
Exploring online repurchase behavioural intention of university students in Malaysia

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Abstract: The focus of this study is to explore the antecedents of online repurchase intention (RI) of university students in Malaysia. The aim of this study is to examine online RI, specifically to examine the impact of pre-purchase user perceptions of attributes, pre-purchase user attitudes and post-purchase user attitudes on RI. This study managed to collect 318 completed online questionnaires from internet shoppers. Multiple Regression Analysis (Stepwise Method) was deployed to statistically test the proposed hypotheses. We found that perceived value and perceived risk are not predictor factors towards RI among experienced online shoppers. Interestingly, PU, PEOU, privacy concern, internet literacy/affinity and satisfaction were positively significant factors in predicting RI. This study considers a few studies' attempts to empirically examine the impact of pre-purchase user perceptions of attributes, pre-purchase user attitudes and post-purchase user attitudes on repurchase intention. The research limitations, contribution and managerial implications are discussed.

Keywords: online shopping; behavioural intention; repurchase intention; pre-purchase user perceptions of attributes; pre-purchase user attributes; post-purchase user attribute; Malaysia.

Reference to this paper should be made as follows: Rezaei, S. and Amin, M. (2013) 'Exploring online repurchase behavioural intention of university students in Malaysia', *J. Global Business Advancement*, Vol. 6, No. 2, pp.92–119.

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1 Introduction

Customers' repurchase intention is considered by both academicians and practitioners to be one of the critical success factors for online retailing with its implications for cost savings and gains in profitability for the business's stakeholders. In the other hand, previous studies (e.g. Sherman and Topol, 1996; Heinemann and Schwarzl, 2010) reveal that marketing, retailing and information technology will be brought together and enjoy positive synergy to create value for the business's stockholders. Relatively, a substantial body of research showed customers must purchase four times at an online store to make profits from that customer (Chiu et al., 2009). Thus, determining internet consumer behaviour intention is fruitful research area in electronic marketing.

"Internet marketing or online marketing could be defined as the entire process of building and maintaining customer relationships through the online activities to facilitate the exchange of ideas, products and services that satisfy the goals of both buyers and sellers or create value for both sides" (Razali et al., 2010, pp.270–289). The tremendously increased use of internet technology and the boom in electronic commerce have opened tremendous business opportunities (Butler and Peppard, 1998; Shankar et al., 2003; Guan and Cheng, 2009). Marketers and online retailers need to focus on an internet user's e-attitudes and e-behaviour as a strong mechanism to attract internet users for retail usage (O'Cass and Fenech, 2003). Internet marketers are advised to explore the determinants of customer online purchasing intention among online shoppers (Ling et al., 2010). Understanding patronage behaviour of online shoppers is one of the keys to success for today's retailers (Reynolds et al., 2002).

A recent study by Dennis et al. (2010) warned that all business sectors particularly in mature and saturated markets or retail marketing industry need to face the challenge that they might miss out sections of young consumers who either have ignored or who are bypassed by traditional modes of offline marketing. In Malaysia, the development of the Multimedia Super Corridor (MSC) has attracted so much attention on the accomplishment and development of internet practice in all industries' performance (Armash et al., 2010b). According to Yang and Lai (2006), a better understanding of consumer behaviour allows marketers to design effective marketing strategies because the internet provides marketers with much more data and information about customers in comparison with offline shopping. As a result, this issue has brought marketing management into a new age.

In contrast with previous related studies, the area of this study is a combination of consumer behaviour insight and also strategy related. Grewal and Levy (2007) through a meta-analysis of journals published between 2002 and 2007 (130 regular articles in *Journal of Retailing*) found that more study should integrate insights gained from consumer behaviour with the development and implementation of retail strategy. Close and Kukar-Kinney (2010) state that "since E-commerce is becoming a critical and important aspect of marketing strategy and customer relationship, there is a growing need for developing new knowledge, models and theories on Internet customer behaviour".

Many studies have been done on the acceptance and adoption of online shopping and there are a few studies on post-adoption of online retailing (Hernandez et al., 2009; Taylor and Strutton, 2010). "Post-adoption usage of the online channel is dynamic and multi-dimensional in many ways" (Liu and Forsythe, 2010). Continued usage (continuance) of the information technologies (IT) is a key research issue in the information systems (IS) field (Hsu et al., 2006). It is important to study the factors that

influence individuals' post-adoption behaviour and attitudes, in regard to the significant influence of continued usage on the long-term viability and profitability of an IT enterprise like online retailing (Khalifa and Limayem, 2003; Thong et al., 2006; Chea and Luo, 2007; Blery et al., 2009; Hernandez et al., 2009; Hannah and Lybecker, 2010; Hernández et al., 2011; Lee et al., 2011). In fact, the success of internet retailing depends more on post-adoption use of the channel for purchasing than on the initial decision to use the channel for shopping (Chang and Samuel, 2004; Sorce et al., 2005; Chiu et al., 2009; Liu and Forsythe, 2011). Many authors (Atcharyachanvanich et al., 2007; Brunelle and Lapierre, 2008; Cai and Cude, 2008; Ha et al., 2010; Wan et al., 2010) have declared that online demographic characteristics play a significant role in revisit duration and are thus an indicator of future earnings. The advanced technology makes youth a unique target for companies as well as a unique demographic group for researchers (Djamasbi et al., 2010; Hannah and Lybecker, 2010). According to Brunelle and Lapierre (2008) and Wan et al. (2010), there is a fundamental issue that has not been precisely addressed: "the impact of age and shopping experience on consumers' perception of online products and services".

