpha for the tested variables ranged from .82 for perceived government legislations, .85 for safety and health concerns, .77 for self-efficacy and .69 for environmental attitude. Hence, according to (Hair, Anderson, Tatham & Black, 1995) the generally agreed upon lower limit for Cronbach's alpha is .70 although it may decrease to .60 in exploratory research. A summary of the reliability tests for the variables is shown in Table 2 below.

Descriptive Statistics

After carrying out the validity and reliability analyses, the items representing their respective factors were then averaged. The mean was applied as a measure of central tendency, which indicated that all variables were above their midpoint level as indicated in Table 2. Respondents safety and health concerns was the highest in rating ($\bar{X} = 4.19$), followed by respondents self-efficacy ($\bar{X} = 4.05$), followed by environmental attitude the mediating variable of the study had a mean value of ($\bar{X} = 3.67$), which indicates that respondents attitude towards the environment was normal neither high nor low. Finally, perceived government legislations ($\bar{X} = 2.11$). Table 7 below, provides a summary of descriptive statistics for; perceived government legislations, safety and health concerns, self-efficacy, environmental attitude, and purchase intention.

Table 2: *Descriptive Statistics*

Type of variable	Minimum	Maximum	Mean	Std. Deviation	Cronbach Alpha
Perceived Government Legislations	1.00	5.00	2.1118	.87114	.82
Safety and Health Concerns	1.50	5.00	4.1971	.70354	.85
Self-efficacy	1.00	5.00	4.0544	.53741	.77
Environmental Attitude	2.00	5.00	3.6716	.53091	.69
Purchase Intention	.00	1.00	.0176	.13205	

Mediating Analyses: *Dependent Variable of Purchase Intention*

In this study, a mediation analysis was employed through a series of multiple regression analyses in order to test the hypotheses. The present study has one mediating variable of environmental attitude, and in order to establish its presence, the first step is to ascertain the impact of the independent variables including perceived government legislations, safety and health concerns, and self-efficacy on the dependent variable of purchase intention. When purchase intention is set as the dependent variable in Table 3, it shows that only perceived government legislations exhibited positive impact on the dependent variable of purchase intention hence, (H1 is supported), while safety and health concerns and self efficacy did not reveal any significant statistical influence and were insignificant therefore, H2, H3, not supported. The output shows that only perceived government legislations had a positive relationship with purchase intention at $\beta = .151$, $t = 1,921$, $p < 0.10$. However, the variation of perceived government exposure explained 0.46 percent of purchase intention. Therefore, H1 is supported. This

indicates that the higher consumers perceive government legislations the higher their intention to purchase electronic green products.

Table 3: Regression Analysis Between All Independent Variables And Dependent Variable Of Purchase Intention

<i>Variables</i>	<i>Beta</i>	<i>t-values</i>	<i>Sig.</i>
Perceived Government Legislations	.151*	1.921	.056
Safety and Health Concerns	.113	1.429	.155
Self-Efficacy	.125	1.630	.105
$R^2 = .046$	$F = 2.616^*$	Durbin-Watson Statistic = 2.000	

Note: *** $p < 0.01$ and ** $p < 0.05$ and * $p < 0.10$

In the second step of the mediating analyses, multiple regression analyses was run (see Table 4) between all the independent variables and the mediating variable of environmental attitude, the result shows that two variables exhibited a positive impact on environmental attitude this variable is safety and health concerns and self-efficacy therefore, (H5 and H6 are supported). The output shows that safety and health concerns has a significant positive impact on environmental attitude at $\beta = .186$, $t = 2.515$, $p < 0.01$. This indicates that the higher the safety and health concerns among lecturers the higher their level of environmental attitude. Therefore, H5 is supported. In addition, the output shows that self-efficacy had a significant positive impact on environmental attitude at $\beta = .324$, $t = 4.520$, $p < 0.01$. Therefore, H6 is supported. However, perceived government legislations did not reveal any significant statistical influence and were insignificant at $p < 0.10$ on environmental attitudes therefore, H4 is not supported. This effectively eliminates the possibility of environmental attitude being a mediator for the relationship of perceived government legislations on purchase intention. According to Baron and Kenny (1986), if one of the steps of the mediating analyses produces a non-significant factor, the mediating effects do not hold.

Table 4: Regression Analysis between all independent variables and the mediating variable of Environmental Attitude

<i>Variables</i>	<i>Beta</i>	<i>t-values</i>	<i>Sig.</i>
Perceived Government Legislations	.047	.644	.521
Safety and Health Concerns	.186***	2.515	.013
Self-Efficacy	.324***	4.520	.000
$R^2 = .158$	$F = 10.414***$	Durbin-Watson Statistic = 1.741	

Note: *** $p < 0.01$ and ** $p < 0.05$ and * $p < 0.10$

Table 5 illustrates the final step of the regression. Hence, environmental attitude was not found to be a mediator for the relationship between perceived government legislations and purchase intention, at $\beta = -.133$, $t = 1.727$, $p < 0.10$. However, environmental attitude explained 3 percent of the variation between perceived government legislations and purchase intention (i.e. $R^2 = 0.033$). Hence, H7 is not supported. However, environmental attitude was not regarded as a mediating variable to the independent variables of; safety and health concerns and self-efficacy, and did not reveal any significant statistical influence. Therefore, H8 and H9 are not supported.

Table 5: Regression Analysis between perceived government legislations and mediating variable of Environmental Attitude on Purchase Intention

<i>Variables</i>	<i>Beta</i>	<i>t-values</i>	<i>Sig.</i>
Environmental Attitude	.133*	1.727	.086
Perceived government Legislations	.135	1.761	.080
$R^2 = .033$	$F = 2.783^*$	Durbin-Watson Statistic = 2.2012	

Note: *** $p < 0.01$ and ** $p < 0.05$ and * $p < 0.10$

DISCUSSION

The result of this study indicated that perceived government legislations, did not influence respondents' environmental attitude, the mean score for perceived government legislations was 2.11 which indicate that lecturers perception of governments' ability in controlling environmental laws and regulations is low. In this study perceived government legislations, is conceptualized as consumer's perception that governments should impose strict laws and regulations on environmental pollution. The findings of this study are closer in line with Chandra (2001) who carried out a study on the "relationship between political awareness and conservation of attitudes and behaviors", political awareness showed a positive weak correlation with attitudes and behaviors. In this study perceived government legislation did not exhibit significant positive influence on environmental attitude; however, it did have a significant positive influence on purchase intention. This governmental variable was used in connection to environmental studies, each study catered for a different context, different measurement, different model, and a different theory from the one that has been used in this study.

In addition, the result of this study indicated that respondents' safety and health concerns strongly influenced respondents' environmental attitude, this indicates that lecturers safety and health concerns towards the environment is high. This means that the higher the concern about safety and health the higher their attitude towards the environment. This study is inline with the findings of Wall (1995) who found that safety and health concerns ranked as the strongest predictors of attitude, findings by Wall (1995) lend support to researchers who claim that increasing concerns with safety and health are becoming a prominent factor in shaping people's attitudes towards the environment.

Dunlap (1991) supports this finding; Dunlap and Scarce (1991) who argued that there is evidence that environmental condition are worsening. Accordingly, Dunlap (1991) argued that concerns for quality of life has given way, in many cases to concern about health issues, and life itself, for humans and non-human species. The findings of this study are in line with Rundmo (1999) who concluded that respondents felt most unsafe regarding polluted food, infected food, and industrial pollution. Hence, in the current study lecturers were asked four questions to measure their safety and health concerns. The first question; our food is becoming unsafe because of environmental pollution, the mean score for question one is (4.0). The second question; our water is becoming unsafe because environmental pollution, the mean score for question two is (4.31). The third question; I feel unsafe from getting a health injury caused by environmental pollution, the mean score for question three is (3.98). Finally question four; I feel unsafe consuming polluted food, the mean score for question four is (4.41). Therefore, the findings indicate that lecturers felt most unsafe consuming polluted food, polluted water, and getting a health injury caused by environmental pollution. Hence, concerns with safety and health are becoming a prominent factor in shaping people's attitudes towards the environment.

Finally, the result of this study indicated that respondents' self-efficacy did influence environmental attitude. Lecturers' self-efficacy is strongly related to levels of participation towards environmental concerns. The findings of this study are inline with Wall (1995) who reported a mean score of 4.30 and concluded that efficacy/interest affects the levels of participation in environmental activities and will increase advantages associated with greater participation. Self-efficacy refers to a person's belief in his or her capability to perform a task as referred to by Bandura (1997) and Wood & Bandura (1989).

Hence, the relationship between self-efficacy and individual performance is strong. Carvone and Peak (1986) has related self-efficacy to diverse outcomes such as problem solving, learning achievements (Campbell & Hackett, 1986), adaptability to new technology (Hill, Smith, & Mann, 1987), and training effectiveness (Earley, 1994; Gist, 1987). For example, Hill (1987) carried out a study on the role of efficacy in predicting the decision use of advanced technologies; the case of computer use. The results indicated that computer efficacy beliefs made a significant contribution to the prediction of behavioral intentions. This study is in line with (Tella et al., 2007) her study revealed that self-efficacy and use of electronic information jointly predict and contribute significantly to academic performance of students. This corroborates previous findings by Tella and Tella (2003) and Pajares and Johnson (1996) that self-efficacy is a better predictor of academic performance.

The Mediating Role of Lecturers' Environmental Attitude on the Relationship between Perceived Government Legislation, Media Exposure, Safety and Health concerns and Purchase Intention.

The result of this study indicated that respondents' environmental attitude was neither low, nor high but it was average. However, from the findings of this study environmental attitude did not mediate the relationship between perceived government legislations, safety and health concerns and self-efficacy, and the dependent variable of purchase intention. This could be due to a number of different facts. Firstly, respondents did not have

strong perception of government rules and regulations this was clear from the low mean scores regarding perceived government legislations. According to Fikry (2000), the media and other sources of information such as the public libraries provide support in public awareness programs in Malaysia. However, maybe an increase to the existing public awareness programs and larger media coverage will increase consumers' perceptions of government rules and regulations. Another aspect that could have affected the non mediating role of environmental attitude between perceived government legislations and purchase intention of lead-free electronics, could be due to the items in the questionnaire measuring government legislations was about government regulations in controlling environmental pollution in general and not specifically about lead-free electronics, this could have contributed to the insignificant result.

Secondly, environmental attitude was not found to mediate the relationship between safety and health concerns and purchase intention. This could be shown from results of factor analysis; items measuring respondent's actual commitment were all eliminated either for cross factor loading or low reliability. For example, items such as, "in my house hold we do not buy products just because they originate from sustainable products". In addition, items such as, "I am not willing to pay pollution tax even if it would considerably decrease the environmental pollution." This indicates that although respondents' safety and health concerns are high towards environmental concern, however, respondents' actual commitment is low. Hence, the finding is inline with Uusitalo (1990) who pointed out that, although people may be genuinely concerned about environmental protection, their individual actions are based on self-interest can bring about environmental damage as an unintended consequence. Similarly, environmental attitude did not mediate the relationship between self-efficacy and purchase intention either. This could be due to the fact that 38.2% of the respondents were between ages of 30 to 39, while 48.2% of respondents were holding a lecturer position, however, 2.4% earned less than RM 2,500 a month and another 27.1% earned between RM 2,500 and RM 3,999 a month. In addition, 20.0% had 1 to 2 household members, while 33.0% had 3 to 4 household members. Hence, the results indicate that the majority of respondents are holding a lecturer position, which are relatively young, and can not afford to purchase a lead-free electronic product or computer and add-on parts, since their monthly income is not high.

CONCLUSION

This study may have identified a part of the pollution problem, which is caused by the disposal of high-tech electronic products at the end of the products life cycle. Hence, lecturers are considered relatively heavy users of electronic products; therefore, their intention to purchase lead-free electronic products (green electronics) is the focus of the study. However, through a survey among lecturers working full time in USM main campus and USM engineering campus the study found some revealing insights through the results of this study; safety and health concerns and self-efficacy had a significant influence on lecturers' environmental attitude, while perceived government legislations influenced purchase intention directly. As for environmental attitude, it did not act as a mediator between the independent variables and the dependent variable of purchase intention. In addition, perceived government legislation did not have an influence on environmental attitude but did exhibit a weak influence on purchase intention, this should not be interpreted as a disability but rather as an opportunity since this study has managed to get an insight on using a governmental variable and adapting a measurement for it. Future studies may explore the influence of this variable, and make use of the existing literature and measurement in exploring a new phenomenon in need of a governmental variable. From the findings of the study it is recommended that marketers should constantly monitor and evaluate the needs and concerns of university lecturers by taking into account lecturers safety and health concerns and self-efficacy factors that lead to their levels of performance and achievement.

REFERENCES

- Alan, B. J., Smith, R. & Craig A. Martin. (1999) "The Influence of Consumer Socialization Variables on Attitude toward Advertising: A Comparison of African Americans and Caucasians." *Journal of Advertising* 28, 3: 13-24.
- Axelrod, L. J. (1968) Reference in Donald G. Morrison,(1979). "Purchase Intentions and Purchase Behavior". *Journal of Marketing*, vol.43, No.2. PP.65-74.
- Azjen, I. (2002) Constructing a TPB Questionnaire: Conceptual and Methodological Considerations.
- Azjen, I. (2002) Residual effects of past on later behavior: Habituation and reasoned action perspectives. *Personality and Social Psychology Review*, 6, 107-122.
- Bandura, A. (1977) Self-efficacy: Toward a Unifying Theory of Behavioral Change. *Psychology review*. Vol. 84, No. 2. (March 1977), pp. 191-215.
- Blanco, E. (2001) Presentation to the Board of the Deep South Center for Environmental Justice, Xavier University of Louisiana, New Orleans, Louisiana.

- Brombacher, J. & U. Hamm. (1990) Ausgaben für eine Ernährung mit Lebensmitteln aus alternative Aunbau, Agra Europe 7, 1-11.
- Buttel, F.H. (1987) "New directions in environmental sociology." Annual Review of Sociology, Vol.13, pp.465-488.
- Campbell, N. K., & Hackett, G. (1986) The effects of mathematics task performance on math self-efficacy and task interest. *Journal of Vocational Behavior*.28,149-162.
- Cannis J. (2001) Green IC Packaging. Advanced Packaging, Vol.8, Pg. 33-38.
- Cervone, D., & Peak, P.K. (1986) Anchoring, efficacy, and action: The influence of judgmental heuristics on self-efficacy judgments and behavior. *Journal of Personality and Social Psychology*, 50, 492-501.
- Chandra, S. (2001) Dept. of Psychology, Loyola University New Orleans, LA 70118.
- Cordano, M., & Frieze, I. H. (2002) Enhancing environmental Management teaching through applications of toxic release information. In S. Sharma & M. Starick(Eds), Research on corporate sustainability (pp.295-318). New York Edward Elgar Publications.
- Cyrus H.Tahmassebi. (2003) Market forces versus regulation Chief Economist and Director of Market Research, Ashland Oil Inc, PO Box 391, Ashland, KY 4114, USA.
- Diekmann, A. & Preisendorfer, P. (1998) Environmental behavior-Discrepancies between aspirations and reality. *Rationality and Society*, 10(1), 79-102.
- Dunlap, R. E. & R. Scarce. (1991)" The poll-poll trends: Environmental problems and protection." *Public Opinion Quarterly*, Vol.55, pp.651-672.
- Dunlap, R.E. (1975) The Impact of Political Orientation on Environmental Attitudes and Actions. *Environment and Behavior* 7:428-54.
- Dunlap, R. E. (1989). Public opinions and environmental policy.The "new environmental paradigm." *Journal of Environmental Education*, 9, 10-19. ...
- Early, P.C. (1994) Explorations of individual and collective self: Sources of self-efficacy across cultures. *Administrative Science Quarterly*, 39, 89-117.
- Fikry, A. Mohamed. (2000) first sub-regional training workshop on environment statistics ESCAP Malaysia Bangkok, Thailand.
- Gist, M.E. (1987) Self-Efficacy: Implications for organizational behavior and human resource management. *Academy of Management Review*, 12, 472-485.
- Grab, E. G.(1988)"Occupation, education and feelings of powerlessness."In *Social Inequality in Canada. Scarborough*. Ont: Prentice Hall, Canada, pp.470-475.
- Hair, J.F., Black, W.C., Babin, B. J., Anderson, R. E., & Tatham, R.L. (2006) Multivariate Data Analysis. 6th Edition. Prentice Hall International, Inc.
- Hatija, H.(2003) PCBs Situation in Malaysia. [Accessed May 2005] Available from http://tabemono.info/report/former/pcd/2003/malaysia/e_1.html
- Hays, S.P.(1987) *Beauty, Health and performance: Environmental Politics in the United States, 1955-1985*. Cambridge: Cambridge Univ. Pr. Hirsch, F.1976. Social Limits to Growth. Cambridge, Mass.: Harvard Univ.Pr.
- Hill, T., Smith, N.D., & Mann, M. F. (1987) Role of efficacy expectations in predicting the decision to use advanced technologies. *Journal of Applied psychology*, 72, 307-314.
- Kotler, P. & Armstrong, G (2001) Principles of Marketing, 9th Edition, by Prentice Hall, Inc., Upper Saddle River, New Jersey.
- Kraus, S.J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and Social Psychology Bulletin*, 21(1), 58-75.
- Langerbein, B. & B. Wirthgen. (1987) Konsumverhalten der kaufervon alternativ erzeugen Nahrungsmitteln in Nordhessen. Brichtete über Landwirtschaft, 65-1-23.
- Miller, K. (2005) Communications theories: perspectives, processes, and contexts. New York: McGraw-Hill.
- Mitchell, R.C. (1990) "Public opinion and the green lobby: Poised for the 1990s?"In Environmental Policy in the 1990s: Toward a new agenda. N.J. Vig and M.E. Kraft (eds). Washington, D. C.: *Congressional Quarterly Pr.*, pp.81-99.
- Morrison, D. G (1979) Purchase Intentions and Purchase Behavior. *Journal of Marketing*, Vol. 43, No. 2, 65-74.
- Napp D. (9-12 October 1995) Lead-Free Interconnect Materials for the Electronic Industry, In: Proceeding of the 27th International SAMPE Technical Conference, Albuquerque, NM, pg 342.
- Nielson, L.B. (1999) Shades of Green: Integrating Environmental and Economic Attitudes. University of Houston, Department of Political Science. Houston. Texas.
- Olli, E., Grendstad, G., & Wollebaek, D. (2001) Correlates of environmental behaviors: Bringing back social context. *Environment and Behavior*, 33(2), 181-208.
- Pajares, F. & Johnson, E. (1996) Self-efficacy beliefs and the writing performance of entering high school students. *Psychology in the Schools*, 33(2), 163-175.