Researchers seldom study the effect of particular online shopping on undergraduate students (Su and Huang, 2011). In fact, university students have a higher level of knowledge and access the internet more frequently in the university; they are full of curiosity and are willing to accept new things (Peng et al., 2008). It is argued that although students are not earning, they are representative of a future earning population, and so their opinions are valid (Chang and Chen, 2008; Hart, 2008; Su and Huang, 2011; Al-Maghrabi et al., 2011). Students may be appropriate, because online consumers are generally young and more highly educated (Chang and Chen, 2009). Therefore, the problem statement in this study is "to understand attitudes and behaviour of repurchase intention of multiracial university students in Malaysia".

Through a meta-analysis of A+ level marketing journals published between 1996 and 2007, Taylor and Strutton (2010) proposed a future research direction (and also research framework of study) that is the problem statement of this study. Consequently, this study is driven by exploratory and descriptive objectives in the hope to explore a new area of study suggested by many scholars (Liu and Forsythe, 2010) and directly by Taylor and Strutton (2010).

The objectives of this study are as follows:

- 1 To understand factors influencing attitudes and behaviour of repurchase intention of multiracial university students in Malaysia (as proposed by Taylor and Strutton, 2010)
- 2 To examine the impact of pre-purchase user perceptions of attributes, pre-purchase user attributes and post-purchase user attributes on repurchase intentions of multiracial university students in Malaysia.

Kiang et al. (2004) claimed that the purchasing behaviour of online shoppers plays an important role in the success of electronic marketing activities. This study has important implications both in research and practice. In fact, this research contributes and generates new knowledge to online retailers, marketing managers and information systems scholars as well. According to Khalifa and Limayem (2003) and Su and Adams (2005), two different forms of electronic commerce (Business-to-Business (B2B) and Business-to-Consumer (B2C) have emerged as important ways of doing business that will surely

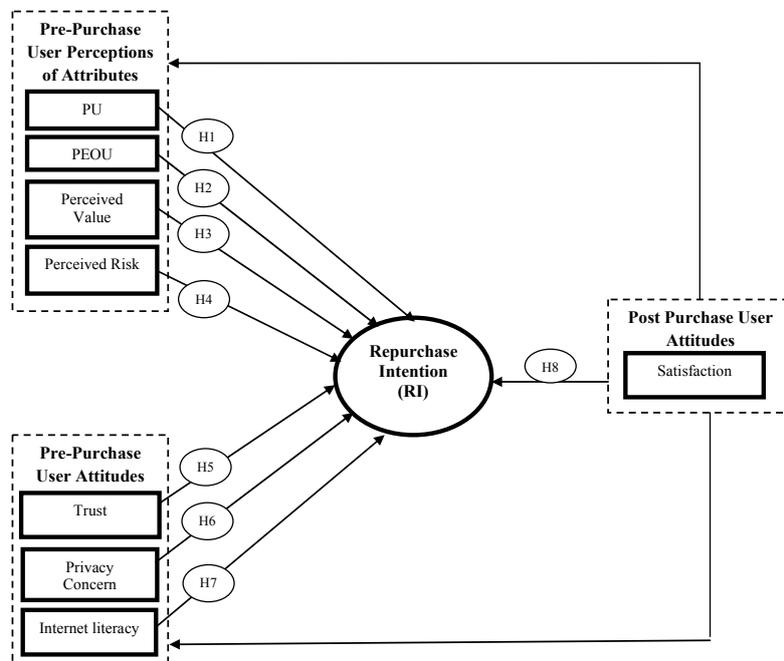
grow in years to come. This study explores the antecedents of online purchase intention for business-to-consumer (B2C) websites. Among the variety of electronic commerce business models conceived and realised in the literature and in practice, B2C online shops (electronic retailing, e-tailing) are the most discussed approach and is the focus of this study (Khalifa and Limayem, 2003; Madlberger, 2004; Al-Maghrabi et al., 2011).

2 Theoretical framework

Drawing upon the literature in internet marketing, online retailing, information systems, information technology, and computers in human resources, this study examines the modelling of consumer shopping behaviour in post-adoption era or repurchase tendency of online shoppers. Repurchase tendency represents the customer's self-reported likelihood of engaging in further repurchase behaviour that is the focus of this study (Ha et al., 2010). Based on the Theory of Reasoned Action (TRA) of consumer behaviour, the Technology Acceptance Model (TAM) was founded upon the hypothesis that technology acceptance and use can be explained in terms of a user's internal belief, attitudes and intentions (Turner et al., 2010). According to Hernandez et al. (2009), there is still room for improvement of TAM. In a post-adoption context, technical attributes such as visual design, user interfaces and navigation continue to influence the purchase intentions of e-consumers.

In this study we propose an integrative model of post-adoption online purchasing behaviour built upon TAM (Davis, 1989) and Taylor and Strutton (2010) model (see Figure 1).

Figure 1 An integrative model of post-adoption online RI based on Taylor and Strutton (2010)



2.1 *Pre-purchase user perceptions of attributes*

Pre-purchase user perception of attributes includes perceived usefulness, perceived ease of use, perceived value and perceived risk. In the following sections, these attributes are explained to understand their impact on repurchase behaviour intention (BI) of online shoppers.

2.1.1 *Perceived Usefulness (PU)*

In TAM, perceived usefulness (PU) and Perceived Ease of Use (PEOU) are considered distinct factors influencing a user's attitude towards using that technology (Gao, 2009). Perceived usefulness has been explained as the degree to which one believes that using the technology will enhance user performance (Peng et al., 2008). Users may continue using an internet service if they consider it useful, even if they may be dissatisfied with their prior use (Al-Maghrabi et al., 2011). Clearly, all users of internet are looking to get more productivity and feel useful by moving from market space to marketplace. PU is the strongest predictor of intention in TAM and continues to be the strongest predictor of customer continuance intention (Al-Maghrabi et al., 2011). According to Ng (2003), one dominant attitude among e-shoppers is usability. Perceived usefulness is expected to be influenced by perceived ease of use because, other things being equal, the easier it is to use a system, the more useful it can be (Venkatesh and Goyal, 2010). Usability is a very important attribute for achieving desirable internal and behavioural responses (Lorenzo et al., 2007). So, we hypothesise:

H1: There is a significant relationship between PU and RI.

2.1.2 *Perceived Ease of Use (PEOU)*

Drawn from the TAM that was introduced and developed by Davis (1989), ease of use in website was considered to be one of the influential elements in this research framework. Perceived ease of use 'is the degree to which one believes that using the technology will be free of effort' and in comparison perceived ease of use 'is useful in explaining the variance in perceived usefulness' (Peng et al., 2008; Chen and Li, 2009). Lu et al. (2011) support the moderating effect of online shopping experience on the relationships between PEOU, PU and attitude towards websites because users with more internet experience are usually exposed to more websites and they are more willing to experience different web services than inexperienced users. We hypothesise:

H2: There is a significant relationship between PEOU and RI.

According to Atcharyachanvanich et al. (2007), if internet shopping can provide customers with time-saving shopping, the usability of such a website may influence the ease-of-use factor, which directly affects customers' attitudes towards purchasing items through the internet. The ease of navigation may have led to greater satisfaction and shopping pleasure with the mall that provides spatial metaphoric aids (Ng, 2003). The results (Chang and Chen, 2008) indicate that convenience directly enhances internet customer loyalty.

2.1.3 Perceived value

In recent years as the concept of customer value has attracted rising attention both for marketing researchers and practitioners, more enterprises started to take customer value strategies in order to increase profits and ensure sustainable development in their core businesses (Tang and Zhang, 2010). “Honesty, integrity, trust and justice are cornerstone values in contemporary business” (Vadi and Jaakson, 2011). According to Lindman (2010), as value creation for target customers has become an important element in contemporary business management, knowledge about customer value which customers actually perceive becomes a strategic asset to gain strategic competitiveness. How much the customer values the product offering is critical to the success of any firm (Caruana and Ewing, 2010). Value has been shown to influence preference, satisfaction, loyalty and other important outcomes, but nearly all studies examining such constructs have been in the context of ‘offline’ consumer behaviour (Overby and Lee, 2006). Overby and Lee (2006) state e-commerce research should consider the motivations or desired value behind consumer use of the internet. ‘Perceived value’ increases purchase and loyalty intentions by reducing consumers’ propensity to seek information on alternatives (Taylor and Strutton, 2010). Koo (2006) states that personal values as underlying motivations which have received less attention in online marketing literature, carry important meanings in explaining customers loyal behaviour. We hypothesise:

H3: There is a significant relationship between perceived value and RI.

2.1.4 Perceived risk

Previous literatures show that perceived risk is a key factor that influences purchase and repurchase intention of online shoppers (Peng et al., 2008). Clearly, the level of perceived risk that a customer associates with a buying decision is higher in online shopping than in traditional shopping (Martín et al., 2011). The effect of customer trust on purchase intentions is possibly mediated by perceived risk, at least when the e-commerce activity involves inexperienced customers who examine a variety of websites some of which are not well known (Gefen et al., 2003). Sorce et al. (2005) and Su and Huang (2011) declare that perceived risk is the key factor influencing consumer online shopping. It is negatively influenced by high-perceived risk (Sorce et al., 2005). We hypothesise:

H4: There is a significant relationship between perceived risk and RI.

2.2 Pre-purchase user attitudes

Another key operational variable that has significant impact on online shoppers is pre-purchase user attitudes. In fact, the online attitudes of users determine their level of shopping both to retain on single online vendor and replace their online shopping portal. On the other hand, pre-purchase user attitudes include trust, privacy concern and internet interest/literacy/affinity. In following sections the literature on this issue is considered to understand the variables that shape online behavioural intention. Liu et al. (2005) state little empirical research has been done to examine the relationship among the three

constructs: privacy concerns, trust and behavioural intentions. Accordingly, the theoretical relationship between privacy of personal information and trust has received limited research focus (Eastlick and Lotz, 2011).

2.2.1 Trust

According to Chiou and Pan (2009) perceived trust of the online customer is very important in retaining shoppers and this issue demonstrated the importance of building asset specificity in increasing customer retention and loyalty. The importance of trust in exchange contexts is being recognised from years ago in marketing context (Andaleeb, 1995). Accordingly, most studies of trust in online business models have tended to focus on trust as an antecedent to initial web usage or acceptance, and ‘have devoted little attention to its effects on continued usage’ (Wang and Chiang, 2009). In short, previous studies on internet trust were remarkable but they did not deal with the development of trust in continuous period of time (Yoo et al., 2008). Many researchers argued that trust is a crucial enabling factor in online transactions (Lee and Cheung, 2004; Brunelle and Lapierre, 2008; Chiu et al., 2009; Badrinarayanan et al., 2010). We hypothesise:

H5: There is a significant relationship between trust and RI.