- Peck, S. & Gibson, R. (2000) "Pushing the Revolution," in *Alternatives Journal*, Vol. 26, No. 1 ,pp.9-11.
- Polonsky, Michael Jay. (1994) "Green Marketing Regulation in the US and Australia: The Australian Checklist." *Greener Management International* 5: 44-53.
- Rogers, E. M. (1962, 1995, 2003) *Diffusion of innovations* (1st ed., 4th ed., 5th ed.) New York: Free Press.
- Rundmo T. (1999) "Perceived risk, health and consumer behavior". *Journal of Risk Research*, Volume 2, Number 3, 1 July 1999, pp. 187-200(14)
- Sewall (1978): Reference in Donald G. Morrison, (1979) "Purchase Intentions and Purchase Behavior". *Journal of Marketing*, vol.43, No.2. PP.65-74.
- Silk and Urban (1978): Reference in Donald G. Morrison, (1979). "Purchase Intentions and Purchase Behavior". *Journal of Marketing*, vol.43, No.2. PP.65-74.
- Smith (1965): Reference in Donald G. Morrison,(1979) "Purchase Intentions and Purchase Behavior". *Journal of Marketing*, vol.43, No.2. PP.65-74.
- Tella, A., Jr & Tella, A. (2003) Self-efficacy and locus of control as predictors of academic achievement among secondary schools students in Osun State Unity Schools. *Oyo Journal of Educational Psychology*, 1(1), 32-41.
- Tella, A., Jr & Tella, A., C.O.Ayeni, R. O. Omba (2007) Self-efficacy and use of electronic information as predictors of academic performance. *Electronic Journal of Academic and Special Librarianship* v.8 no.2.
- Uusitalo, L. (1990) "Are environmental attitudes and behavior inconsistent: Findings from a finished study. " *Scandinavian Political Studies*, Vol.13, No.2, pp.211-226.
- Van Liere, K.D. & R.E. Dunlap. (1981) "Environment concerns: Does it make a difference how its measured?" *Environment and Behavior*.13 (6):651-676.
- Von Alvensleben, R. and M. Altamann (1986) Die Nachfrage nach alternativen Lebensmitteein. *Agrarwirtschaft* 10, 289-295.
- Wall, Glenda. (1995) "Barriers to individual environmental action: The influence of attitudes and Social Experiences," *Canadian Review of Sociology&Anthropology*, vol.32 Issue 4, pp 28-465.

YOUNG MALAYSIAN'S USE OF PRODUCT CUES IN THEIR CHOCOLATE PURCHASE DECISION

Poh-Chuin, Teo and Osman Mohamad
Universiti Sains Malaysia

ABSTRACT

Consumers' product evaluation is increasing important in marketing area to understand consumer behavior. This study tries to identify the importance of product attributes and factors that influencing young consumers' chocolate purchase decision, and the influences of their chocolate consumption level. The results showed that young consumers are more influenced by product intrinsic cues when making a chocolate purchase. Other than that, most of the young consumers were found consumed chocolate heavily, and the importance of the factors that influence their chocolate purchase decision was found positively related to their chocolate consumption level. These bring some implications to marketing managers, especially who targeting chocolate products to young consumers. This paper also discusses the limitations of study and recommendations for future research.

Keywords: Product cues, Segmentation, Young consumers, Consumption level, Purchase decision

INTRODUCTION

The huge driving forces behind which are greater brand choice and product variety encourage chocolate confectionery grew by 4% to reach RM 361 million in 2008 in current value terms, and is expected to achieve a 3% in constant value terms over the forecast period in Malaysia (Euromonitor International, 2008). However, multinational continued to dominate chocolate confectionery in Malaysia, due to intensive marketing efforts, constant new product launches and familiarity among consumers. Consumers show higher preferences to multinational brands for the perceived better quality and prestige (Euromonitor International, 2008). Thus, it is crucial to understand the role play of country of origin of brand in chocolate confectionery.

The vast growth and wide use of the internet make brand related information more available to consumers in the world. Consumers can assess brand related information anytime (7-24) when they want. Other than the internet, the growing of international trade exposed the world wide consumers to wider brand and products choice, as more brand choice from different foreign countries are available for the consumers all around the world. These make the cue other than product's intrinsic cues such as taste, quantity, smell and etc., and also product extrinsic cues likes guarantee and warranty, price, packaging, store design, but especially a brand's country of origin cue become important from time to time in influencing consumer's brand perception, purchase intention and buying decision.

O'Cass and Lim (2002) claimed that it is important to conduct the research in the Southeast-Asian countries, because Southeast-Asian economies have seen strong growth in terms of the capacity of both consumption and production. Besides, young consumers were chosen to be the focus in this study, as they are the prime target of much commercial marketing activity (O'Cass & Lim, 2002). Other than demographic segmentation, which is young consumer, this study also included use-related segmentation to examine how it related to the importance of product related cues when young consumer making chocolate purchase decision. This study aims to examine the product cue usage among young Malaysian in their chocolate buying decision, and the effect of their chocolate consumption level on it.

LITERATURE REVIEW

Product cues

Nowadays, wide variety of product and brand information is available to consumers with the increasing exposure to firms' international and domestic marketing strategies. Generally, the information processing model of consumer decision making assume that product quality judgments are inferred from cues (Steenkamp, 1989; Verlegh & Steenkamp, 1999). Product and brand related cues, such as taste, packaging, store display, brand name, price, warranty and guarantee, size, country of origin, color of packaging, spoke person, and etc., play crucial role in shaping consumer behavior. Consumers use product and brand cues in their product evaluation, forming their perceptions, shaping their attitude and purchase intention, and finally their actual purchase decision.

Product cues are classified in two categories, which are intrinsic and extrinsic cues. Product intrinsic cues are the cues that can be manipulated by changing the physical product (Gutman & Alden, 1985), such as taste, product design, color and size; whereas product extrinsic cue is form part of product value which is not inherent feature of the physical product (Gabbot, 1991), likes brand name, retailer reputation, country of manufacture and endorser. Consumers more rely on product intrinsic cues when they have more experience with the product. Thai's evaluation towards product from China relates positively to their familiarity with the product (Ahmed & d'Atous, 2007). However, product extrinsic cues are more influential when consumers have lower familiarity towards the product, as these cues are relied heavily in the situation of risk (Lantos, 1983).

The uses of product cues also differ regarding to the product category. Consumers tend to emphasize on product extrinsic cues when judging high involvement product, and vice versa. For instance, country of origin cue plays important role in influencing consumer product judgment toward high involvement product. Consumers generally show higher preferences towards high technology product from developed countries, as their high technological sophistication and workmanship. Highly industrialized countries are found to be evaluated as superior in designing high-involvement products (Ahmed & d'Atous, 2001, 2007 & 2008). For example, consumers show high judgment and preferences towards automobile from Germany and electronic appliance from Japan.

Consumer's uses of product cues also differ regarding to their demographic characteristics. Female showed higher preferences toward product intrinsic cues, and vice versa. In the evaluation of product dimension, Sohail (2005) found there are significant effects where female were more driven by quality consideration, but male driven by product extrinsic cues likes packaging. The finding of his study also revealed that respondents in younger group showed greater preference for the style of product, where those in older group more prefer to use product quality in their product evaluation.

Market segmentation

All consumers are not alike. Consumers have different needs, wants, desires, experience and socio-demographic backgrounds. Segmentation strategy allowed producers to avoid direct competition in marketplace by differentiate their offering, through pricing, styling, packaging, promotional appeal, method of distribution, and superior service (Schiffman & Kanuk, 2007). There are nine major categories of consumer characteristics which provide to the most popular bases for market segmentation, which are geographic segmentation, demographic segmentation, psychological segmentation, psychographic segmentation, socio-cultural segmentation, use-related segmentation, usage-situation segmentation, benefit segmentation and hybrid segmentation approaches (Schiffman & Kanuk, 2007). This study used consumers demographic and product-usage based segment, usage level, to analyze their use of product related cues when making purchase decision. These approaches are extremely popular and effective form of segmentation (Schiffman & Kanuk, 2007), and these segments have a priori high propensity to purchase and purchase intention (Morwitz & Schmittlein, 1992). There are three characteristics in this form of segmentation, which are usage level, level of awareness and degree of brand loyalty. Usage level was included in this study to determine young consumers' chocolate consumption level, and to determine the importance of factors influencing their chocolate purchase decision with regarding to their chocolate consumption level. The objectives of this study were to examine product cue that influencing young consumer chocolate buying decision, and the effect of their chocolate consumption level.

METHODOLOGY

This empirical research aimed to examine young consumer's product cue usage in their purchase decision of chocolate. A self-administered questionnaire was administered to the student aged from 17 to 28 years old in Universiti Sains Malaysia, as consumers age ranged from 17 to 28 years old were treated as young consumer in past studies (O'Cass and Lim, 2002; Kwok et al., 2006; Goi, 2009). The sampling method applied in this study is convenience sampling, where in the meta-analysis of Roth and Diamantopoulos (2008) found this sampling method was widely use in the study of COO. A total of 100 questionnaires were distributed to the student, as this study aimed 100 respondents. All of the questionnaires were completed and usable, because with the present of researcher, the researcher provided prompt feedback to the subject and screened the questionnaires before the questionnaires were collected.

The questionnaire consist two parts. First part was designed to collect the demographic and usage level data about the subjects. The questioned designed included age, gender, marital status, occupation and their usage level. One question was designed to measure consumer's usage level; where the respondents were asked to indicate the frequency of their chocolate consumption. A five-point Likert scales anchored on "Not at all" (1) to

“Most of the time” (5). Next, the third part was designed to measure the level of importance of factors that influence respondents’ chocolate purchase decision. The factors provided are recommendation from my friends, own previous experience, country of origin of the brand, country of manufacture, brand name, price, color of packaging, design of packaging, taste, availability of product in different sizes, advertisement, promotional offer, *halal* certification, store display and others. Muslim market is crucial to many Malaysian companies and has documented procedures to make sure *halal* processing requirements are applied at all stages of production (Zailani & Othman, 2009). Furthermore, in Malaysia, *halal* products certified run the gamut from meet products to food products, such as ice cream, chocolate and food supplements (Zailani & Othman, 2009). Thus, *halal* certification was included in this study as this study included Malay respondents (Muslim), and the focus on Halal food is increasing, especially in Malaysia. Numerical values were assigned from 1 (not all important) to 5 (extremely important). Five-point Likert scales were chosen as measurement scales to collect data in this part, as Likert-scales are more reliable and appropriate for studies of this nature (Kaynak et al., 2000).

A four stages of data analysis were undertaken: first, descriptive analysis to calculate demographic measured on nominal scales; second, descriptive analysis to calculate mean value and standard deviations for the importance of factors influencing consumer buying decision which measured on five-point rating scales; third, independent *t*-test to measure the differences in the means between the two subgroup of one of the demographic parameter used, which was gender; lastly, one-way ANOVA to measure the differences of mean value among three subgroup of chocolate consumption level, on the importance of factors that influencing their chocolate purchase decision.

ANALYSIS AND FINDINGS

There were 100 respondents included in this survey. The survey was conducted to a convenience sample of university students. 37 out of 100 respondents were male, and the rest 63% were female. Furthermore, 46% of the subjects were found consume chocolate heavily as they always. Both 27% of respondents were light and medium users, where they consume chocolate sometimes and most of the time, respectively.

Descriptive analysis, such as mean and standard deviation, was done to analyze the importance of factors that influencing subjects’ buying decision. Table 1 provides the means for the importance of factors that influencing consumer chocolate buying decision. The result showed that chocolate taste and respondent’s own previous experience play the most influential role in their chocolate purchase decision, followed by price and brand name, where the mean value were 4.48, 4.11, 3.81 and 3.60, respectively. However, *Halal* certificate, color of packaging and store display contribute to the least, where the mean values were 2.07, 2.68 and 2.73, respectively. The findings demonstrated that other factors like availability of product in different sizes, recommendation from friends, country of origin of brand, design of the packaging, country of manufacture, advertisement just shown moderate effect on young consumer’s chocolate purchase decision.

Next, independent *t*-test was conducted to analyze the influences of gender on the factors that influencing consumer’s chocolate purchase decision. The results were as shown in table 2. Regarding to table 2, we can found that *halal* certification play the least important role for both male and female, where the mean value both is 2.08 and 2.06 only, in their chocolate purchase decision. Taste was found as the most important factor for both male and female respondents in their chocolate buying decision where the mean value was 4.51 and 4.46, respectively. Own previous experience is the second important factor, and followed by price. The results in line with the findings shown in Table 1, where gender did not show significant difference in their evaluation of factors that influencing their chocolate purchase decision.

Table 1: The Importance of Factors Influencing Buying Decision

Factors	Importance					Mean value (standard deviation)
	Not all important	Least important	Moderate	Important	Extremely important	
Taste	0	3	3	37	57	4.48 (.70)
Own previous experience	0	5	21	32	42	4.11 (.91)
Price	0	7	31	36	26	3.81 (.91)
Brand name	2	12	25	46	15	3.60 (.95)
Promotional offer	3	19	20	37	21	3.54 (1.11)
Availability of product in different sizes	9	13	40	17	21	3.28 (1.20)
Recommendation from my	3	14	44	31	8	3.27 (.91)

friends						
Country of origin of brand	9	25	28	27	11	3.06 (.12)
Design of the packaging	11	23	35	24	7	2.93 (1.09)
Country of manufacture	14	22	33	24	7	2.88 (1.14)
Advertisement	12	24	42	19	3	2.77 (.99)
Store display	17	22	40	13	8	2.73 (1.14)
Color of packaging	18	22	37	20	3	2.68 (1.08)
<i>Halal</i> certificate	49	14	25	5	7	2.07 (1.26)

Note: All item used a 5-point scale with (1= not all important; 2= least important; 3= moderate; 4= important; 5= extremely important)

Table 2: Mean Rating of Factors Influencing Chocolate Purchase Decision by Male and Female Respondents

Factors	Mean value (Std. Dev.)		t-value	Significant (2-tailed)
	Male	Female		
Taste	4.51 (.56)	4.46 (.78)	.364	.717
Own previous experience	3.92 (.98)	4.22 (.85)	-1.624	.108
Price	3.68 (1.03)	3.89 (.83)	-1.137	.258
Brand name	3.59 (1.01)	3.60 (.93)	-.043	.966
Promotional offer	3.51 (1.27)	3.56 (1.06)	-.181	.856
Recommendation from my friends	3.38 (.98)	3.21 (.86)	.913	.363
Availability of product in different sizes	3.30 (1.13)	3.27 (1.25)	.110	.913
Country of origin of brand	3.05 (1.20)	3.06 (1.13)	-.039	.969
Design of the packaging	2.97 (1.04)	2.90 (1.13)	-.300	.765
Country of manufacture	2.84 (1.19)	2.90 (1.12)	-.282	.778
Store display	2.81 (1.20)	2.68 (1.11)	.543	.588
Advertisement	2.78 (1.06)	2.76 (.96)	.106	.916
Color of packaging	2.62 (1.14)	2.71 (1.25)	-.412	.681
<i>Halal</i> certificate	2.08 (1.21)	2.06 (1.29)	.067	.947

Note: All item used a 5-point scale with (1= not all important; 2= least important; 3= moderate; 4= important; 5= extremely important)

Subsequently, one-way ANOVA was run to clarify the differences about the importance of factors that influencing consumer chocolate purchase decision which regarding to their consumption level. Univariate ANOVA tests were undertaken along with the Duncan test to spot the differences across the three groups on the importance those factors. Table 3 presents there were significant different for own previous experience, country of manufacture, brand name and taste. F value for own previous experience is 2.58 and based on the result of Duncan's range test, there were significant different between group 1(3.81) to group 3(4.30). Besides, F value for country of manufacture was 3.39 and there were significant different between group 1 (2.41) to group 2 (3.00) and group 3 (3.9), and the F value for brand name was 2.87 and there were significant different between group 1 (3.30) to group 3 (3.83). The F value for taste was 3.40, there were significant different exist between group 1 (4.30) to group 3 (4.67).