2.2.2 Privacy concern

According to Dinev and Hart (2005), privacy concern is another critical factor in the online area, the impact of which needs to be fully understood and adequately studied. Privacy concerns often arise among online users when new IT with enhanced capabilities for storage, collection, use and communication of personal information come into the picture (Liu et al., 2005). Privacy refers to the degree to which the online shopping website is safe and protects the customers’ information (Chiu et al., 2009; Badrinarayanan et al., 2010). B2C websites gather information about visitors via explicit modes (e.g. surveys) and implicit means (e.g. cookies) providing the necessary data for decision making on marketing, advertising, and products (Armesh et al., 2010a). Basically, IT literacy (discussed more in the next section) is positively associated with internet access because in order to access the internet an individual needs to have basic IT literacy (Ferro et al., 2011). In Malaysia, for example, many buyers appear to be afraid to purchase products online due to fears of lack of privacy and possibility that online retailers will misuse their personal information (Lee et al., 2011). Privacy and security concerns have been viewed by some researchers as ‘two clearly distinct constructs’ in studies of online consumer behaviour (Brunelle and Lapierre, 2008; Chiu et al., 2009; McCole et al., 2010). Hasim and Salman (2010) found that the issues relating to security concerns and interruptions have significant negative effect on the sustainability of internet usage among the Malaysian youth. We hypothesise:

H6: There is a significant relationship between privacy concern and RI.

2.2.3 *Internet interest/literacy/affinity*

The differences in various aspects of internet usage across demographic groups have become an interesting research area because demographic attributes were found to influence individuals' actions before they engage in a given behaviour intention (Akman and Mishra, 2010). While IT literacy is an important factor in digital divide research, and studies examine user characteristics with respect to IT literacy, few studies make the process of basic IT literacy acquisition their main focal point (Ferro et al., 2011). Jones and Reynolds (2006) state that consumers often switch brands due to boredom despite being highly satisfied and this problem is especially true in retailing and generally results from consumers losing interest and becoming bored with stores. In addition, internet literacy is also closely related to computer literacy, which is now of great importance in everyday life (Dinev and Hart, 2005). We hypothesise:

H7: There is a significant relationship between internet literacy/affinity and RI.

2.3 *Post-purchase user attitudes*

Román (2010) found that “learning more about the critical relationship between e-satisfaction and e-loyalty should be a top priority for scholars and practitioners”. Another important factor mentioned in the literature and suppose to impact on online customer retention and loyalty is post-purchase customer attitudes. In the real world satisfaction is a big issue to be understood by businesses both offline and online. In the following section satisfaction, expectation and experience are explained. According to Ball et al. (2004) “satisfaction is the most critical factor to the explanation of customer retention and loyalty”.

2.3.1 *Satisfaction*

Most studies on customer satisfaction focus just on the forming mechanism and process of satisfaction. Few studies have examined satisfaction concept from its origin (Ye et al., 2009). Satisfaction has been seen as the major determinant of subsequent loyalty, with positive consequences for company performance (Finn et al., 2009). Marketers have attempted to discover the major factors leading to customer loyalty which customer satisfaction is obviously one of those (Chang and Chen, 2009). Loyal customers are undoubtedly important because they contribute to the profitability of the service providers (Armesh et al., 2010a). We hypothesise:

H8: There is a significant relationship between satisfaction and RI.

Román (2010) found that loyalty intentions were significantly and strongly associated with increased satisfaction. Satisfaction is one of the most important consumer reactions in internet shopping, and its importance is reflected in the ability to help build customer loyalty (Cheung and Lee, 2005). According to Lee and McIvor (2007), it appears that consumers from different cultures could assign different degrees of importance to antecedents of consumer satisfaction even in online shopping.

3 Methodology

The theoretical framework of this study has been built on TAM proposed by Davis (1989) and developed in 2010 by Taylor and Strutton. Taylor and Strutton (2010) declared that their model should be used to conduct more study in post-adoption online behaviours.

3.1 Development of research design

After all the relevant hypotheses were developed in previous section, the research design was prepared. There were five sections in research design, namely (a) define the target population, (b) sampling method, (c) determine necessary sample sizes, (d) data collection method, and (e) types of data and analysis.

3.1.1 Define the target population

Chang and Zhu (2007) declared that if we studied consumers' internet behaviours based on the data from all consumers and did not classify them then some wrong conclusions would be obtained. To identify the main influential factors of online shopper, university students especially undergraduate students who can best represent student group as research object (Su and Huang, 2011; Al-Maghrabi et al., 2011) are chosen in order to study their online shopping behaviour intention. In addition, university students have high education background and have been one of the main internet users at the present time (Hu et al., 2009).

3.1.2 Sampling method

The sampling design is random sampling technique that will be used in this study proposed by Ling et al. (2010) and Tan et al. (2007). The reason to use probability sampling is the findings from the study of a non-probability sample cannot be confidently generalised to the population (Tan et al., 2007). In probability-based sampling, the first step is to decide on the population of interest (Doherty, 1994) that is university students, the population we want to know about their repurchase behaviour intention towards online shopping.

3.1.3 Determine necessary sample sizes

In this research, 318 respondents from four (4) different Malaysian universities (three public universities and one private university) were chosen. Based on Ha et al.'s (2010) study, the important criteria for selecting respondents for the sample are: (a) minimum of 12 months' experience shopping on the internet, (b) at least one purchase within that period and (c) age 18–31. This is because the research focuses on the customer post-adoption behaviour's intention towards online shopping among youth.

3.1.4 Data collection method

Previous studies have shown that data collection directly from users rather than from service providers offers more accurate information especially given that customers'

continuance intentions are best assessed through information obtained from the users themselves (Al-Maghrabi et al., 2011). The target population of this research was university students (age 18–31) both male and female to understand and predict e-attitude and e-behaviour in post-adoption era. To understand more precisely target population was divided into two groups. First group include male and female between 18 and 24 years old (undergraduate students) and second group between 25 and 31 years old (postgraduate student). The overall response was 318 students because this increased the representativeness of the sample and consequently the generalisability of the findings which is proposed by Lee et al. (2011) in previous related study on online repurchasing intention. There were two main sections of the questionnaire. Section A is regarding the consumer demographic and section B is regarding the factors influencing the consumer e-behaviours and e-attitudes. The measurement used for section B is the 5-point Likert scale (see Appendix A). The factors which characterise the consumer demographic profile are: age, sex, occupation, education, culture and usage of internet. Changes in the consumer demographic profile caused a lot of alterations in online shopping context (Ieva and Gaile-Sarkane, 2009). First, the questionnaire was sent via email to respondents and second the link included surveys embedded in Facebook to enable youth to respond to the survey. This way was very effective because university students replied to the survey after they saw it on their Facebook wall.

3.1.5 The types of data and analysis

The research opted to employ (a) descriptive, (b) goodness of data (reliability) analysis, and (c) hypotheses testing. The proposed method is to use the SPSS software (18) to analyse and test the data for significant. It is also used to test the entire hypothesis formed to prove its relationship. First, the data for section 1 were test on the frequency. Next, the data for section 2 were measured in term of the central tendency of mean and measure of dispersion in term of standard deviation. Descriptive analysis was divided into three sections namely: (a) respondents' profiles, whereby frequency analyses were performed; (b) central tendency and variability analysis whereby mean and standard deviation analysis were performed; and (c) normality analysis. The second data analysis method is a reliability analysis. This was to make sure all the items were fit for the hypotheses testing analysis that followed. Upon completion of the pilot study reliability analysis, hypotheses testing was employed to measure the research objectives. There were two types of tests performed namely: (a) significance of difference testing and (b) association testing. The multiple regression analysis was used to test the independent variables against dependent variables. According to the literature, these methods of testing were used before in many studies of TAM (Davis, 1989) and (Taylor and Strutton, 2010) Model 2010). Table 1 presents the summary of hypotheses testing.

Table 1 Summary of hypotheses (H) testing

<i>H</i>	<i>Details</i>	<i>Types of data analysis</i>	<i>Indicator</i>
1	Relation between dependent variable and independent variables of study	Descriptive and multiple regression analysis	Mean, standard deviation, Pearson correlation, adjusted R2 value, <i>F</i> -statistics, sig. level $p < 0.005$, Standardised B.

3.2 *Measurement of variables*

The questionnaire and its scaling were developed and modified based on validated and reliable existing empirical studies carried out by various scholars and it also within the framework given in Table 2. There were two (2) sections in the questionnaire booklet in which one of them includes demographic profiles of respondents and the other section was to test the variables of this study.

Table 2 Sources of questionnaires development

<i>No.</i>	<i>Variables</i>	<i>Sources of Instruments</i>	<i>No. of questions</i>
1	RI	Chiu et al. (2009)	Three (3)
2	PEOU	Hausman and Siekpe (2009)	Three (3)
3	PU	Chiu et al. (2009)	Three (3)
4	Perceive value	Lee et al. (2011)	Five (5)
5	Perceive risk	Martín and Camarero (2009)	Four (4)
	Trust	Chiu et al. (2009)	Four (4)
6	Privacy concern	Yu-Hui and Stuart (2007)	Three (3)
7	Internet literacy	Dinev and Hart (2005)	Two (2)
9	Satisfaction	Chang and Chen (2009)	Three (3)

3.3 *Validity and reliability*

The survey questionnaire used for the current study is deemed to reflect all three types of validity. The survey questionnaire was adopted and modified from the questionnaire constructed by validated empirical studies. It concerns the dependability, consistency, accuracy, predictability and stability of a measuring instrument (Kerlinger and Lee, 2000). Subsequently, the reliability analysis was conducted with the results of Cronbach alphas of more than 0.7. Prior to the distribution of the final questionnaires, a pilot study was performed at Multimedia University, Cyberjaya Campus as the pilot study population. They were thirty (30) respondents who participated in this process.

4 **Results**

The respondents of this study were undergraduate and postgraduate students from four (4) universities in Malaysia which includes: (a) Multimedia University (MMU), (b) University Kebangsaan Malaysia (UKM), (c) University Technology Malaysia (UTM) and (d) University Putra Malaysia (UPM).

4.1 *Response rates*

First, questionnaires were distributed to students' email addresses at the four universities mentioned above. Two hundred twenty emails were sent to respondents from which 180 questionnaires were collected. From this method a total of 43% of data were collected. Second, questionnaires were embedded in Facebook for the others who did not

receive the survey via email. Therefore 180 questionnaires were collected through Facebook (43%). The overall sample size were 318 respondents which were collected within thirty one (31) days.

4.2 Demographic characteristics of respondents

Analyses of respondents' demographic characteristics are presented in Table 3 namely: (a) respondents' gender, (b) age, (c) marital status, (d) race and nationality (e) respondents' current town/city (f) respondents' university and (g) education level. Table 3 illustrates the demographic characteristics of target population of this research.