Table 3: Consumption Level and the Importance of Factors That Influencing Chocolate Buying Decision

Factors	Mean value			F value	Duncan's Range test
	Group 1 Light user (n=27)	Group 2 Medium user (n=27)	Group 3 Heavy user (n=46)		
Taste	4.30	4.33	4.67	3.42**	Group 1 vs Group 3
Own previous experience	3.81	4.07	4.30	2.58**	Group 1 vs Group 3
Price	3.78	3.81	3.85	.05	
Promotional offer	3.41	3.57	3.63	.29	
Brand name	3.30	3.52	3.83	2.87**	Group 1 vs Group 3
Availability of product in different	3.22	3.28	3.33	.06	

sizes					
Recommendation from my friends	3.19	3.19	3.37	.51	
Country of manufacture	2.41	3.00	3.09	3.39**	<i>Group 1 vs Group 2&3</i>
Design of the packaging	2.78	2.89	3.04	.52	
Color of packaging	2.63	2.70	2.70	.04	
Advertisement	2.67	2.70	2.87	.43	
Store display	2.52	2.59	2.93	1.43	
<i>Halal</i> certificate	1.70	2.13	2.33	1.82	

Note: Mean scores based on a five-point scale ranging from 1 = not at all important to 5 = extremely important; *F*-ratios are the result of a one-way ANOVA test; where *, **, and *** represent statistical significance at .10, .15 and .01, respectively.

Generally, table 3 showed that the importance of those factors that influencing consumer's chocolate purchase decision was increasing regarding to the usage level. Such as the mean value of brand name were 3.30 for light user, but the mean value increased to 3.52 for medium user 3.83 for heavy user. Furthermore, based on Duncan's range test, heavy users tend to used own previous experience, brand name and taste as important considerations during making chocolate purchase decision, as compared to light users. Interestingly, availability of product in different sizes and country of manufacture display significance different influences in affecting respondents in different consumption level. However, there were no significant different exist between young consumers' usage level in recommendation from friends, country of origin of brand, price, color of packaging, design of packaging, availability of product is different sizes, promotional offer, *Halal* certificate and store display. This in line with the findings of past researches, as consumers relied on product intrinsic cues when they have high familiarity with the product. However, the results demonstrated all three groups less relied on *Halal* certificate, store display, advertisement and color of packaging.

DISCUSSION AND IMPLICATIONS

The major aims of this study are to examine the usage of product cue among young Malaysian in their chocolate buying decision, and the influences of their chocolate consumption level. Results showed product intrinsic cues play more important role in their purchase decision, where consumers were more influenced by their own experience and the chocolate taste, rather than another factors, such as color of packaging, country of origin of brand, country of manufacture, design of the packaging, advertisement, *Halal* certification and store display, during making a chocolate purchasing decision. This showed that young consumers are more focus on product intrinsic cues, as compared to product extrinsic cues when making low involvement product. Furthermore, the findings showed no significant between both male and female in evaluating factors that influencing their chocolate purchase decision. However, the results showed the importance of factors influencing consumer's chocolate purchase decision was differ among young consumers, in terms of their consumption level, where the importance of factors were increasing followed by their increasing chocolate usage level. So, marketers need to put consideration on this issue when designing marketing strategies and activities that targeting consumers in different consumption level. In addition, most of the young consumers were found to be heavy chocolate users.

These findings shed light to market practitioners. Marketers should emphasize on and utilized of some intrinsic product cues, likes taste, consumer experience, price and brand name, in their marketing strategy. Marketers need to take caution when designing marketing communication, as advertisement was found as not important factors that can influencing young consumers' chocolate purchase decision. Other than that, market practitioners are encouraged to design different marketing strategies that focused on different products cues, when they target young consumer with different consumption level, as young consumers in different chocolate usage level respond differently to different cues. For instance, when marketers target on heavy users, then the promotion message need to focus on product intrinsic cue likes taste, and also brand name and country of manufacture, as compared to those who target on light chocolate users. These factors are important as heavy user are more familiar with particular chocolate brands, thus they have more knowledge and experience about those brands. On the other hand, light user may have lesser experience and knowledge about chocolate brand, thus their evaluation on the taste, brand name, own previous experience and country of manufacture are significantly different from heavy user.

LIMITATIONS AND RECOMMENDATION

The limitations of this study are questionnaire design and distribution. The weakness of this questionnaire is the absent of ethnicity information. There was no question designed to collect this information, but this information

is important as Malaysia is a multi-racial countries which contained three major ethnic groups (Malay, Chinese and Indian). The next limitation is the questionnaire just distribute in the campus of Universiti Sains Malaysia. This is because the students of Universiti Sains Malaysia cannot represent all young Malaysian. Although the sample- university students, are come from every states in Malaysia, but there are only a small portion of all Malaysian. In addition, the findings of this study just restrict on chocolate product, so the results cannot be generalized to another product categories. The recommendations for future researchers are increase the sample size, test another product category and try to collect data from different parts of Malaysia. This is larger sample size can ensure higher level of reliability and validity of results. Other than that, future researchers are also encouraged to further this research by nvestigating the role of consumer's socioeconomic and psychological characteristics, such as income, occupation, national identification, cultural identification, patriotism, cognitive personality factors and consumer animosity in influencing consumer's purchase decision. Thus the understanding on consumers' buying behavior will be clearer.

REFERENCES

- Ahmed, S.A. and d'Atous, A. (2001), "Canadian consumer perceptions of products made in newly industrializing East Asian countries", *International Journal of Commerce and Management*, Vol.11 No.1, pp.54-81
- Ahmed, S.A. and d'Atous, A (2007), "Moderating effect of nationality on country-of-origin perceptions: English-speaking Thailand versus French-speaking Canada", *Journal of Business Research*, Vol.60, pp.240-248
- Ahmed, S.A. and d'Atous, A. (2008), "Antecedents, moderators and dimensions of country-of-origin evaluations", *International Marketing Review*, Vol.25 No.1, pp.75-106
- Euromonitor International (2008), "Chocolate confectionery - Malaysia", [Online]. [Accessed 21st April 2009] Available from World Wide Web: <http://www.portal.euromonitor.com/passport/Statistics.aspx>
- Gabbot, E. (1991), "The role of product cues in assessing risk in second-hand markets", *European Journal of Marketing*, Vol.25 No.9, pp.38-50
- Goi, C. L. (2009), "Integrated marketing communications: perception of young consumers", [Online]. [Accessed 13th July 2009] Available from World Wide Web: 66.102.1.104/scholar?q=cache:yH8B1IJZidEJ:scholar.google.com/+young+consumer,+chai+lee+goi&hl=en
- Gutman, J. and Alden, S.D. (1985), "Adolescents's cognitive structures of retail stores and fashion consumptions: a mean-ean chain analysis of quality, in Jacoby, J. & Olson, J.C (Eds), *Perceived Quality: How consumers views stores and merchandise*, Lexington Books, New York, NY, pp.99-114
- Kaynak, E., Kucukemiroglu, O. and Hyder, A.S. (2000), "Consumers' country-of-origin (COO) perceptions of imported products in a homogeneous less-developed country", *European Journal of Marketing*, Vol.34 No.9/10, pp.1221-1241
- Kwok, S., Uncles, M. and Huang, Y. (2006), "Brand preferences and brand choices among urban Chinese consumers: an investigation of country-of-origin effects", *Asia Pacific Journal of Marketing and Logistics*, Vol.18 No.3, pp.163-172
- Lantos, G.P. (1983), "The influence of inherent risk and information acquisition on consumer risk reduction strategies", *Journal of The Academy of Marketing Science*, Vol.11, pp.358-380
- Morwitz, V. G. and Schmittlein, D. (1992), "Using segmentation to improve sales forecasts based on purchase intent: which "intenders" actually buy", *Journal of Marketing Research*, Vol. XXIX November, pp.391-405
- O'Cass, A. and Lim, K. (2002), "Understanding the younger Singaporean consumers' views of Western and Eastern brands", *Asia Pacific Journal of Marketing and Logistics*, Vol.14 No.4, pp.54-78
- Roth, K. P. and Diamantopoulos, A. (2008), "Advancing the country image construct", *Journal of Business Research*, pp.1-15
- Schiffman, L.G. and Kanuk, L.L. (2007) *Consumer behavior*, 9th ed., Pearson education: New Jersey
- Steenkamp, J. -B. E. M. (1989), *Product quality*, Van Gorcum, Assen (NL)
- Sohail, M.S. (2005), "Malaysian consumers' evaluation of products made in Germany: the country of origin effect", *Asia Pacific Journal of Marketing and Logistics*, Vol.17 No.1, pp.89-104
- Verlegh, P. W. J. and Steenkamp, J. -B. E. M. (1999), "A review and meta-analysis of country-of-origin research", *Journal of Economic Psychology*, Vol.20, pp.521-546
- Zailani, S. H. M. and Othman, R. (2009), "Prospect and challenges of halal food industry in Malaysia" in *Malaysia's economy: past, present and future*, Malaysian Strategic Research Centre

CASE OF ADVERGAME: FACTORS AFFECTING THE DIFFERENCES OF THE PLAYERS' EXPERIENCES AND INTENTIONS TO PRODUCT PURCHASE

Zuhal Hussei¹, Nabsiah Abdul Wahid² and Norizan Mat Saad²
¹Universiti Teknologi MARA, ² Universiti Sains Malaysia

ABSTRACT

The world now is looking at United State financing crisis that has made a lasting impact on many businesses around the world. However not many businesses have noted that the digital content industry seems to be recession-proof. This is based on monthly sales figures that continue to show growth in the market. In this study, a comparison between hardcore and casual game players is made on their intentions to purchase the product. The usage of the advergame with product placement as a medium in the game space is expected to affect game players' memory to influence their purchase intention. For the purpose of this empirical research, 60 respondents of undergraduate students were invited to participate in the advergame in university computer lab. Results showed that majority of respondents' are hardcore game players with most of them female, ages 19 to 27 years old. This study found that the experience of playing game has not significantly affected on users' intentions towards product placement. This analysis does offer recommendation from current economic scenarios by developing the advergame as a new business strategy. Implications on games content strategy formulations and opportunities to face a current economic recession will be discussed later.

Keywords: Game Experience, Advergame, Purchase Intention

INTRODUCTION

Ramsey, in e-Marketer special report (2009) highlights that traditional media such as television, radio, magazines and mainly newspapers are experiencing cataclysmic and double-digit turn down. However results are different on Internet expenditure when it only shows sign of slowing down from a growth rate of more than 25% to 4.5%. Furthermore Ramsey (2009) sees the signs of online expenditure to grow continuously and remaining positive throughout the economic recession, by forecasting that at the year-end 2009, online ad expenditure will be around \$25 billion.

Despite of a current economic crisis and slowing growth on Internet expenditure, numbers of new comers of the game players are continued to increase. Therefore it is necessary for business people to look at this as an opportunity to adopt the online marketing strategy. Hence it is a new trend of the online marketing strategies to adopt the advergames as a part of marketing campaign. Adoption of advergame as a marketing campaign is to improve branding, product awareness and gathers data on existing and potential customers (Afshar, Banerjee, & Jones, 2004; Buckner, Fang, & Qiao 2002; Graaf & Nieborg 2003).

Furthermore consumers' trends show an increasing use of the interactive entertainment applications, mostly related to entertainment, such as playing games (Hamadeh, 2003). People whose playing games are expanding as consumers can access the games through new outlets such as social gaming networks or digital storefronts. Although interactive game is considered as immature industry with fastest growth underpinned by technological development, PricewaterhouseCoopers report on the 'Global Entertainment and Media Outlook 2009-2013', the EMEA region's video game market is projected to grow by 6.9 percent annually from 2008 to 2013. The console, online and wireless games market are forecasted to have the strongest projected growth. It is expected that consumer spending on video games will grow by 6.6 percent on an annual basis from \$17.7 billion in 2008 to \$24.5 billion in 2013, whilst video game advertising in the region will grow from \$400 million to \$800 million.

According to Fritsch, Voigt, & Schiller, (2006) a game player can be classified as hardcore in the matter of being stubbornly resistant in playing the same game with way more than average interest. On the other hand, casual game player will approach the game from the ordinary side (Fritsch et al., 2006). Game player experience of virtual reality is expected to increase the intrinsic motivation of the players by satisfying their needs. According to Malone and Lepper, (1987) and Cordova & Lepper (1993), a game player does satisfy their needs from the different kinds of fantasies and imaginary characters that games provide for them. In addition Gee (2003) posits that some of the game players akin to play outside of their "real" identity in order to assign their own values and desires onto the presence of the game world. Therefore, it is imperative for this study to identify if there is a need to create a different kind of the game contents for different players based on their playing

experiences since there are large differences among individuals in the fantasies that they find undeniable (Malone and Lepper, 1987).

With the growth trends of the consumers to access the game sites, it can be a shifting on communication paradigm from one-way media interaction to two ways media interaction. For example two ways interactions to happen when a game player has an interaction with the game space, character, and respond to the information placed in the game. As such Chen and Ringel (2001) suggest that advergaming should be assessed against three critical factors: the message, the medium, and the money. Moreover study by Hernandez and Minor (2003) highlight that the adoption of the advergaming strategy is to develop lasting exchange relationships with customers. However there is expected that the advergaming does have a unique capability to maintain the players' full attention during the game play. Therefore this study is to investigate the effect of the two different levels of the hardcore game players and the casual game players and their purchase intentions to the product placement from the advergaming sites.

Game player profiles

According to Zona, Inc. (2004), a gaming solutions provider, the total gamer universe, across all platforms, was 430 million people worldwide or 7% of the world's population, played games. Furthermore one quarter of these populations did online and it is expected that the number as a percentage of the total game players continue to grow. Despite of the rise of the computer games as a leisure phenomenon, there has been relatively little research done in the area of the player profiles differences. Numbers of the previous research on game has emphasized the negative aspects of gaming, such as gaming addiction (Griffiths and Hunt 1998), the effects of gaming on extra game aggression and violence (Anderson and Bushman 2001); poor sleep patterns (Higuchi, Motohashi, Liu, & Maeda, 2005), or obesity (Vandewater, Shim, & Caplovitz, 2004), and the prevalence in computer games of violent imagery (Smith, Lachlan, & Tamborini, 2003), or problematic cultural ideologies (Gottschalk, 1995). However, this study has identified that there have been a few studies to focus on the differences between the hardcore player and casual player from a new business formulation perspective.

Current survey by Lenhart & Macgill, in Pew Internet Project (2008) identified that more than half of adults aged 18+ years old (53%) mentioned that they play video games every day or almost every day. In addition, the game players are expected to switch from traditional game to interactive game that is more interesting. Profiles of the game players identified that 50% of the game players were having an undergraduate degree (Griffiths, Davies and Chappell, 2003). Besides, male students are more likely than female students (49.3% vs. 34.3%) to view streaming video content (BurstMedia, Corp., 2007).

Growth opportunity on advergaming is seen to be incredibly fast as marketers seek out new ways to create a relationship with their target audiences. Brightman, (2007) in AOL Games and The Associated Press survey on the video game demographic and its game playing habits revealed that 81 percent of children between the ages of four and 17 years old regularly play computer or video games as well as 38 percent of adults. Furthermore the survey also revealed that male game players are more than female. However although more gamers are male than female, the female game playing constituency is larger than been expected with 45 percent of adult gamers were found to be female. Hence Brightman also identified that over half of all adult gamers are less than 40 years old, while 27 percent are under the age of 30 years old. About one third of all adult gamers are married and have children.

Study by Baudrillard (1994) believed that individuals are now trapped in the game consumption-oriented media reality that it may also be the influence of brand-owners on games. This support by Molesworth (2003) who agreed that perhaps the consumers play a game that may provide an opportunity to control the environment, or at least negotiate to the communication objective. For example a survey conducted to identify aspects of computer games that might induce players to begin gaming in the first place or to continue playing after beginning a game by Wood, Griffiths, Chappell, & Davies (2004) found the importance of a wide variety of common video game characteristics, including sound, graphics, rate of play, control options, etc. The survey also found numerous differences between players when they ask to give rating for particular characteristics of the game content. Therefore it is imperative for this study to consider the aspect of computer game with product placement that having influence between the hardcore player and casual player, when they asked to play advergaming in computer laboratory.

Advergaming

Traditionally literature has defined the advertising as "a form of controlled communication that attempts to

persuade consumers, through the usage of various strategies and appeals, to buy or to use a particular product or services" (Defleur & Dennis, 1996, p. 564). However with the related growth of technology, advertising is defined as, "paid non-personal communication from an identified sponsor using mass media to persuade or influence an audience" (Wells, Burnett, & Moriarity, 1998, p. 13). Hence, this study identified that previous literature has studied product placement in the movie and television medium. Balasubramanian, (1994) defined product placement as: "A paid product message aimed at influencing movie (or television) audiences via the planned and unobtrusive entry of a branded product into a movie (or television program)". The statement is applicable for the study that advergame will embrace all types of the game played by using console game and online video games.

Despite of current economic crisis, advergame is expected to continue in acquiring attention among companies as a new and captivating advertising medium. Product placement in a game space and the variation of experiences during the game play can be contrasted with watching movies or television. This is happened when viewing the product message typically placed within the scenes that remain constant compared to games. According to the Yankee Group, the market value of advergaming will reach \$732 million by 2010 (Goodman and Oh, 2006). Furthermore the degree of consumer awareness and knowledge about product placements presented as subversive, subconscious techniques (Balasubramanian 1994). Besides, most research into in-game advertising focuses on traditional product placements in online and console games rather than advergames (Winkler and Buckner 2006). It is also expected that the advergame will help the business strategy to build brand awareness, offer product information, and provide a means to compare similar products.