Table 3 Summary of demographic characteristics of respondents

<i>Demographic profile</i>	<i>Frequency</i>
1 Distribution of Gender	Male: 55% Female: 45%
2 Distribution of Age	18–24 : 74.8% 25–31: 24.8%
3 Distribution of Marital Statues	Single: 73% Married: 27%
4 Distribution of respondents by race/nationality	Chinese 27.4%; Malay 23.3%; Indian 11.3%; Iranian 17.9%; Arabian 9.4%; African 8.8% Other races or nationality 1.9%
5 Distribution of Town/City	Kuala Lumpur 26.7 % Cyberjaya 31.1% Serdang 22.0% Other city or location 12.3% Not Stated 7.9%
6 Distribution of University	MMU: 30% UTM: 23% UKM: 23% UPM: 24%
7 Distribution of Education Level	Undergraduate 67.6% Postgraduate 32.4%

4.3 Distribution based on respondents' shopping experience

Like previous section, this section also represents the respondents based on their online shopping experience.

4.3.1 Distribution of types of product purchased

As shown in Table 4, the most purchased products were travel reservation and ticketing at 18.9% (60 respondents).

Table 4 Distribution of respondents according to types of product purchased

	<i>Type of product</i>	<i>Frequency</i>	<i>Percent</i>
1	Software	35	11.0%
2	Travel reservation & ticketing	60	18.9%
3	Games	19	6.0%
4	Credit for Hand Phone	40	12.6%
5	Laptop (PC)	49	15.4%
6	Book	20	6.3%
7	Food	22	6.9%
8	Music CD, DVD, videotape	26	8.2%
9	Gifts	18	5.7%
10	Electronics Product	23	7.2%
11	Other	6	1.9%
	Total	318	100.0%

After that other products purchased by target population of this study includes: Laptop (PC) 15.4% (49 respondents), credit for hand phone 12.6%, software 11.0%, Music CD, DVD, videotape 8.2%, electronic products 7.2%, food 6.9%, book 6.3%, games 6.0%, gifts 5.7% and other products 1.9%.

4.3.2 *Distribution of number of purchases made*

Numbers of purchases made by respondents are shown in Table 5. In fact most respondents purchased at least one time via internet. 21.7% of respondents purchased at least two times within last 12 months. 17.9% purchased at least three times, 17.0% purchased at least four times, 14.2% purchased one time, 11.3% purchased more than ten times, 10.1% purchased between 5 and 7 times and 7.9% purchased 7 and 10 times within one year.

Table 5 Distribution of respondents according to the number of purchases made

	<i>Number of purchases made</i>	<i>Frequency</i>	<i>Percent</i>
1	1 Times	45	14.2%
2	2 Times	69	21.7%
3	3 Times	57	17.9%
4	4 Times	54	17.0%
5	5–7 Times	32	10.1%
6	7–10 Times	25	7.9%
7	More Than 10 times	36	11.3%
	Total	318	100.0

4.3.3 *Distribution of average daily use of internet*

Despite the growth in the internet's popularity, not everyone shops online. Some people are technological 'have-nots', who do not have or want computers and/or internet access (Cai and Cude, 2008).

Therefore, in this study the target population was those who had purchased minimum one product online within last one year or 12 months. According to Table 6, 24.8% of respondents use the internet 5–7 hrs per one day. And 21.7% use the internet more than

10 hrs per day, 18.9% of students use the internet 7–10 hrs per day, 18.6% use internet 4 hrs per day, 10.1% use the internet just three hrs per day, 3.1% just two hrs and 1.6% one hrs per day.

Table 6 Distribution of respondents according to average daily use of internet

		<i>Frequency</i>	<i>Percent</i>
1	1 hrs	5	1.6%
2	2 hrs	10	3.1%
3	3 hrs	32	10.1%
4	4 hrs	59	18.6%
5	5–7 hrs	79	24.8%
6	7–10 hrs	60	18.9%
7	More than 10 hrs	69	21.7%
8	Total	314	98.7%
9	Not stated	4	1.3%
	Total	318	100.0

4.3.4 Summary of descriptive statistics of all variables

Based on descriptive statistics of above variables and discussion, Table 7 shows the mean and standard deviation of study.

Table 7 Summary of descriptive statistics of all variables

		<i>Mean</i>	<i>Std. Deviation</i>
1	RI	2.1592	1.30232
2	PEOU	2.0473	1.22619
3	PU	2.0819	1.22688
4	Satisfaction	2.1903	1.21855
5	Trust	2.0952	1.21890
6	Privacy Concern	2.1084	1.22308
7	Perceived Value	1.5875	.76657
8	Perceived Risk	3.3659	1.17426
9	Internet Literacy	1.7664	.85794

Repurchase intention (RI) mean as a dependent variable of study was 2.1592 which indicate that respondents agree to continue their purchase from same online vendors as they did before. In total, among all sample (318), 246 (77%) state they will continue purchasing from their experienced online retail where they have purchased before but the rest of the respondents (23%) state they will not purchase again from the online retail that they bought within one year.

The first and most important objective of this study was to examine elements and factors that could impact on repurchase intention of university student in Malaysia. This research objective was based on research question one and research gap which was explained in the previous section of this study. The research question was: ‘What factors influence attitudes and behaviour of repurchase intention of multiracial university

students in Malaysia?" Based on objective one (1) descriptive analysis and the level agreement, this study found some new points in online shopping behaviour. Repurchase intention mean of 318 respondents was 2.1592 that indicate almost respondents agree to repurchase in future from same online vendor. PEOU shows the mean of 2.0473 which indicates sample size of this study also agrees about the PEOU of experienced web shopping. Perceived usefulness's mean shows 2.0819 which indicates the online shopper experience was useful that is why they will attempt to repurchase again. Satisfaction's mean also was 2.1903 which indicates the online shoppers agree that they are satisfied with their purchase. Trust mean shows 2.0952 which means target population was trusted based on their experience. Privacy concern mean was 2.1084 which indicates the online shoppers agree that the retailer will care about their information that they provide for shopping. Perceived value mean was 1.5875 which indicates that online shoppers of this study highly agree that perceived value is so important to them and makes them to repurchase online in future. Perceived risk mean was 3.3659 which indicates those online shoppers are not afraid of buying product from experienced shop. Internet literacy mean was 1.7664 which shows that the online shoppers have all information about shopping on the internet.