In addition Choi, Miracle, and Biocca (2001) highlight that there is not much of advertising literature addressing the relationship with users feeling, and imply a positive relationship with advertising effectiveness. Lombard & Ditton, (1997) studied on telepresence also suggest that the game players feeling the sense of presence is affected both by the communication modality as a sensory breadth and by nonverbal cues as content variables the modality of the message presentation, this will influence the vividness of the message and an agent's nonverbal cues will influence the users' perceived interactivity in the mediated environment. Furthermore research by Kim and Biocca, (1997), found that the sense of being present in a mediated environment had a positive effect on attitude change such as buying intention and confidence in product placed online.

Research on users feeling in mediated environment or telepresence by ISPR (2000) stated that telepresence as a "psychological state or subjective perception in which even though part or all of an individual's current experience is generated by and/or filtered through human-made technology, part or all of the individual's perception fails to accurately acknowledge the role of the technology in the experience". Therefore it can be understood that the game players who felt present in the advergame environment to have psychological effect or perception towards the advertising message placed in the computer game.

Moreover games provide players to experience challenge and transformation every time the game is played based on players' choices and responses to game selection. On top of that a game player can experience different emotions, cognitions, and interactions for the same game played at different times, or if played alone or in groups, this varying levels of learning, curiosity, surprise, and suspense molded by game play effect a player's emotions, arousal, or orienting responses (Grodal 2000). Taken all the studies together, it is necessary for this study to identify the differences between the hardcore player who have more than average interest in game by spending many hours playing game and casual player that approaching the game from the ordinary side on their intention to the product placement in the advergame.

HYPOTHESES

The current economic melt down are unable to curb on continuing the growth of the online consumer spending that remaining positively growth throughout the economic recession. Hence this study attempts to identify a business opportunity from the current economic meltdown from the usage of technology perspective. Furthermore it should be highlighted in this study that online advertising is a creative and design driven. Researchers are interested to understand on game-related topic that has grown strongly in recent years. This is followed by the widespread success of computer games as strategic business opportunities. However little research has been done to understand the psychographic differences on online advertising. Taking that into consideration, this study is considering the aspect of game player profile with product placement on the influence between the hardcore game player and casual game player. Therefore, it is imperative to hypothesize that there is significant differences between the experiences of the hardcore players and the casual players after they were asked to play advergame on their purchase intentions. In this case, it can be postulated that:

H1: *There is a significant difference between hardcore game player and casual game player in intention to purchase product placement in the online game.*

METHODOLOGY

This research is to examine the psychographic characteristics of the hardcore player and casual player among the undergraduate students of Universiti Sains Malaysia. The ultimate goal to conduct this experimental research is to examine the differences between hardcore player and casual player on their intentions towards product placement after playing the advergaming conducted in the computer laboratory. There are various methodologies used by the game developers to evaluate game play experience (Davis, Steury, & Pagulayan, 2005; Fabricatore, Nussbaum, and Rosas, 2002; Sweetser and Wyeth 2005), though few empirical results have been reported. Experimental method is adopted to ensure the cause and effect relationship between persuasive advertising in game mediated environment is recognized and the game player intention to be clearly established. As Law and Braun-LaTour (2004, p. 64) argue, 'recall and recognition measures are not capable of detecting the more subtle effects of product placements'. Therefore, the experimental research has been adopted to study on the product placement in order to ensure its effectiveness when consumers are exposed to the medium then queried with explicit (memory) or implicit (brand evaluation) measurement (Law and Braun-LaTour 2004). A total of 60 questionnaires were distributed to the volunteered respondents of undergraduate students to play the game and they have to answer the questionnaires immediately once they were completed the game play in order to explore the hypothesized role of the differences between their experiences.

All respondents have experienced the same game content without any possibilities to discuss among those individuals and groups who use the games and referred to the particular game systems to acquire valid results. This focus has done much to widen the perception of what gamers do and how gamers form the behavior intention through the usage of games.

RESULTS

The profile of respondents is presented in Table 1.

Table 1: Profile of the respondents

Demographic		Total (%)	Hardcore Game Players (58%)	Casual Game Players (42%)
		(N=60)	(N=35)	(N=25)
Gender	Male	25	6	9
	Female	75	29	16
Age	19-21 years old	35	9	12
	22-24 years old	57	23	11
	25- 27 years old	8	3	2
Race	Malay	45	19	8
	Chinese	40	12	12
	Indian	12	4	3
	Others	3	-	2
Field of study	Science	42	12	13
	Arts	58	23	12
Game Experience	None	18	0	11
	Basic	58	21	14
	Intermediate	24	14	-
	Expert	0	-	-
Game Knowledge	None	25	2	13
	Basic	53	20	12
	Intermediate	20	12	-
	Expert	2	1	-
Virtual reality knowledge	None	28	3	14
	Basic	48	18	11
	Intermediate	22	13	-
	Expert	2	1	-

The data relating to socio-demographic characteristics of hardcore game players has revealed some interesting results that majority of respondents is female. This in line with report from Entertainment Software Association

ESA, (2008) where games nowadays cannot be seen as a boy's toy as a recent trend showed that 40% of all gamers today are female. Hence, female aged over 18 years old represent a significantly greater portion of the game players population (34 percent) than boys aged 17 years old or younger (18 percent). It is also identified that most of the undergraduates that participate in this study are more likely to have knowledge on playing game and virtual reality knowledge. With higher levels of virtual reality knowledge of the respondents are more likely to spend more time online on computer-based entertainment such as game.

Goodness of measurement

A factor analysis with varimax rotation was run on the 6 items representing purchase intention of product placement in advergence,. The KMO was 0.879, with the Bartlett's Test for Sphericity significant ($\chi^2 = 303.331$, $p < 0.00$) indicating sufficient inter-correlations. The total variance explained was 79.68%. Then we proceed to do a reliability analysis to explore the inter-item consistency and the results are presented in Table 2.

Table 2: Reliability Analysis

Variables	Number of Items	Number of Items Deleted	Cronbach's Alpha
Purchase Intention of advergence product placement	6	-	0.949

Hypotheses testing

A One-way ANOVA analysis is used to test the hypothesis which is to observe if there any differences in the two groups of users experience (hardcore game player and casual game player) among the respondents in this study. For this analysis, it is aimed to look at the differences in the users' psychographic of the advergence from two groups of respondents. The F value (the degree of freedom that has a p value less than 0.05) indicates the significant differences.

Table 3: Results of Differences between Hardcore Game Player and Casual Game Player

No	Purchase intention of product placement in advergence	Hardcore Game Players		Casual Game Players		F-value
		Mean	SD	Mean	SD	
1	It is very likely that I will buy the brand in the displayed environment	2.83	.95	2.87	.92	.02
2	I will purchase this brand the next time I need to	2.87	.94	2.70	.93	.44
3	I will definitely try the brand from the displayed environment	3.00	.87	2.83	.98	.46
4	It is very likely that I will buy the product from the displayed environment	2.97	.96	3.00	1.00	.02
5	I will purchase product the next time I need to eat	2.87	.97	2.65	.98	.63
6	I will definitely try the product from displayed environment	2.97	1.03	2.78	.95	.44

Note. Significant levels: *** $p < .01$; ** $p < .05$; * $p < .10$

The result of One-way ANOVA analysis is presented in Table 3 indicates that there are no significant differences between the hardcore game player and casual game player groups when respondents were ask to play the game and to respond to questionnaires on their intentions to purchase the product placement in advergence. In the first item, the respondents having intention to buy the brand in the displayed environment has resulted the f value .02 and it is insignificant at $p < 0.89$. In order to determine where the statistically differences lie, the Tukey test is employed. Findings of Tukey test indicate that the mean score for a hardcore game player (mean= 2.84, sd=.95), and casual game player (mean= 2.87, sd=.92) are statistically no different.

One way ANOVA identified that no statistical differences in two groups of respondents are likely to buy the product displayed in the game environment when F value is .44 and $p < .51$ and the mean score for a hardcore game player (mean= 2.87, sd=.94), and casual game player (mean= 2.70, sd=.93) are statistically no different. Results on the third item has identified that if the respondents have an intention to try the brand from the

displayed environment the F value is .46 and $p < .50$ and the mean score for a hardcore player (mean= 3.00, sd=.87), and casual game player (mean= 2.83, sd=.98) that are statistically no different.

Table 3 also shows that there are no significant differences in intention to purchase the brand in the future amongst those two groups (hardcore game player and casual game player). The experimental treatment shows that there are no differences when F value is .02 and $p < .90$ and the mean score for a hardcore game player (mean= 2.97, sd=.96), and casual game player (mean= 3.00, sd=1.00). In the fifth item has suggested that the respondents definitely will try the product placed on the game space which is the f value is .63 and it is insignificant at $p < 0.43$ and furthermore the mean score for a hardcore game player (mean= 2.87, sd=.97), and casual game player (mean= 2.65, sd=.98) showed no significant differences.

Finally, the One-way ANOVA test has resulted the two groups' intentions ultimately to try the product from the displayed environment that has found a statistically no significant differences among the sample groups when F value is .44 and is significant at $p < 0.51$. Post Hoc comparison using the Tukey test explains that the mean score for a hardcore game player (mean= 2.97, sd=1.03), and casual game player group (mean= 2.78, sd=.95), score almost similar results from one another.

CONCLUSION

The results of this study indicate that there are no significant differences between the hardcore game players and casual game players on their intentions to purchase the product after both groups completed the game challenge. This pattern is similar to what Balasubramanian (1994) suggests that the product placement does not interrupt the consumer's media experience such as paid media advertising, which operates between the media content. This is supported by previous research that has looked at moviegoers' opinions on the product placement and its may not be perceived by consumers as commercial messages (DeLorme and Reid, 1999).

This study has found that there are no significant differences between hardcore game players and casual game players in several ways such as when majority of the hardcore game players are female. Elder, B., Gardner, & Ruth (1987) revealed that females are more likely to experience technostress (physical and emotional burnout caused by inability to adapt to new technology) in using computer compared to males. Some studies have found that females had greater computer anxiety than males (Igbaria and Chakrabarti, 1990; Gilroy and Desai, 1986). Besides some female consumers in the United States and individuals from Austria, France or Singapore - are less positive about the acceptability of ethically charged products such as guns, cigarettes, or alcohol, especially in targeted media (Gould, Gupta, and Grabner-Krauter 2000; Karrh, Frith, and Callison 2001). Thus, there is need for future study to find about the relationship between gender and game knowledge as well as their behavioral intentions.

However such measurement would increase the business in making decision confidently to adopt this kind of strategy as advergaming does cover both groups of the game player experience, which no need to differentiate the game content and the challenges are based on the group's experience. Besides on the earlier section of this study mentioned that there are constantly growth numbers of new game players to play games. Therefore advergaming strategies are applicable with no need to differentiate between the hardcore game player and the casual player who rarely play the game.

However this study has several limitations such as limited numbers of respondents volunteered to participate in this experiment. Besides most of the respondents posit that they were came from hardcore game player group, while a few of respondents were came from casual game player group. Therefore future research is expected to have a larger numbers of respondents from both groups in order to ensure that the results will represent a total population of each group. Furthermore future studies are expecting to cover a different kind of the game devices and challenge genres.

Finally, most of the games are designed to be real to the users feeling. Therefore, this provides an opportunity for product placement to be part of the game content design. In sum, the findings of this study provide some implications in business strategy online to face the current economic meltdown. The marketers are expected to get in aggressively to the consumers who mostly spend time online using the advergaming to get close in the consumers mind without distracting the excitement of the game player in playing game.

REFERENCES

- Afshar, R., Banerjee, D., & Jones, C. (2004). *Advergaming developer's guide: using Macromedia Flash MX 2004 and Director MX* (illustrated ed.): Cengage Learning.
- Anderson, C. A., & Bushman, B. J. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *American Psychological Society*, 12(5).
- Balasubramanian, S. K. (1994). Beyond Advertising and Publicity: Hybrid Messages and Public Policy Issues. *Journal of Advertising*, 23(Fall), 29 - 48.
- Baudrillard, J. (1994). *Simulacra and Simulation*. Ann Arbor University of Michigan Press.
- Brightman, J. (2007). A new poll from AOL Games and The Associated Press has come up with some interesting findings on today's gamers. Retrieved 2 January, 2008, from <http://www.gamedaily.com/articles/news/parents-not-playing-video-games-with-kids-price-biggest-factor-in-game-purchases-/18508/>
- Buckner, K., Fang, H., & Qiao, S. (2002). Advergaming: A New Genre in Internet Advertising [Electronic Version]. Retrieved 2 February 2008 from http://www.dcs.napier.ac.uk/~mm/socbytes/feb2002_i/9.html.
- BurstMedia. (2007). Looking to Reach College Students – Look Online. *Online Insights* Retrieved 22 August, 2008, from <http://www.burstmedia.com/assets/newsletter>
- Chen, I., & Ringel, M. (2001). Can advergaming be the future of interactive advertising? , from <http://www.moderngames.se/files/WhyGames.doc>
- Choi, Y. K., Miracle, G. E., & Biocca, F. (2001). The Effects of Anthropomorphic Agents on Advertising Effectiveness and the Mediating Role of Presence. *Journal of Interactive Advertising*, 2(1), 3-21.
- Claypool, M. (2005, 10th-11th October 2005). *On the Turbulence of Nintendo DS and Sony PSP Hand-held Network Games*. Paper presented at the Netgames 2005 Hawthorne, NY.
- Cordova, D. I., & Lepper, M. R. (1993). Intrinsic motivation and the process of learning: beneficial effects of contextualization, personalization, and choice. *Journal of Educational Psychology*, 88(4), 715-730.
- Davis, J. P., Steury, K., & Pagulayan, R. (2005). A survey method for assessing perceptions of a game: The consumer playtest in game design. *The international journal of computer game research* 5(1).
- DeFleur, M. L., & Dennis, E. E. (1996). *Understanding Mass Communication*. Boston: Houghton Mifflin Company.
- DeLorme, D. E., & Reid, L. N. (1999). Moviegoers' Experiences and Interpretations of Brands in Films Revisited. *Journal of Advertising*, 28(2), 71 - 94.
- Elder, B., V., Gardner, E. P., & Ruth, S. R. (1987). Gender and age in technostress: effects on white-collar productivity. *Government Finance Review*, 3(6), 17 - 21.
- ESA. (2008, 2 February 2009). Industry Facts. Entertainment Software Association. Retrieved 2 February, 2009, from <http://www.theesa.com/facts/index.asp>
- Fabricatore, C., Nussbaum, M., & Rosas, R. (2002). Playability in Action Videogames: A Qualitative Design Model. *Human Computer Interaction*, 17, 311 - 368.
- Fritsch, T., Voigt, B., & Schiller, J. (2006). Distribution of Online Hardcore Player Behavior (How Hardcore are You?). *The 5th Workshop on Network & System Support for Games 2006 — NETGAMES 2006*.
- Gee, J. P. (2003). *What video games have to teach us about learning and literacy*: Palgrave Macmillan. N.Y.
- Gilroy, F. D., & Desai, H. B. (1986). Computer anxiety: sex, race and age. *International Journal of Man-Machine Studies*, 25, 711-719.
- Goodman, M., & Oh, C. (2006). Yankee Group Sizes the In-Game Advertising Market Opportunity; Exponential Market Growth to Reach More than \$700 Million by 2010 *Business Wire*.
- Gottschalk, S. (1995). Videology - Video-Games as Postmodern Sites/Sights of Ideological Reproduction. *Symbolic Interaction*, 18(1), 1-18.
- Gould, S. J., Gupta, P. B., & Grabner-Krauter, S. (2000). Product Placement in Movies: A Cross-Cultural Analysis of Austrian, French and American Consumers' Attitudes toward This Emerging, International Promotional Medium. *Journal of Advertising*, 29(winter), 41-58.
- Graaf, S. V. D., & Nieborg, D. B. (2003). *Togather we brand: America's Army*. Paper presented at the Level Up: Digital Games Research Conference, Utrecht University and Digital Games Research Association (DiGRA).
- Griffiths, M., & Hunt, N. (1998). Dependence on Computer Games By Adolescents. *Psychological Reports* 82(2), 475 - 480.
- Griffiths, M., Davis, O. N. M., & Chappell, D. (2003). Breaking the stereotype: The case of online gaming.
- Grodal, T. (2000). Video games and the pleasures of control. In D. Zillmann & P. Vorderer (Eds.), *Media entertainment: The psychology of its appeal* (pp. 197-212). Mahwah, NJ: Lawrence Erlbaum Associates.