The second research objective was to examine the impact of pre-purchase user perceptions of attributes, pre-purchase user attributes and post-purchase user attributes on repurchase intention (RI) of multiracial university students in Malaysia which is based on research question two (2) of study. The research question two was 'what are the impacts of pre-purchase user perceptions of attributes; pre-purchase user attributes and post-purchase user attributes on repurchase intention of multiracial university students in Malaysia?' Based on research gap and research objective two (2) the post-purchase online shopping continuously begs attention. Among pre-purchase user perceptions of attributes and pre-purchase user attributes variables some of elements were not main predictor for future behavioural intention or repurchase intention. But PU, PEOU, privacy concern and internet literacy were significant factors in prediction of future purchase. PU explained 18%, PEOU explained 23%, privacy concern explained 33%, satisfaction explained 28% and internet literacy explained -0.077% of repurchase intention (RI). The research proved that there is a significant and positive relationship between mentioned variables except internet literacy.

4.4 Hypothesis testing

The final analysis in this research is hypothesis testing. The independent variables in this study are the factors which may influence students' online repurchasing intention. Through the hypothesis testing, we can identify whether these factors have significant relationship with consumers' intention to repurchase online or not.

4.4.1 Multiple regression analysis (stepwise method) result

Trust alone explains 81.5% of the variation in RI. After trust, the inclusion of PU explains additional 83.8% of the variation. Trust, PU and PEOU explain additional 84.5% of the variation and relatively trust, PU, PEOU and privacy concern 85.0%; trust, PU, PEOU, privacy concern and satisfaction 85.4%; PU, PEOU, privacy concern and satisfaction 85.4% and PU, PEOU, privacy concern, satisfaction, internet literacy 85.6%.

Therefore the model is: Model 2 regression equation: Repurchase Intention (RI) = .105 + .181 (PU) + .230 (PEOU) + .336 (privacy concern) + .289 (satisfaction) + (-.077) internet literacy.

4.4.2 Summary of hypotheses testing

This research seeks to examine the repurchase intention of students who are studying in four major universities in Malaysia. Specifically, this study aims to achieve the following objectives: (a) to understand factors influence attitudes and behaviour of repurchase intention of multiracial university students in Malaysia (proposed by Taylor and Strutton, 2010), (b) to examine the impact of pre-purchase user perceptions of attributes, pre-purchase user attributes and post-purchase user attributes on repurchase intention of multiracial university students in Malaysia.

All these objectives were then converted into complement hypotheses. Then the data were analysed to measure the hypotheses empirically. Table 8 displays the summary of all eight (8) hypotheses tested in the study.

Table 8 Summary of the hypotheses testing

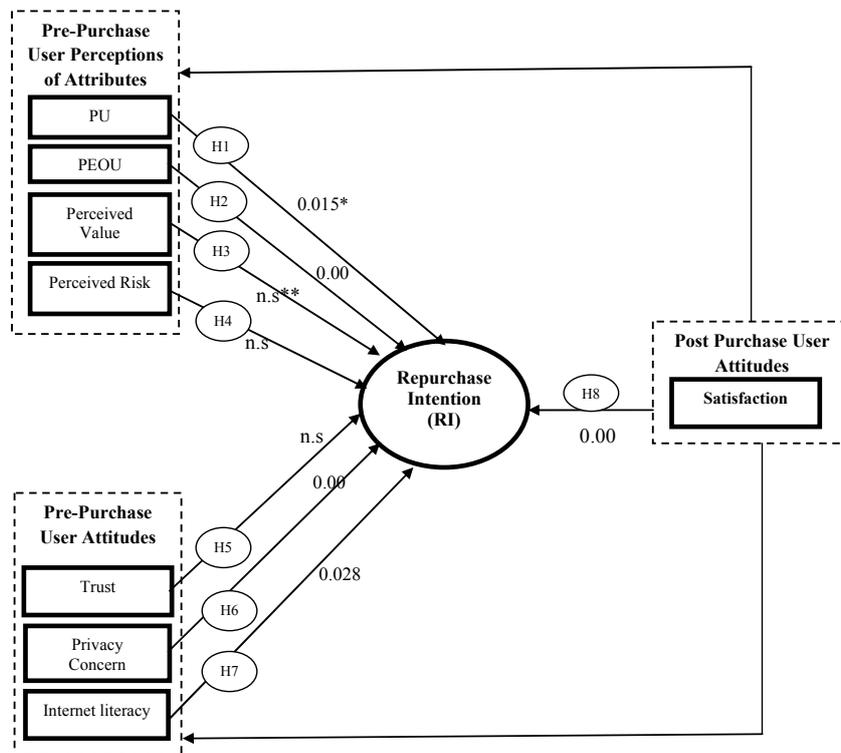
	<i>Hypothesis of Research</i>	<i>Research Objectives</i>	<i>Decision</i>
1	There is a significant relationship between PU and RI	1,2	Reject H0, Accept H1
2	There is a significant relationship between PEOU and RI	1,2	Reject H0, Accept H1
3	There is a significant relationship between Perceived value and RI	1,2	Accept H0 Reject H1
4	There is a significant relationship between perceived risk and RI	1,2	Accept H0 Reject H1
5	There is a significant relationship between Trust and RI	1,2	Accept H0 Reject H1
6	There is a significant relationship between Privacy concern and RI	1,2	Reject H0, Accept H1
7	There is a significant relationship between Internet literacy/affinity and RI	1,2	Reject H0, Accept H1
8	There is a significant relationship between satisfaction and RI	1,2	Reject H0, Accept H1