- Hamadeh, R. (2003). *Game Review for Madden NFL™ 2003*.
- Hernandez, M. D., & Minor, M. S. (2003, August). *A Decision Tool for the Assessment of Advergaming Suitability*. Paper presented at the 2003 American Marketing Association Summer Educators Conference
- Higuchi, S., Motohashi, Y., Liu, Y., & Maeda, A. (2005). Effects of playing a computer game using a bright display on presleep physiological variables, sleep latency, slow wave sleep and REM sleep. *European Sleep Research Society, 14*, 267 - 273.
- Igbaria, M., & Chakrabarti, A. (1990). Computer anxiety and attitudes towards microcomputer use. *Behavior and Information Technology, 9*(3), 229 - 241.
- ISPR. (2000). The Concept of Presence: Explication Statement. *International Society for Presence Research (ISPR)* Retrieved 15 August, 2006, from http://www.temple.edu/ispr/frame_explicat.htm
- Karrh, J. A., Frith, K. T., & Callison, C. (2001). Audience Attitudes towards Brand (Product) Placement: Singapore and the United States. *International Journal of Advertising, 20*, 3 - 24.
- Kim, T., & Biocca, F. (1997). Telepresence via Television: Two Dimensions of Telepresence May Have Different Connections to Memory and Persuasion *JCMC, 3*(2).
- Law, S., & Braun-LaTour, K. A. (2004). Product Placements: How to Measure Their Impact In L. J. Shrum (Ed.), *The psychology of entertainment media: blurring the lines between entertainment and persuasion* (Mahwah ed., pp. 63 - 78). New Jersey: Lawrence Erlbaum Associates.
- Lenhart, A., & Macgill, A. R. (2008). Adults and video games [Electronic Version]. *PEW Internet Project Data Demo*. Retrieved February 7 2009 from http://www.pewinternet.org/~media/Files/Reports/2008/PIP_Adult_gaming_memo.pdf.pdf.
- Lombard, M., & Ditton, T. (1997). At the Heart of It All: The Concept of Presence *Journal of Computer mediated Communication, 3*(2), 1-20.
- Malone, T., & Lepper, M. (1987). Making learning fun: A taxonomy of intrinsic motivations of learning. In R. E. Snow & M. J. Farr (Eds.), *Conative and affective process analyses* (Aptitude, learning, and instruction ed., Vol. 3, pp. 223 - 253). Hillsdale, NJ: Lawrence Erlbaum.
- Molesworth, M. (2003). Encounters with consumption during computer-mediated play: the development of digital games as marketing communication media *Digital Games Research Association*(Level Up Conference Proceedings Utrecht: University of Utrecht).
- PricewaterhouseCoopers. (2009). *Global Entertainment And Media Outlook 2009–2013*.
- Ramsey, G. (2009). *Online Brand Measurement: Special Report*. Retrieved 2 July 2009, from http://www.emarketer.com/docs/eMarketer_Online_Brand_Measurement_Report.pdf.
- Smith, S. L., Lachlan, K., & Tamborini, R. (2003). Popular video games: Quantifying the presentation of violence and its context. *J. Broadcast Electron. Media, 47*, 58 - 76.
- Sweetser, P., & Wyeth, P. (2005). GameFlow: A Model for Evaluating Player Enjoyment in Games. *ACM Computers in Entertainment, 3*(3), 3A.
- Vandewater, E., Shim, M., & Caplovitz, A. (2004). Linking obesity and activity level with children's television and video game use. *J Adolesc, 27*(1), 71-85.
- Wells, W., Burnett, J., & Moriarity, S. (1998). *Advertising Principles & Practices* (4 ed.). Upper Saddle River, NJ: Prentice Hall.
- Winkler, T., & Buckner, K. (2006). Receptiveness of Gamers to Embedded Brand Messages in Advergaming: Attitudes Towards Product Placement. *Journal of Interactive Advertising, 7*(1), 37-46.
- Wood, R. T. A., Griffiths, M. D., Chappell, D., & Davies, M. N. O. (2004). The Structural Characteristics of Video Games: A Psycho-Structural Analysis. *CyberPsychology & Behavior, 7*(1).
- Zona, I. (2004). Online Console Gaming. Jan 2004. Retrieved 28 July, 2007, from <http://www.researchandmarkets.com/reports/225173/>

EFFECTS OF INTERNAL STIMULI ON PURCHASE DECISION: USING PERCEIVED RISK AS MODERATOR

Mohammad Jalalkamali and Davoud Nikbin
Universiti Sains Malaysia

ABSTRACT

The purpose of this study is to find out the effects of internal stimuli on purchase decision for cosmetic products among the university students and the moderating effects of perceived risk on the relationship between internal stimuli and purchase decision. This study found six dimensions for perceived risk namely, physical risk, performance risk, time risk, psychological risk, financial risk and social risk. Results of this study showed that internal stimuli has a positive effect on purchase decision for cosmetics products. Out of the six components of perceived risk, only social risk moderates the relationship between internal stimuli and purchase decision and it obviously indicates that the idea of family members and also the idea of the friends are important to ensure customers beauty and appearance. The study thereby address recommendations for the cosmetic products marketers the importance of internal motivation to purchase the cosmetic products and the likely influence of reference groups such as family and friends in the cosmetic purchase decision making process.

Keywords: Perceived Risk, Internal Motivation, Internal Stimuli, Financial Risk, Social Risk

INTRODUCTION

The cosmetic industry is a very lucrative industry. There are a number of cosmetic companies around the world are competing against in order to capture a share of this lucrative market. Cosmetics have been around for thousands of years. When people hear the word “cosmetics”, they tend to think of makeup and perfume designed for women. Cosmetics actually come in many forms, ranging from powders, body makeup, soap, shampoo, and toothpaste. Cosmetics are used for beautifying purposes and cover a wide range of products including: cleaning body parts, enhancing features, and changing skin tones and colors such as, makeup, perfume, toothpaste, shampoo, and deodorant (Kumar et al., 2006). In general, cosmetic companies have targeted the female audience based on the product itself. Prior to the 1990s many people used to think that cosmetic products were only for adult women; the reality of today is slightly different. New markets for cosmetic companies are young females and men (Kumar et al., 2006). Cosmetics are the most basic personal care products of all women (and men) that are used for hygienic and beauty purposes. Besides, color cosmetics (makeup), skin care and fragrances are increasingly perceived as a necessity rather than a luxury (Euromonitor, 2003). These products displayed high sales with value growth of 6.8%, 5.7% and 6.5% respectively in Malaysia. Understanding behavior of consumers is a key to the success of business organizations. Marketing personnel are constantly analyzing the patterns of buying behavior and purchase decisions to predict the future trends (Nair & Pillai, 2007). The evolutions of consumers’ behavior toward a particular product will affect evaluations existing strategies and planning of new strategies for that product (Quah, 2000). Hence, the marketing of certain products must meet the needs of the target market (Wagner, 2007). Therefore, it is important to investigate the factors that influence the consumer behavior towards cosmetic product purchasing decision.

Review of previous literature shows that, there is no research which examines the relationship between internal stimuli dimension of motivation and purchase decision in local context of Malaysia. Besides, Now a variety of cosmetic and toiletries ranging from natural to sophisticated items are available in the market. Studies found that the pattern and preference of use of these items vary according to different segments of gender, age and socio-economic class. However, the effect of perceived risk in motivating consumer to purchase the cosmetic product is not widely studied (Nair and Pillai, 2007). Therefore this research intends to assess the relationship between internal stimuli dimension of motivation and purchase decision with considering perceived risk as moderating variable.

Consumer Purchase decision

The problem of consumer behavior during the last decade is treated more extensively compared to the other fields of economic research due to its importance in economics and business administration. The main problem is that there is no single and generally accepted model to explain the consumer behavior aspects, for example the drivers of the purchase decision. As widely expected, different approaches to this problem can be grouped as *cognitive approach* and the *external conditioning approach* (East, 1995; Dalli & Romano, 2005).

Consumer behavior can be understood as: "The decision process and physical activity individuals engage in when evaluating, acquiring, using, or disposing of goods and services." (Loudon & Della, 1980). Nowadays, this phenomenon can also be illustrated in the following way: "activities people undertake when obtaining, consuming, and disposing of products and services" (Blakwell et al., 2001). Predicting consumer behavior is an important factor in marketing. For this reason, the process of purchase decision has been studied extensively by many authors. Consumer behavior can be defined as "activities people undertake when obtaining, consuming, and disposing of products and services" (Blakwell et al., 2001). It is also necessary to classify the parameters that affect the process of purchase decision making. Engel et al. (1995) have tried to categorize them. According to them, these factors fall into three categories: personal factors, psychological factors and social factors. Mowen (1988) proposes that consumer purchase decisions may be viewed from three perspectives: the decision-making perspective; the experiential perspective; and the behavioral influence perspective. The majority of research into consumer behavior throughout the 1970s and 1980s focused on the decision-making perspective. Based on marketing theory, the key stimuli that lead consumers to make their purchase decisions in the complex business environment are prices, quality, brands of products, advertisements, friends'/families' recommendations and disqualifications and consumers' previous purchase experiences. On this basis the consumer purchase motivation model consists of two parts:

- internal stimuli
- external stimuli

Kotler (1996:162) cited that buyer decision process passing through five stages that is: (1) need recognition, (2) information search, (3) evaluation of alternatives, (4) purchase decision and (5) post purchase behavior. This process starts with the buyer recognizing a need which can be inspired by internal or external stimuli. The buying process begins with need recognition. When the buyer senses a difference between his or her actual state and a desired state, the buyer has perceived a need. Need recognition can be triggered by internal or external stimuli (Kotler & Armstrong 2001, pp. 193-197). The buying behavior is influenced by both internal and external factors. So, the need recognition is based on two key input variables, namely internal and external input variables (Assael, 1998). Internal input variables are those stemming from within an individual, such as the individual's past experience, characteristics and motive. The internal factors comprised of motivation, perception, consumer resources, knowledge, attitudes, personality, values and lifestyle (Engel et al., 1995). On the other hand, the external input variables consist of the environmental and marketing stimuli. Reference group, social class and family are examples of environmental stimuli.

Internal Stimuli and purchase decision

Human beings want to satisfy the need to look and feel good. This created a boom in the cosmetic and toiletries sector across the world. Vigneron and Johnson (1999) reported that people's needs for appearances and materialism were increasing. The most important MLM products bought by the respondents were skin care (75.5%), nutrition (69.5%) and personal/household cleaning (69%). Besides, the skin care has the maximum repurchasing rate (75.5%), but the health equipment has the lowest one (33.3). It shows that people like to be younger, more healthy or beautiful/handsome no matter what age they are. Dann (1977) suggests two steps in a purchase decision, known as push factors and pull factors. Accordingly, push factors are considered as internal factors to instill a desire and therefore aim to satisfy various psychological needs; whilst pull factors, which are considered external factors, concentrate on the benefits of a special purchase and these factors influence where, when and how.

Based on marketing theory, the key stimuli that lead consumers to make their purchase decisions in the complex business environment are prices, quality, brands of products, advertisements, friends'/families' recommendations and disqualifications and consumers' previous purchase experiences. On this basis the consumer purchase motivation model consists of two parts: internal stimuli and external stimuli. In the context of this study, internal stimuli refer to internal factors such as self confidence, feeling safe, image, appearance that may influence motivation.

Uysal and Hagan (1993) state that preferences can be matched to specific psychological profiles of consumers. In the same way, motivation is a dynamic concept that varies from one consumer to another, from one market segment to another, from one objective to another as well as from one decision making process to the next.

In the food market, the ethical concerns play the role of an internal stimulation. Harper and Makatouni (1999) study consumer attitudes towards organic food in the UK. They report that although health and food safety

concerns are the main motives for organic food purchases, ethical concerns, specifically in relation to standards of animal welfare, play a significant influencing role in the decision to purchase organic food.

Perceived Risk

Perceived risk can be defined as an expectation of loss (Stone and Winter 1987) or “someone’s subjective belief of suffering a loss in pursuit of a desired outcome” (Pavlou, 2003). It is considered an uncertainty regarding the possible negative consequences of using a product or service. It is a combination of uncertainty with the possibility of serious of outcome (Bauer 1967).

Consumer perceptions of risk have been widely dealt with in the past literature and have been shown to shape all purchase decisions to varying degrees, and thereby influence consumer behavior (Mitchell, 1999). Kogan and Wallach (1964) describe the concept of risk as having two dimensions: first, the chance aspect where the focus is on probability and second, the danger aspect where the emphasis is on severity of negative consequence. It is theorized that when perceived risk falls below an individual's acceptance value, it has little effect on intended behavior and is essentially ignored (Greatorex & Mitchell, 1993). On the other hand, an extremely high level of perceived risk can cause a consumer to postpone or avoid a purchase entirely.

One of the major attributes especially relevant in the purchase of cosmetics is safety. This is because many cosmetic products contain preservatives and color additives that are harmful to the human body and may lead to allergy (Siu & Wong, 2002). In a study on the marketing of green cosmetics in Thailand, (Johri & Sahasakmontri, 1998) found that product safety (safe for skin) was important besides product performance and ingredients. Furthermore, according to the CAP (consumers’ Association of Penang) Guidebook to Cosmetics and Personal Care Product, the fancy packing and big budget advertising campaigns that accompany cosmetic brands are nothing more than marketing tactics to convince consumers that a product will make them feel better. The truth is many of the ingredients in the product merely play to the image but does nothing for the skin. However, Darden and Worden (1994) said that ingredients in cosmetics are effective because they are natural, but they are attainable only through scientific process.

There have been numerous studies designed to understand the concept of perceived risk and its impact on consumer behavior. Various types of risks in making purchase decisions have been identified from ever expanding retail alternatives. Cox (1967) identified two major categories of perceived risk, performance and psychosocial risks. He then classified performance risk into three types: economic, temporal, and effort, while psychosocial risk was classified into two types: psychological and social. Featherman and Pavlou (2002) further typified perceived risk as having six dimensions: performance, financial, opportunity/time, safety, social, and psychological risks. Regardless of different situations for identifying perceived risk, numerous studies have argued that the following types of risk are usually involved in purchase decisions: social, financial, physical, performance, time, and psychological risks (Kim and Lennon, 2000). First, social risk refers to the perception that a product purchased may result in disapproval by family or friends (Dowling & Staelin, 1994). Second, financial risk is the perception that a certain amount of money may be lost or required to make a product work properly (Garner, 1986). Third, physical risk refers to the perception that a product may be dangerous to health or safety when it does not work properly (Roselius, 1971). Fourth, performance risk is the perception that a product purchased may fail to function as originally expected (Kim & Lennon, 2000). Fifth, time risk is the perception that time, convenience, or effort may be wasted when a product purchased is repaired or replaced (Bauer, 1967). Finally, psychological risk is the perception that a negative effect on a consumer's peace of mind may be caused by a defective product (Jacoby & Kaplan, 1972).

In marketing research, Bauer (1960) first proposed looking at consumer behavior as an instance of risk taking because “consumer behavior involves risk in the sense that any action of a consumer will produce consequences which he cannot anticipate with anything approximating certainty, and some of which at least are likely to be unpleasant” (p. 390). He also noted that “individuals can respond to and deal with risk only as he perceives it subjectively,” and only “perceived risk” influences consumers’ decisions (p. 395).

Amongst the social factors, the role of family members is significant. They play different roles in making decisions within the family. Through initiating demand or contributing information, they make decision on where to buy, which brand and style to buy, how to pay for the product, how to consume the product, what benefit to expect from the product, and how to share in maintaining the product. The Sheth family decision-making model (1974) considers the family as the appropriate consumer decision making unit. The left side of the model showed separate psychological systems representing father, mother, and other family members. For them, friends and family form a very important source of information before making purchasing decisions. They

are also three times more likely to learn about a product from other women (Advertising Research; Popcorn, 2001). This means that when a woman buys a certain product, she will likely influence three of her friends to buy it too.

Research Hypotheses

H1. There is a positive relationship between internal stimuli and purchase decision.

H2. Perceived risk moderates the relationship between internal stimuli and purchase decision.

METHODOLOGY

Research design

This research is basically correlational in nature. The purpose of this study is to find the relationship between internal stimuli and purchase decision, with considering perceived risk as moderator. Type of the data involved in this study is primary data collected through questionnaire from postgraduate students. This was done through self-administered style questionnaire, which was distributed via in hand and electronic mails.

Population and sample

The population of this study is USM female students including international students located in Penang. Convenience sampling was conducted in order to obtain a large number of completed questionnaires quickly and economically due to time constraints. For this study 200 set of questionnaires were distributed to female students located in Penang. A total of 166 respondents responded, which reflected 83% Response rate. Among 165 questionnaires were collect only 156 sets were useable.

Measurement

In the first section of questionnaire all the questions related to motivation consist of internal stimuli and external stimuli developed based on the understanding of the concept after studying through the related literature reviews. In this section all the questions adopted from Goldberg (1993). There are six dimensions for perceived risk, physical risk, time risk, social risk, performance risk, financial risk and psychological risk. Questions related to purchase decision were adopted from Mittal (1989). A pilot test was conducted in order to ensure the reliability of the questionnaire and some the instrument was slightly modified.

RESULTS

Out of the total questionnaires distributed, 166 sets of questionnaires were returned, of which only 156 sets of them were usable, which contribute to a response rate of 78 %. Most of the respondents are aged between 26 to 30 years old, which is around 68 percent. The respondents are all females , around 55.1% of the respondents are married, most of respondents are postgraduate students with around 57% they are around 30% Malay, 34.6% Chinese and 7.1% are Indian and 28.2% are others. Most of them are students (42.9 %) with the monthly salary less than RM 2000.

Factor analysis was used to understand the underlying factor of variables in the proposed framework (Hair et al. 1998). In this research the chosen cut off point for significance loading is minimum 0.40. Twenty seven items were used to measure perceived risk. Results show that perceived risk is comprised as factor with a total variance of 70.98. The Bartlett's test of sphericity indicated significance of overall correlations within the correlation matrix. The KMO measures of sampling adequacy stood at .63. There were seven components for perceived risk. Seventh factor were deleted because just one of the values were acceptable. Based on values accepted in each component and according to the items the factors were labeled. Out of twenty seven items twelve items were deleted because of either low value or cross loading

Based on the factors comprised from factor analysis, reliability analysis was used to measure the goodness of data; this is to ensure that all items used in each variable are free from error and, providing consistent results. Cronbach's alpha was the measurement. According to Hair et al. (1998), alpha more than 0.70 is acceptable. Cronbachs alpha for internal stimuli, perceived risk, and purchase decision were above 0.70, and therefore, they were acceptable.

For testing the proposed hypotheses regression analysis was used. Results of regression analysis revealed that internal stimuli is significant with Beta= .50, ($p < .00$), and have positive effect on purchase decision. R Square= .26, which means 26% of the variance in purchase decision can be predicted from internal stimuli, therefore, this model is fit with 26%. Thus, H1 is accepted. Besides, F change was 52.645 and Sig F change was .000.

Hierarchical regression was used to test hypothesis 2 and the moderating effects of perceived risk on the relationship between internal stimuli and purchase decision. The results of hierarchical regression does not found significant moderating effect of physical risk, time risk, performance risk, psychological risk, and financial risk. The results of hierarchical regression supported the moderating effects of social risk on the relationship between internal stimuli and purchase decision.

DISCUSSION

The results of regression showed that internal stimuli is positively related to purchase decision. This indicates that the more internally stimulated the USM female students are, the more they decide to purchase cosmetic products. The results support Vigneron and Johnson (1999), that human beings want to satisfy the need to look and feel good, therefore people's needs for appearances and materialism were increasing. The implications are, it is natural that people like to look beautiful, therefore in according to their characteristics and past experiences in buying cosmetic products, they decide whether to buy or not. The more internally motivated they are, the more they likely to decide to buy cosmetic products. Thus, in buying cosmetic products they should be internally motivated in order to decide to buy cosmetic products, otherwise they will not be motivated to purchase.

Hierarchical regression results showed that perceived risk does not moderate the relationship between internal stimuli and purchase decision. Among six factors of perceived risk, only social risk dose moderate the relationship between internal stimuli and purchase decision. This result support Sheth (1974) that family is the appropriate consumer decision making unit, therefore USM female students are highly concerned about their family members and friends. Actually majority of respondents were postgraduate students so they are very cautious about the idea of their friends and also family members and try to include their ideas in deciding to purchase, because they want a product which is approved by their friends and family members, the rest of the other factors does not moderate this relationship.

IMPLICATIONS

In today's competitive environment, marketplace advantages are often short-lived, thus, in order to survive in this marketplace organizations need to know consumer behavior. Results of this study will help organizations to get familiar with psychological influences, understand consumer behavior and therefore sell more goods and products.

Use of cosmetics in Malaysia are growing gradually, and due to this these companies are investing more in this business, therefore, in order to be competitive, these organizations should focus on internal and external stimulus in order to understand the purchase decision of the buyers. Then, it will be a source of competitive advantage for the organizations.

LIMITATIONS AND FUTURE RESEARCH

The sample size is small because it is focusing only on female students in USM. Therefore, the results of this study cannot be generalized to other women who use cosmetic products all over Malaysia. This study might have some self reporting biased, because all of the respondents are from postgraduate students, and they did not answer the questionnaire properly.

There are some directions for future research. Firstly, future work can overcome limitations of the present study in terms of number of respondents and focusing in more area of Malaysia that it will help in generalizing the findings of the study. Secondly, future research can look for other moderating and mediating variables that can affect motivation, and purchase decision, for example future research can consider personality traits as a mediator between motivation, and purchase decision. Future research can also examined the moderating effect of demographic characteristic along with perceived risk. Thirdly, future research can do a comparative study, and compare the motivation of the people of two or more countries to study their purchase decision.

CONCLUSION

The purpose of this study was to test whether perceived risk as moderator can affect the relationship between motivation, and purchase decision among USM female students. Based on responses from 156 respondents, it is shown that there is a positive relationship between internal stimuli and purchase decision. It is also proven that perceived risk cannot play as moderator in the relationship between internal stimuli and purchase decision. In conclusion, this study provides insights about the internal motivation level of female students in USM, how internally motivated are the USM female students in deciding to purchase cosmetic products.

REFERENCES

- Assael, H. (1998). *Consumer behavior and marketing actions*. (6th Ed.), Cincinnati: South-Western College Publishing.
- Bauer, R. A. (1960). Consumer behavior as risk taking. In R. S. H. (Ed.) (Ed.), *Dynamic marketing for a changing world* (pp. 389-398). Chicago: American Marketing Association.
- Blackwell, R.D., Miniard, P.W., Engel, J.F. (2001). *Consumer Behavior* (Ninth Edition). Fort Worth: Harcourt College Publishers.
- Cox, Donald F. and Stuart U. Rich (1967), "Perceived Risk and Consumer Decision Making: The Case of Telephone Shopping," In Donald F. Cox (eds.), *Risk Taking and Information Handling in Consumer Behavior*, Boston, MA: Harvard University Press, pp. 487-506.
- Dalli, D., Romani, S. (2005). *Il comportamento del consumatore*, Milano: Angeli.
- Dann, G. (1977). Anomie, ego-enhancement and tourism. *Annals of Tourism Research*, 4, pp. 184-194.
- Dowling, G., R. Staelin, R. (1994), "A Model of Perceived Risk and Intended Risk- Handling Activity," *Journal of Consumer Research*, (21), pp. 119-134.
- Engel, J.F., Blackwell, R. D. and Miniard, P.W. (1995). *Consumer Behavior*, 8th edition, The Dryden Press Harcourt Brace College Publishers, Fort Worth.
- Featherman, M. S., Pavlou, P. A. (2002), "Predicting E-Services Adoption: A Perceived Risk Facets Perspective," in *Proceedings of the 2002 Americas Conference in Information Systems*, Dallas, TX: Association for Information Systems, pp. 1034-1046.
- Garner, Sarah J. (1986), "Perceived Risk and Information Sources in Services Purchasing," *The Mid-Atlantic Journal of Business*, (24), No. 2, pp. 49-58.
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, 48, pp. 26-34.
- Greator, M., Mitchell, V.W. (1993), "Developing the perceived risk concept: emerging issues in marketing", in Davies, M. (Eds), *Proceedings of the Marketing Education Group Conference*, Loughborough, pp. 405-15.
- Harper, G.C. Makatouni, A (1999). Consumer perception of organic food production and farm animal welfare *Personnel Review*, Vol. 104 No. 3/4/5, pp. 287-299.
- Jacoby, J., Kaplan, L. B. (1972), "The Components of Perceived Risk," in *Proceedings, Third Annual Conference of Association for Consumer Research*, In M. Venkatesan (eds.), College Park, MD: Association for Consumer Research, pp. 382-393.
- Kim, M., Sharron J. Lennon (2000), "Television Shopping for Apparel in the United States: Effects of Perceived Amount of Information on Perceived Risks and Purchase Intentions," *Family and Consumer Sciences Research Journal* (28), March, No. 3, pp. 301-330.
- Kogan, N., Wallach, M.A. (1964), *Risk Taking, A Study in Cognition and Personality*, Holt, Rinehart and Winston, New York, NY.
- Kotler, P., Armstrong, G. (2001). *Principles of Marketing*. New Jersey: Prentice Hall.
- Kotler, P., Armstrong, G., Saunders, J. & Wong, V. (2001). *Principles of Marketing* (5th European ed.). Lombarda: Rotolito.
- Kumar, S., Massie, C., Dumonceaux, M. D. (2006). "Comparative innovative business strategies of major players in cosmetic industry". *Industrial Management & Data Systems*, Vol. 106 No. 3, pp. 285-306.
- Loudon, D., Bitta, D. (1986). *A Consumer Behavior. Concepts and Applications*, New York: McGraw- Hill.
- Mittal, B. (1989), "Measuring purchase decision involvement", *Psychology and Marketing*, Vol. 6 No. 2, pp. 147-62.
- Mitchell, V.W. (1999). Consumer perceived risk: Conceptualization and models *European Journal of Marketing*. 33, (1/2), pp. 163-195.
- Mowen, J., Minor, M. (1998). *Consumer behavior*. New Jersey: Prentice-Hall.
- Nair., Pillai (2007). A Study on Purchase Pattern of Cosmetics among Consumers in Kerala. *International Marketing Conference on Marketing & Society*.
- Pavlou, P. (2003). Consumer acceptance of electronic commerce: Interacting trust and risk with the technology acceptance model. *International Journal of Communication*, 46, pp. 80-97.

- Quah, B.S (2000). A study of consumer choice preference on infant formula. Unpublished dissertation, School of Management, University of Science Malaysia.
- Roselius, Ted (1971). "Consumer Rankings of Risk Reduction Methods," *Journal of Marketing* (35), pp. 56-61.
- Stone, R.N., Winter, F.W. (1987). Risk: Is I still uncertainty times consequences? In Belk, R.W. et al. (Eds), *Proceedings of the American Marketing Association*
- Uysal, M., Hagan, L (1993). Motivations of pleasure travel and tourism. In Khan, M, Olsen, M and Var, T, editors, *Encyclopedia of hospitality and tourism*, New York: Van Nostrand Reinhold, pp. 798-810.
- Vigneron, F. J., Lester, W. (1999). A Review and a Conceptual Framework of Prestige- Seeking Consumer Behavior. *Academy of Marketing Science Review*, 1999 (1), pp. 1-15.
- Vigneron, F., Johnson, L. W. (1999). A Review and a Conceptual Framework of Prestige- Seeking Consumer Behavior. *Academy of Marketing Science Review*, 1999 (1), pp. 1-15.
- Wagner, T. (2007). Shopping motivation revised: a means-end chain analytical perspective. *International Journal of Retail & Distribution Management*, Vol. 35 No. 7, pp. 569-582.

CONSUMER LIFESTYLES AND ONLINE SHOPPING CONTINUANCE INTENTION: AN OVERVIEW

Norzieiriani Ahmad¹, Azizah Omar² and T. Ramayah²
¹Universiti Utara Malaysia, ²Universiti Sains Malaysia

ABSTRACT

A study on consumer buying behavior particularly on what do they want, what are they interested in, and what are their opinions and thoughts on market offerings has been always of great interest to marketers. The purpose of this paper is to review on the concept of consumer lifestyles in understanding the buying behavior of Malaysian consumers particularly in online shopping context. The review of various literature sources show that the life-style concept, when used carefully, can help the marketer gain an understanding of changing consumer values and how they affect buying behavior. The results of this study will provide some ideas and practical suggestions which can be implemented particularly in online shopping in order to improve its continuance (i.e. customer retention strategies) as effective means of maintaining the subscriber base, market share and overall revenue of online businesses. By identifying lifestyle factors and the relationship between lifestyle factors and online shopping continuance, the online businesses will be able to predict prospective online shoppers' intention to repurchase more easily.

Keywords: Online Shopping, Lifestyle Behavior, Continuance Intention

INTRODUCTION

Online shopping, also known as internet shopping, electronic shopping, online purchasing or internet buying can be defined as the process of purchasing goods and services over the Internet (Mastercard Worldwide Insights, 2008). Kim (2004) defined online shopping as examining, searching for, browsing for or looking at a product to get more information with the possible intention of purchase on the Internet. Alternatively, according to Chiu, Lin, Sun & Hsu (2009), online shopping can be considered as an exchange of time, effort and money for receiving products or services. Online shopping is increasing being accepted in Malaysia as an alternative for visiting traditional bricks-and-mortar stores. A Nielsen Global Online Survey on Internet shopping habits (2008) provides relevant descriptive statistics on the growth and potential of online shopping. This survey reported that more than 85 percent of the world's online population has used the Internet to make a purchase thus increasing the market for online shopping by 40 percent in the past two years. Furthermore, according to the same survey, in Malaysia, seven in ten consumers claimed to have made a purchase over the Internet before.

Despite the remarkable growth and optimistic outlook in online shopping, there is evidence to suggest that there are many consumers shopping with intent to buy at retail web sites for some reasons do not complete the transaction and in the worst case scenario, they do not return to the same site even after they have made a purchase from that site. Cho (2004) indicates that although almost 95% of Internet users visit online retail sites, most of them do so without the intention of actually making a transaction. More importantly, even the most established web sites are struggling with increasing their goal of building a large pool of repeat customers, on average, it is estimated that 98.7% of those who visit sites do not return, even if they make a purchase (Maravilla, 2001). Moreover, Lewell (1999), states that according to a research conducted by Engage Technologies and UK Internet consultancy NVision, four out of five Web users never return to a site. Furthermore, Pastore (1999) asserts that according to a survey by BizRate.com, despite many Internet users are motivated to start an Internet purchase transaction, 75 percent discontinue (cancel) the transaction (termed abandoning their shopping cart). Besides, the Malaysian Communication and Multimedia Commission (MCMC) survey also revealed that although there were 11 million Internet users in 2005, only 9.3% of them had purchased products or services through the Internet (Economist Intelligence Unit, 2006). This implies that Internet users are discovering attractive shopping opportunities on the web, but there are barriers and other concerns, preventing them to continuously purchase via the Internet.

In online shopping environment, consumers are free to shop at different websites and they are able to switch from one website to another in just a click away. The ease of switching and the ability to quickly gather almost complete information have awarded online customers with a new set of power tools in their decision making. Provided with the latest information on every aspects of products being sold online from numerous choices of web-sites, there is little to inhibit customers from switching suppliers or from changing where they would shop (Reibstein, 2002). The switching behavior of online consumers occurs when the quality of customers'

experience falls below a certain threshold either relative to competition or relative to their own expectations (Kon, 2004). As further noted by Michman, Mazze & Greco, (2003, p. 67) “the product or brand switching behavior of customers occurs not just because they are dissatisfied with a present brand of products or services, instead a change in consumer lifestyles is another likely reason for a change in consumer preference”. In addition, Kucukemigroglu (1999) also pointed out that lifestyles describe the behavior of individuals and groups of interactive people in defining potential consumers. Based on the idea “the more you know and understand about consumers, the more effectively you can communicate and market to them” (Plummer, 1974, p.33), the study of people’s values and lifestyles has become a standard tool for both social scientist and marketers around the world (Chu & Lee, 2007). Bellman, Lohse & Johnson (1999) points out that the most important information for predicting shopping behaviors (online and offline) are measures of consumer lifestyles, not demographics. In other word, to conduct a shopping website effectively, online retailers should be acquainted with consumers’ lifestyles and characters (Chu & Lee, 2007). To address this need, this paper is therefore, focuses on examining the extent of online shopping continuance in Malaysia and identifying the lifestyle factors that influence consumers’ intention to repurchase online.

LITERATURE REVIEW

Online Shopping Continuance Intention

Understanding the adoption of technology-based products or services has been long considered as an important research topic for Information System (IS) and marketing researchers. However, Yu (2007) mentioned that adoption was not equivalent to continuous use. This was due to that, in the initial stage of technology introduction (e.g. online shopping adoption), users are making acceptance decisions to use a product or service, which were different from the continuance decisions since continuous use was a post-adoption behavior (Yu, 2007). The term continuance has been defined as the intention to continue purchasing items after customers have purchase products or services (Atcharyachanvanich, Okada & Sonehara, 2008) thus, congruent with repeat purchase decisions (Kang, Hong & Lee, 2009). Continuance intention or repurchase intention refers to an individual’s judgment of buying again a specified product or services from the same business, taking into account his or her current situation and likely circumstances (Hellier, Geursen, Carr, & Rickard, 2003). In online business context, both the presence and operation of online shopping was depending heavily on Information Technology (IT) and they were often regarded as the type of IS (Chen, Gillenson & Sherrell, 2002). Furthermore, Limayem, Hirt & Cheung, (2007) suggested that IS continuance, IS continuance behavior or IS continuous usage described behavioral patterns reflecting continued use of a particular IS. Moreover, Hong & Lee (2005) asserted that continued usage was a matter of continuous decision making among alternatives in the competitive alternative systems.

The Importance of Online Shopping Continuance Intention

Undeniably, even though online shopping facilitates customer purchase through unlimited information, instantaneous price comparison and 24/7 service, it also raises concern to online retailers particularly in retaining online customers. Furthermore, a lot of ecommerce companies, online retailers in particular, have started to realize that since their competitors are just a click away, retaining companies’ customer base, in addition to attracting new ones is critical for sustaining revenue base, profitability and market share (Bhattacharjee, 2001a). Attracting and retaining customers in any businesses is important not only because repeat customers buy more and in the process, generate more revenue, but also it costs less to retain them. In this vein, investigating online shopping continuance intention are deemed important because in an ever-changing electronic market environment, acquiring new customers may incur higher costs compared to generating repeat businesses from existing customers.

A study conducted by Parthasarathy & Bhattacharjee (1998) among 214 continuing adopters and 229 discontinuers of online service subscribers reveals that on average the cost of acquiring a new customer is five to ten times greater than the cost of retaining a current one. Furthermore, retaining customers to continuously purchasing online is also important since many companies continue to rely on, an indeed accelerate heavy investment in developing various Internet or web applications to provide highly specialized electronic services for users (Hsu & Chiu, 2004). These companies are indeed spending oodles of cash on setting up their e-commerce websites, only to find that they have to spend much more to market their online storefronts.

A study by Gartner Group in 1999 reveals that companies are spending around 1 million dollars to set up shop on the web. One of the companies represented in the same study, eBags.com, reveals that the company spent in the “million-dollar” range to set up its web site and plans to spend more than 10 times with the aim of

establishing eBags as a national brand and placing eBags advertisements all over the web. Furthermore, according to the same study, some of the companies are spending or planning to spend several times more on marketing their sites than they spent on setting them up (CNET News, 1999).

In fact, several studies (e.g. Hong, Thong & Tam, 2006; Kim, Chan & Chan, 2007) also mention that infrequent and ineffective use of IT after the initial adoption may incur undesirable costs or result in a waste of effort to develop the IT. Thus, it is now firmly believed that the acceleration of heavy investment in venturing into online businesses is such a waste of effort if consumers discontinue purchasing online. Hence, in order to make sure that all heavy investments to develop web-based applications are not waste of effort, identifying factors that could motivate Internet users to repurchase particularly through online shopping is very crucial. Therefore, such evidences underscore the relevancy and timeliness of studying online customers' repeat purchase intention.

Antecedents of Continuance Intention

In spite of the higher of online shopping adoption rate, not many consumers have completed their purchases online. There have been several reasons investigated in previous studies as to why some consumers prefer not complete their purchases online. For various consumers there are still concerns with security and passing personal data over the Internet (Changchit, 2006). One study found that consumers did not complete online purchases due to the intangibility of the purchase (Cho, 2004). Furthermore, Sim & Koi (2002) pointed out that the main concern of consumers who had not bought anything on the Internet was related to the risk of not being able to examine the products and the reliability of the sellers. Sim & Koi (2002) who focused their study in Singapore observed that although Singaporeans acknowledge the convenience offered by online stores, they also recognized the risks associated with buying products online. The study indicated that security in payment through the Internet was among the main concern in purchasing products online.

In Malaysia, most of past studies on Internet technology adoption focused on Internet banking (Ndubisi & Sinti, 2006; Amin, 2007; Poon, 2008; Nor & Pearson, 2008; Haque, Tarofder, Rahman & Raquib, 2009), Internet stock trading (Gopi & Ramayah, 2007; Ramayah, Rouibah, Gopi & Rangel, 2009), E-learning (Mahmod, Dahlan, Ramayah, Karia & Asaari, 2005; Hsbollah & Idris, 2009), e-recruitment (Tong, 2009), online services adoption (Sulaiman, Mohezar & Lin, 2006; Ahmad & Juhdi, 2008; Tan, Chong, Lin, & Eze, 2009) and Internet shopping (Sulaiman, Jaafar & Kadam, 2005; Suki, 2006; Haque & Khatibi, 2006; Haque, Sadeghzadeh & Khatibi, 2006; Harn, Khatibi & Ismail, 2006; Ghazali & Mutum, 2006; Suki, Ramayah & Suki, 2008; Delafrooz, Paim & Khatibi, 2009). A short summary of related articles are presented in Table 1. Nevertheless, there are few studies that look into consumers' purchase intention especially in online shopping environment. For instance, Suki et al., (2008) carried out a study to investigate the effect of several factors namely, perceived ease of use, cognitive absorption, perceived usefulness and fashion involvement on intention to shop online. The study found that cognitive absorption and fashion involvement do not influence consumers' intention to conduct online shopping. In addition, Suki (2006) mentioned that the Internet pull factors such as user friendliness and reliability of the products or services offered through the Internet that attracted Malaysian Internet users to conduct online shopping. In investigating the factors that might affect the behavior of Malaysian consumers toward online shopping, Haque & Khatibi (2006) revealed that online products' price, consumers' trusts toward the Internet stores and educational levels significantly influence the frequency level of online shopping activities. They also found online consumers in Malaysia still lack of confidence and trust in using the Internet as a shopping channel.

Table 1: Some Review of Literature in Different Internet Technology Adoption Studies in Malaysia

Researcher	Independent Variable	Dependent Variable	Key Finding(s)
Ndubisi & Sinti (2006)	Attitude (importance to banking needs, compatibility, complexity, trialability and risk) Internet banking features (utilitarian orientation & hedonic orientation)	Internet banking adoption	The results reveal that the attitudinal factors play a significant role in internet banking adoption. The findings show that attitudinal disposition and webpage features can predict Internet banking adoption. Four attitudinal factors have strong influences on adoption namely importance to banking needs, compatibility, complexity, and trialability, whereas risks have a weak influence. Utilitarian orientation of the website rather than

			hedonic orientation has significant influence on adoption.
Gopi & Ramayah (2007)	Attitude, subjective norm and perceived behavioral control	Behavioral intention	Findings show that attitude, subjective norm and perceived behavioral control have a direct positive relationship towards behavioral intention to use internet stock trading. This study suggests that the theory of planned behavior can be used to explain variation in behavioral intention and actual usage.
Amin (2007)	Perceived usefulness (PU), perceived ease of use (PEOU), perceived credibility (PC) & computer self-efficacy	Behavioral intention	The results suggest that PU, PEOU and PC had a significant relationship with behavioral intention. Further, these measures are good determinant for undergraduate acceptance for internet banking. Results also suggest that PU and PEOU had a significant relationship with CSE. On the contrary, CSE did not associate with PC. Also, PEOU had a significant relationship with PU and PC that indicate these scales are related to PEOU in explaining undergraduate preference.
Suki et al., (2008)	Perceived ease of use (PEOU), perceived usefulness PU, cognitive absorption (CA) & fashion involvement (FI)	Online buying intention	The survey showed that PU, product search, search process, CA, FI, and online experience have a significant impact on online shopping, while the other two variables (i.e. CA and FI) do not have an impact on online shopping.
Amin (2008)	Perceived usefulness (PU), perceived ease of use (PEOU), perceived credibility (PC), the amount of information about mobile credit cards (AIMC), and perceived expressiveness (PE).	Usage intentions	Results suggest that TAM constructs are sufficient to explain the newly emerging context of mobile credit in Malaysia but additional features should be added to better reflect this system. The results indicate that PU, PEOU, PC and the amount of information contained on mobile phone credit cards are important determinants to predicting the intentions of Malaysian customers to use mobile phone credit cards. However, PE is not an important determinant in predicting the intentions of Malaysian customers to use mobile phone credit cards.
Poon (2008)	Convenience of usage, accessibility, features availability, band management and image, security, privacy, design, content, speed, and fees and charges.	E-banking adoption	Results indicate that all elements for ten identified factors are significant with respect to the users' adoption of e-banking services. Privacy and security are the major sources of dissatisfaction, which have momentarily impacted users' satisfaction. Accessibility, convenience, design and content are sources of satisfaction. Besides, the speed, product features availability, and reasonable service fees and charges, as well as the bank's operations management factor are critical to the success of the e-banks. WAP, GPRS and 3G features from mobile devices are of no significance or influence in the adoption of e-banking services in this study. Results also reveal that privacy, security and convenience factors play an important role in determining the users' acceptance of e-banking services with respect to different segmentation of age group, education level and income level.

Ramayah et al., (2009)	Attitude (Perceived usefulness & Perceived ease of use) Subjective norm (Injunctive norm & Descriptive norm)	Behavioral intention	Findings show that attitude and subjective norm have a direct positive relationship towards behavioral intention to use Internet stock trading. Attitude was significantly influenced by perceived ease of use and perceived usefulness whereas subjective norm was significantly influenced by injunctive norm and descriptive norm which were proposed as antecedents.
Rouibah, Ramayah & May (2009)	Perceived ease of use, perceived usefulness, attitude, subjective norms and perceived behavioral control	Behavioral intention	Findings reveal that perceived ease of use, perceived usefulness, attitude, subjective norms and perceived behavioral control have a direct positive effect on behavioral intention to use. However, attitude toward behavior has the highest effect, followed by perceived usefulness, and subjective norm, while perceived behavioral control exerts the weakest effect. Findings also found TPB model has the best explanatory power, followed by TRA and TAM models.
Tan et al., (2009)		Internet-based ICT adoption	The results suggest that internet-based ICT adoption provides a low cost yet effective communication tool for customers. However, security continues to be a major barrier. Finding on cost as a barrier is mixed. The inferential statistics reveal that relative advantage, compatibility, complexity, observability, and security are significant factors influencing internet-based ICT adoption.
Hsbollah & Idris (2009)	Perceived attributes of innovation (relative advantage, compatibility, complexity, trialability, observability) Demographical Information (gender, age, academic specialization, number of years in the organization)	E-learning adoption	This study indicates that the adoption decision as a dependent variable is well predicted by relative advantages and trialability. The research model showed a reasonably good fit with the data and empirical results confirm that only relative advantages, trialability and academic specialization positively influence the adoption decision. The findings have provided evidence of the importance of relative advantages, trialability and academic specialization in understanding the adoption decision before introducing new online technology and instructional delivery in education. The findings also indicated that there is no significant relationship between gender, age, and numbers of years in UUM with the adoption decision
Tong (2009)	Perceived usefulness, perceived ease of use, perceived privacy risk, performance expectancy, application specific self-efficacy, perceived stress	Behavioral intention to use	This paper has identified few key indicators to e-recruitment adoption, thus contributing to the existing knowledge in the human resources literature, particularly in recruitment. The PEOU construct indicates that the employed jobseekers could comprehend and become familiar with the operation of e-recruitment technology quickly over time. Employed jobseekers perceived usefulness (PU) in e-recruitment technology is more important and it indicates that detail job information would lead them to better decisions.

Over the years, a myriad of determinants have been proposed in connection with continuance intention in IS (e.g Bhattacherjee 2001a,2001b; Limayem, Hirt & Cheung, 2003; Hsu, Chiu & Ju, 2004; Hsu & Chiu, 2004; Lin, Wu, & Tsai, 2005; Chiu, Hsu, Sun, Lin & Sun, 2005; Hong & Lee, 2005; Hong, 2006; Wu, Tsai, Chen, & Wu, 2006, Thong, Hong & Tam, 2006) and marketing field (e.g Khalifa, Limayem & Liu, 2001; Ju & Hsu 2004; Jiang & Rosenbloom, 2005; Hsu, Yen, Chiu & Chang, 2006; Atcharyachanvanich, Okada & Sonehara, 2006); Tsai, Huang, Jaw & Chen, 2006; Min, 2007; Tsai, & Huang, 2007; Khalifa & Liu, 2007).

Given that attracting and retaining online consumers is the key to the success of e-commerce, many scholars have studied continuance intention from a number of perspectives. Using the Technology Acceptance Model (TAM), some scholars have predicted continuance intention based on perceived usefulness (Bhattacherjee, 2001a; 2001b; Limayem, Hirt & Cheung, 2003; Atcharyachanvanich et al., 2006; Hong et al., 2006; Roca & Gagne, 2007; Naido & Leonard, 2007; Kim & Kwank, 2007; Min, 2007; Premkumar & Bhattacherjee, 2008; Wu & Kuo, 2008; Saeed & Abdinnour-Helm, 2008; Wangpipatwong, Chutimasku & Papasratorn, 2008) and perceived of use (Hong et al., 2006; Roca & Gagne, 2007; Premkumar & Bhattacherjee, 2008; Wu & Kuo, 2008; Wangpipatwong et al., 2008).

Another research approach is based on the fact that trust plays an important role in transactions between online retailers and consumers (Grabner-Kraeuter, 2002). Recognizing the importance of retaining customers' trust in online business, researchers associated with this school of thought have investigated the role of trust in retaining repeat customers and have found it to be absolutely crucial for online business (Tsai et al., 2006; Liao, Palvia & Lin; 2006; Min, 2007; Vatanasombut, Igbaria, Stylianou & Rodgers, 2008). Several researchers have suggested that habit affects attitudes about shopping online (Limayem, Khalifa & Frini, 2000). Some empirical studies have found that the influence of intention on IS continuance varies depending on the strength of one's habit (Limayem et al., 2003; Limayem et al., 2007).

Although the significant role of perceived usefulness, perceived ease of use, trust and habit are crucial in online shopping context, Mahmood, Bagchi & Ford (2004) suggested that demographics and lifestyle characteristics also play an important role in customer buying behavior. According to Bellman, Lohse & Johnson (1999), online buyers typically have a "wired" lifestyle, meaning that they have been on the Internet for years. The study also found that people who have a more wired lifestyle and who are more time-constrained tend to buy online more frequently. Bellman and colleagues (1999) also proposed that people living a wired lifestyle patronize e-stores spontaneously. These consumers use the Internet as a routine tool to receive and send emails, to do their work, to read news, to search information, or for recreational purposes. Their routine use of the Internet for other purposes leads them to naturally use it as a shopping channel as well. Similarly, Kim, Cho & Rao (2000) in their study for instance, found that customer lifestyles directly and indirectly affect the customers' purchasing behavior on the internet.

The Definition of Lifestyle

In an economic perspective, lifestyle denotes the way individuals have allocate their income, both in terms of relative allocations to different products and services and specific choices within this groups (Zablocki & Kanter, 1976). Along the same line, Mitchell (cited in Lin, 2003) indicates that lifestyles are specific patterns of individuals' behaviors, and those behaviors result from those individuals' inner values. Furthermore, lifestyle could be identified as distinctive characteristics or an individual's typical way of life (Horley, Carroll & Little, 1988). One's lifestyle is a function of inherent individual characteristics that have been shaped and formed through social interaction as one evolves through the life cycle (Hawkins, Best & Coney, 2001). In short, consumer lifestyle is how they live. It includes the products they purchase, how they consume, what they think, and how they feel toward them.

The Importance of Lifestyle

Understanding and predicting consumer behavior is a vital aspect in marketing and is a necessary requirement to organizations being marketing orientated thus profitable because it underpins all marketing activities pursued by them. Over the past decades, a number of constructs, for instance, demographics, social class and psychological characteristics have been found useful in better understanding the behavior of the consumers (Plummer, 1974). Wells (1975) however, emphasizes that demographic profiles, essential though they maybe, have not been deemed adequate to influence consumer behavior because demographics lack richness. Moreover, Plummer (1974) states that demographic constructs are insufficient and need to be supplemented with other data. Although social class and psychological characteristics add more strength to demographics, but it, too, regularly needs to be complemented in order to get important insights into consumers (Plummer, 1974). In this vein,

Plummer (1974) indicates that lifestyle is one of the most popular concepts in marketing, used to explain consumer behaviors when demographic characteristics are not sufficient. In addition, lifestyle is useful to distinguish one group of people from another when demographic characteristics are not enough to make distinction (Demby, 1994; cited in Lee, 2005). This has been supported by Donthu & Garcia (1999) that “Many factors are helping the development of the Internet market, some related to technological advances, some related to the way the corporate world has changed its perceptions, and some related to changing lifestyles of consumers” (p. 52).

Consumer Lifestyles and Online Shopping

In recent years, there have been some profound changes in consumer lifestyles. A growing number of people are time constrained by obligations to work and family (Schor, 1991). This is true due to the fact that people nowadays are living in an era of quite hectic and busy working lifestyle, thus it has become very difficult for most of the people to go for shopping outside their homes. Moreover, based on a survey of over 5000 Internet users, Assael (2005) suggests that heavy users of the Internet are somewhat younger, growing up in the edge of technology and taking advantage of it, more likely to be workaholics and working more than 50 hours a week. Additionally, in the same study, Assael (2005) also indicates that the heavy Internet users are a multitasking group that tends to do more jobs or activities and seeks to do more than they currently have on their plate. They may be “time starved” and constantly exploring ways to reduce the time to complete various tasks to manage their busy schedules (Vijayasathy, 2004). Apparently, the time-deprived, multitasking orientations of heavy internet users have led to a profound change in shopping activities.

With regard to their busy working lifestyles, consumers nowadays are heavily rely on online shopping and progressively attach to it. This transformation has created a drastic change in the lifestyles and purchasing habits of the consumers. In such a dynamic changing environment, knowledge of consumer lifestyle helps marketers to understand how consumers think and select from alternatives hence communicate and serve them more effectively. Furthermore, the purchase behavior of the consumers differs with their lifestyle patterns. As Krishnan & Murugan (2007) mentioned, the importance they attach to the products, the sources of information, the influencers, the buying patterns and the brand choices are all affected by the lifestyle. According to a research report on A European Study of Changing Lifestyles and Shopping Behavior by Cap Gemini Ernst & Young, consumers nowadays are no longer fit neatly into marketing segments, but are rather ‘instaviduals’ who jump between many segments during the week, and even during the course of the day. This new environment makes traditional marketing obsolete and many marketers today are struggling to understand the new lifestyle needs of consumers in order to remain relevant in the marketplace. The knowledge of consumers’ lifestyle, attitudes and usage patterns therefore, enables the marketer in many situations to explain why certain consumers purchase or do not purchase a particular product or service online.

CONCLUSION

The main objective of this paper is to twofold; to examine the extent of online shopping continuance in Malaysia and to identify the lifestyle factors that influence consumers’ intention to repurchase online. This study intends to fill the gaps in the body of literature concerning the effects of consumer lifestyle factors on online shopping continuance intention. From the practical point of view, the findings from the present research may benefit IS practitioners, especially electronic commerce providers (e.g online retailers, online banks, online brokerages) whose business models and revenue streams are based on long-term usage of IT products and services. The results of this study will provide some ideas and practical suggestions which can be implemented particularly in online shopping in order to improve its continuance (i.e. customer retention strategies) as effective means of maintaining the subscriber base, market share and overall revenue of online businesses. By identifying lifestyle factors and the relationship between lifestyle factors and online shopping continuance, the online businesses will be able to predict prospective online shoppers’ intention to repurchase more easily. By doing so, they will be able to develop or improve future e-commerce sites which will be sensitive to the shoppers’ lifestyle. Also, they will be able to develop more precise or targeted marketing plans, programs and strategies according to the lifestyle and continuous intention of their target groups. Consequently, they can reach the target markets better.

REFERENCES

ACNielsen. (2008). *Nielsen Reports 875 Million Consumers Have Shopped Online* (Publication. Retrieved 14 January 2009, from The Nielsen Company:

- <http://www.nielsenmedia.com/nc/portal/site/Public/menuitem.55dc65b4a7d5adff3f65936147a062a0/?vgnnextoid=0bfef273110c7110VgnVCM10000ac0a260aRCRD>
- Ahmad, S. N. B., & Juhdi, N. (2008). Travel website adoption among Internet users in the Klang Valley, Malaysia. *Unitar E-journal*, 4(1).
- Amin, H. (2007). Internet banking adoption among young intellectuals. *Journal of Internet Banking and Commerce*, 12(3).
- Assael, H. (2005). A demographic and psychographic profile of heavy Internet users and users by type of Internet usage. *Journal of Advertising Research*, 45(1), 93-123.
- Atcharyachanvanich, K., Okada, H., & Sonehara, N. (2006). What Keeps Online Customers Repurchasing through the Internet? *ACM SIGecom Exchanges*, 6(2), 47-57.
- Atcharyachanvanich, K., Okada, H., & Sonehara, N. (2008). Exploring factors effecting the continuance of purchasing behavior in internet shopping: extrinsic benefits and intrinsic benefits. *Information Processing Society of Japan - Digital Courier* 4, 91-102.
- Bellman, S., Lohse, G. L., & Johnson, E. J. (1999). Predictors of Online Buying Behavior. *Communication of the ACM*, 42(12), 32-38.
- Berkman, H. W., & Gilson, C. C. (1974). Consumer lifestyle and market segmentation. *Academy of Marketing Science*, 2(1), 189-200.
- Bhattacharjee, A. (2001a). An empirical analysis of the antecedents of electronic commerce service continuance. *Decision Support Systems* 32, 201-214.
- Bhattacharjee, A. (2001b). Understanding information systems continuance: an expectation-confirmation model. *MIS Quarterly*, 25(3), 351-370.
- Changchit, C. (2006). Consumer perceptions of online shopping. *Issues in Information Systems*, VII(2), 177-181.
- Chen, L.-d., Gillenson, M. L., & Sherrell, D. L. (2002). Enticing online consumers: An extended technology acceptance perspective. *Information & Management*, 39(8), 705-719.
- Chiu, C.-M., Hsu, M.-H., Sun, S.-Y., Lin, T.-C., & Sun, P.-C. (2005). Usability, quality, value and e-learning continuance decisions. *Computers & Education* 45, 399-416.
- Chiu, C.-M., Lin, H.-Y., Sun, S.-Y., & Hsu, M.-H. (2009). Understanding customers' loyalty intentions towards online shopping: an integration of technology acceptance model and fairness theory. *Behaviour & Information Technology*, 1-14.
- Cho, J. (2004). Likelihood to abort an online transaction: influences from cognitive evaluations, attitudes, and behavioral variables. *Information & Management* 41, 827-838.
- Chu, Y., & Lee, J. J. (2007). The experiential preferences of the online consumers in different Internet shopping lifestyles towards online shopping websites. *Human-Computer Interaction, Part IV*, 3-11.
- Delafrooz, N., Paim, L. H., & Khatibi, A. (2009). Developing an instrument for measurement of attitude toward online shopping. *European Journal of Social Sciences* 7(3).
- Donthu, N., & Garcia, A. (1999). The Internet Shopper. *Journal of Advertising Research*, 52-59.
- Economist Intelligence Unit (2006). *Overview of e-commerce in Malaysia* (Publication. Retrieved January, 14, 2009:http://globaltechforum.eiu.com/index.asp?layout=rich_story&doc_id=8706&categoryid=&channelid=&search=malaysia
- Ghazali, E., & Mutum, D. (2006). Delineation of Malaysian online shoppers and non-shoppers using discriminant analysis. *The Business Review*, 6(2), 270-276.
- Gopi, M., & Ramayah, T. (2007). Applicability of theory of planned behavior in predicting intention to trade online: some evidence from a developing country. *International Journal of Emerging Markets*, 2(4), 348-360.
- Grabner-Kraeuter, S. (2002). The role of consumers' trust in online shopping. *Journal of Business Ethics* 39(1-2), 43-50.
- Haque, A., & Khatibi, A. (2006). The study of the behavior of Malaysian consumers towards online shopping. *Asian Journal of Information Technology* 5(1), 12-19.
- Haque, A., Sadeghzadeh, J., & Khatibi, A. (2006). Identifying potentiality online sales in Malaysia: a study on customer relationships online shopping. *Journal of Applied Business Research* 22(4), 119 -130.
- Haque, A., Tarofder, A. K., Rahman, S., & Raquib, M. A. (2009). Electronic transaction of Internet banking and its perception of Malaysian online customers. *African Journal of Business Management* 3(6), 248-259.
- Harn, A. C. P., Khatibi, A., & Ismail, H. (2006). E-Commerce: A study on online shopping in Malaysia. *Journal of Social Science* 13(3), 231-242.
- Hawkins, D. I., Best, R. J., & Coney, K. A. (2001). *Consumer Behavior: Building Marketing Strategy* (8 ed.): McGraw Hill.
- Hellier, P. K., Geursen, G. M., Carr, R. A., & Rickard, J. A. (2003). Customer repurchase intention: a general structural equation model. *European Journal of Marketing*, 37(11/12), 1762-1800.
- Hong, S., & Lee, H. (2005). *Antecedents of use continuance for information systems*. Paper presented at the KMIS International Conference.

- Hong, S.-J., Thong, J. Y. L., & Tam, K. Y. (2006). Understanding continued information technology usage behavior: A comparison of three models in the context of mobile internet. *Decision Support Systems* 42, 1819-1834.
- Horley, J., Carroll, B., & Little, B. R. (1988). A Typology of Lifestyles. *Social Indicators Research*, 20, 383-398.
- Hsbollah, H. M., & Idris, K. M. (2009). E-learning adoption: the role of relative advantages, trialability and academic specialisation. *Campus-Wide Information Systems*, 26(1), 54-70.
- Hsu, M. H., and, C. M. C., & Ju, T. L. (2004). Determinants of continued use of the WWW: an integration of two theoretical models. *Industrial Management & Data Systems*, 104(9), 766-775.
- Hsu, M.-H., & Chiu, C.-M. (2004). Predicting electronic service continuance with a decomposed theory of planned behavior. *Behavior & Information Technology*, 23(5), 359-373.
- Hsu, M.-H., Yen, C.-H., Chiu, C.-M., & Chang, C.-M. (2006). A longitudinal investigation of continued online shopping behavior: An extension of the theory of planned behavior. *International Journal Human-Computer Studies* 64, 889-904.
- Insights, M. W. (2008). Online Shopping in Asia-Pacific – Patterns, Trends and Future Growth from <http://www.mastercard.com/us/company/en/insights/studies/2008/asiaonlineshopping.html>
- Jiang, P., & Rosenbloom, B. (2005). Customer intention to return online: price perception, attribute-level performance, and satisfaction unfolding over time. *European Journal of Marketing*, 39(1/2), 150-174.
- Ju, T. L., & Hsu, M.-H. (2004). *Understanding web site continuance from a composite view of expectancy disconfirmation theory and theory of planned behavior*. Paper presented at the The Eighth Pacific-Asia Conference on Information Systems, Oriental Riverside Hotel, Shanghai, China.
- Kang, Y. S., Hong, S., & Lee, H. (2009). Exploring continued online service usage behavior: The roles of self-image congruity and regret. *Computers in Human Behavior* 25, 111-122.
- Khalifa, M., & Liu, V. (2007). Online consumer retention: contingent effects of online shopping habit and online shopping experience. *European Journal of Information Systems*, 16(6), 780-793.
- Khalifa, M., Limayem, M., & Liu, V. (2001). Online consumer stickiness: a longitudinal study. *Journal of Global Information Management*, 856-870.
- Kim, D. J., Cho, B., & Rao, H. R. (2000). *Effects of Consumer Lifestyles on Purchasing Behavior on the Internet: A conceptual Framework and Empirical Validation*. Paper presented at the International Conference on Information Systems Brisbane, Queensland, Australia
- Kim, H.-W., & Kwahk, K.-Y. (2007). *Comparing the usage behavior and the continuance intention of mobile internet services*. Paper presented at the Eighth World Congress on the Management of eBusiness.
- Kim, H.-W., Chan, H. C., & Chan, Y. P. (2007). A balanced thinking–feelings model of information systems continuance. *International Journal Human-Computer Studies*, 65, 511-525
- Kim, J. (2004). *Understanding consumers' online shopping and purchasing behaviors*. Unpublished Doctor of Philosophy, Graduate College of Oklahoma State University.
- Kon, M. (2004). Customer churn: stop it before it starts. *Mercer Management Journal* 17, 54-60.
- Krishnan, J., & Murugan, M. S. (2007). Lifestyle analysis - A tool for understanding buyer behavior. *AIMA Journal of Management and Research*, 1(1/4).
- Kucukemiroglu, O. (1999). Market segmentation by using consumer lifestyle dimensions and ethnocentrism: An empirical study. *European Journal of Marketing*, 33(5/6), 470 - 487.
- Lee, H.-J. (2005). *Influence of lifestyle on housing preferences of multifamily housing residents*. Unpublished Dissertation, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
- Lewell, J. (1999). *4 Out of 5 Users Never Re-Visit the Average Web Site* (Publication. Retrieved January 10, 2009, from ClickZ-News and Expert Advice for the Digital Marketer: <http://www.clickz.com/212071>
- Liao, C., Palvia, P., & Lin, H.-N. (2006). The roles of habit and web site quality in e-commerce. *International Journal of Information Management* 26, 469–483.
- Limayem, M., Hirt, S. G., & Cheung, C. M. K. (2007). How Habit Limits The Predictive Power of Intention: The Case of Information Systems Continuance. *MIS Quarterly* 31(4), 705-737.
- Limayem, M., Hirt, S. G., & M.K.Cheung, C. (2003). *Habit in the Context of IS Continuance: Theory Extension and Scale Development*. Paper presented at the The 11th European Conference on Information Systems, ECIS, Naples, Italy.
- Limayem, M., Khalifa, M., & Frini, A. (2000). What Makes Consumers Buy from Internet? A Longitudinal Study of Online Shopping. *IEEE Transactions on Systems, Man, and Cybernetics-Part A: Systems and Humans*, 30(4).
- Lin, C. S., Wu, S., & Tsai, R. J. (2005). Integrating perceived playfulness into expectation-confirmation model for web portal context. *Information & Management* 42, 683-693.
- Lin, F.-Y. (2003). *An analysis of hospitality consumer lifestyles in the United States*. Unpublished Dissertation, Texas Tech University, Texas.

- Mahmod, R., Dahlan, N., Ramayah, T., Karia, N., & Asaari, M. H. A. H. (2005). Attitudinal belief on adoption of e-MBA program in Malaysia. *Turkish Online Journal of Distance Education*, 6(2), 115-124.
- Mahmood, M. A., Bagchi, K., & Ford, T. C. (2004). On-line shopping behavior: cross-country empirical research. *International Journal of Electronic Commerce* 9(1), 9-30.
- Maravilla, N. M. (2001). *The case of the abandoned shopping carts* (Publication Retrieved May 19, 2009, from Power Homebiz Guides: <http://www.powerhomebiz.com/vol13/shoppingcarts.htm>)
- Mastercard. (2008). *Mastercard Worldwide Insights: Online shopping in Asia Pacific-patterns, trends and future growth*: Mastercard Worldwide.
- MCMC. (Q4 2008). *Communication & multimedia: selected facts and figures*. Retrieved April 7, 2009, from http://www.skmm.gov.my/facts_figures/stats/pdf/SKMM_Q4.pdf
- Michman, R. D., Mazze, E. M., & Greco, A. J. (2003). *Lifestyle Marketing: Reaching the new American Consumer*.
- Min, Q. (2007). Consumer behavior towards continued use of online shopping: an extend expectation disconfirmation model. In *Integration and Innovation Orient to E-Society* (Vol. 1): Springer Boston.
- Naidoo, R., & Leonard, A. (2007). Perceived usefulness, service quality and loyalty incentives: Effects on electronic service continuance. *South Africa Journal Business Management*, 38(3), 39-48.
- Ndubisi, N. O., & Sinti, Q. (2006). Consumer attitudes, system's characteristics and Internet banking adoption in Malaysia. *Management Research News*, 29(1/2), 16-27.
- Nor, K. M., & Pearson, J. M. (2008). An exploratory study into the adoption of Internet banking in a developing country: Malaysia *Journal of Internet Commerce*, 7(1), 29 -73.
- Parthasarathy, M., & Bhattacharjee, A. (1998). Understanding post-adoption behavior in the context of online services. *Information Systems Research* 9(4).
- Pastore, M. (1999). *75 Percent of Shoppers Abandon Carts* (Publication. Retrieved January 5, 2009, from ClickZ-News and Expert Advice for the Digital Marketer: <http://www.clickz.com>)
- Plummer, J. T. (1974). The concept and application of life style segmentation. *Journal of Marketing*, 38(1), 33-37.
- Poon, W.-C. (2008). Users' adoption of e-banking services: the Malaysian perspective. *Journal of Business & Industrial Marketing*, 23(1), 59-69.
- Premkumar, G., & Bhattacharjee, A. (2008). Explaining information technology usage: A test of competing models. *The International Journal of Management Science*, 36, 64-75.
- Ramayah, T., Rouibah, K., Gopi, M., & Rangel, G. J. (2009). A decomposed theory of reasoned action to explain intention to use Internet stock trading among Malaysian investors. *Computers in Human Behavior*.
- Reibstein, D. J. (2002). What attracts customers to online stores, and what keeps them coming back? *Journal of the Academy of Marketing Science*, 30(4), 465-473.
- Roca, J. C., & Gagne', M. n. (2007). Understanding e-learning continuance intention in the workplace: A self-determination theory perspective. *Computers in Human Behavior*, 1-20.
- Rouibah, K., Ramayah, T., & May, O. S. (2009). User acceptance of Internet banking in Malaysia: test of three competing models. *International Journal of E-Adoption*, 1(1), 1-19.
- Saeed, K. A., & Abdinnour-Helm, S. (2008). Examining the effects of IS characteristics and perceived usefulness on post adoption usage of IS. *Information & Management*, 45(6), 376-386
- Schor, J. B. (1991). *The Overworked American*. Retrieved 24 February 2009, 2009, from <http://users.ipfw.edu/ruflethe/american.html>
- Sim, L. L., & Koi, S. M. (2002). Singapore's Internet shoppers and their impact on traditional shopping patterns. *Journal of Retailing and Consumer Services* 8, 115-124.
- Suki, N. M. (2006). A descriptive investigation of Malaysian Internet users' adoption of online shopping. *Jurnal Teknologi Maklumat & Multimedia* 3, 127-138.
- Suki, N. M., Ramayah, T., & Suki, N. M. (2008). Internet shopping acceptance: examining the influence of intrinsic versus extrinsic motivations. *Direct Marketing: An International Journal*, 2(2), 97-110.
- Sulaiman, A., Jaafar, N. I., & Kadam, P. (2005). *Factors affecting online purchasing among urban Internet users in Malaysia*. Paper presented at The Fourth International Conference on e-Business.
- Sulaiman, A., Mohezar, S., & Lin, J. N. W. (2006). *E-Ticketing in Malaysia: Usage Trends*. Paper presented at the The Tenth Pacific Asia Conference on Information System.
- Tan, K. S., Chong, S. C., Lin, B., & Eze, U. C. (2009). Internet-based ICT adoption: evidence from Malaysian SMEs. *Industrial Management & Data Systems*, 109(2), 224-244.
- Thong, J. Y. L., Hong, S.-J., & Tam, K. Y. (2006). The effects of post-adoption beliefs on the expectation-confirmation model for information technology continuance. *International Journal of Human-Computer Studies* 64, 799-810.
- Tong, D. Y. K. (2009). A study of e-recruitment technology adoption in Malaysia. *Industrial Management & Data Systems* 109(2), 281-300.

- Tsai, H.-T., & Huang, H.-C. (2007). Determinants of e-repurchase intentions: An integrative model of quadruple retention drivers. *Information & Management* 44, 231-239.
- Tsai, H.-T., Huang, H.-C., Jaw, Y.-L., & Chen, W.-K. (2006). Why on-line customers remain with a particular e-retailer: an integrative model and empirical evidence. *Psychology & Marketing*, 23(5), 447-464.
- Vatanasombut, B., Igbaria, M., Stylianou, A. C., & Rodgers, W. (2008). Information systems continuance intention of web-based applications customers: The case of online banking. *Information & Management* 45, 419-428.
- Vijayasathya, L. R. (2004). Predicting consumer intentions to use online shopping: the case for an augmented technology acceptance model. *Information & Management*, 41, 747-762.
- Wangpipatwong, S., Chutimasku, W., & Papisratorn, B. (2008). Understanding citizen's continuance intention to use e-government website: a composite view of technology acceptance model and computer self-efficacy. *Journal of e-Government* 6(1), 55-64.
- Wells, W. D. (1975). Psychographics: A critical review. *Journal of Marketing Research*, 12, 196-213.
- Wu, J., Tsai, R. J., Chen, C. C., & Wu, Y. (2006). An integrative model to predict the continuance use of electronic learning systems: hints for teaching. *International Journal on E-Learning* 5(2), 287-302.
- Wu, M.-C., & Kuo, F.-Y. (2008). An empirical investigation of habitual usage and past usage on technology acceptance evaluations and continuance intention. *Advances in Information Systems*,
- Yu, C.-S. (2007). *What influences people to continuously use web-based services*. Paper presented at the 18th International conference on information management.
- Zablocki, B. D., & Kanter, R. M. (1976). The differentiation of life-styles. *Annual Review of Sociology*, 2, 269-298.