5 Discussion of results

This research focuses on attitudes and repurchases behavioural intention of Malaysian university students and contributes to the literature in assessing and explanation of this issue. Consumer attitudes are often acknowledged to mediate the link between consumer values and behaviour (Hansen, 2008). In this light, this research begins with explanation and drawing literature about online marketing strategy and its relationship with online consumer behavioural intention. Based on literature review and proposed models in consumer behaviour an integrative model was chosen (Taylor and Strutton, 2010) to understand online shopper repurchase behavioural intention. The main construct of

the model was based on TAM. Therefore, an integrative model of post-adoption online purchasing behaviour of university students based on TAM (Davis, 1989) and (Taylor and Strutton's (2010) model was implemented (see Figure 1). Eight (8) relevant hypotheses were developed based on the research questions and objectives. The questionnaire was created based on the modification of tested and validated research instruments obtained from the literature in relevant studies. The research managed to collect 318 completed online questionnaires from the respondents within 31 days. Further analyses of data were performed in order to test the established research objectives through various statistical methods. Figure 2 summarises the findings of the research. As shown in Figure 2 hypotheses No. 3 (relationship between perceived value and RI), No. 4 (relationship between perceived risk and RI), No. 5 (relationship between trust and RI) were not accepted. In fact perceived value, perceived risk and trust of online shopper could not be a predictor for future behavioural intention but PU, PEOU, privacy concern, satisfaction, and internet literacy were main predictors towards RI.

Figure 2 Research findings



Notes: *Significant level; **Not significant.

This study confirms that the internet marketing capabilities have passed the point where they represent mere nice-to-haves. Instead, such capabilities now represent absolute musts for all kind of businesses in different industry. The reason to state above statement is because among target population (318) of this research, 246 (77%) state they will continue purchasing from their experienced online retail that purchased before but the rest of the respondents (23%) state they will not purchase again on the online retail that

they bought within one year. Therefore, the possibility to gain market share on the net is increasing because of the intention to get loyal customer is relatively high. According to the above findings, the online retailers should understand that there is a big segment on the internet which is the student segment. In addition, targeting solely just Malaysian local students is a mistake. Accordingly, other nationality like Iranian, Arabian and African are also a big segment to be considered in this light. Since in the heart of strategy is positioning, this study focused on how strategy could be used in the right way to target more precisely market segmentation in the light that all positioning is about what is in the mind of customer (e-attitude and e-behaviour). This could be important for the firm's strategist, e-marketers and all decision makers within companies to shape perceptive strategies based on e-attitude and e-behaviour of online shipper to gain strategic positioning. According to this study, internet marketer should concentrate more on PU, PEOU, privacy concern, internet literacy and satisfaction which are most significant elements that could influence on RI and finally consumer loyalty and retention.

5.1 Managerial implications and recommendations

This study provides internet marketing managers with useful and important knowledge to increase shoppers' intention towards online shopping, and suggest that this should feed into website planning and marketing strategies. The findings of this study enable a better understanding of online shoppers relevant to market segmentation variables to enhance internet marketing strategy based internet consumer behavioural intention. The prospect of implementing this research finding is to target more effectively the customers who already bought a product from an online retailer. This is all about customer retention and loyalty not customer capturing. Therefore, strategists can set a savvy strategy to gain more market share for vendors. Table 9 summaries the managerial implication and strategy recommendations based on research finding.

Table 9 Summary of research objectives and findings

No.	Research objectives	Findings
1	Factors influence attitudes and behaviour of repurchase intention (RI) of multiracial university students	PU, PEOU, privacy concern, internet literacy and satisfaction are most significant elements that could influence on RI.
2	Impact of pre-purchase user perceptions of attributes, pre-purchase user attributes and post-purchase user attributes on repurchase intention (RI) of multiracial university students	Post purchase user attributes is more influential factor compared with pre-purchase user perceptions of attributes and pre-purchase user attributes.

5.1.1 Perceived Usefulness (PU)

According to finding, pre-purchase user perceptions of attributes variables are considered as those whose online retailers could change to influence on target customer and gain more market share. Online marketing manager should understand that target customers (students in this study) are considered to be useful and are still the main concern. Target customers will purchase again when he or she understand that the transaction that the online vendor is going to make must be perceived useful in the mind of consumers. Managers should understand that in both pre-purchase process and post-purchase process

PU is an element to be considered. The online manager should try to give more value to customers to get their attention after they placed an order. The marketer could give free information during purchase process of online shopper to make shopper transaction more useful. Opt-in marketing and conveniences of post-sales services could influence consumer behaviour intention in this prospect. The best practice ever done is airasia.com.my. Through opt-in marketing airasia.com.my send the information about online discount and new flight schedule to who subscribed before. This way prevents spam email therefore customer perceived useful. Another strategy recommendation to boost PU is conveniences of post-sales services. Airasia.com offers more value after the customer made their purchase. Therefore, customers show willingness to purchase again from their online website.

5.1.2 Perceived Ease of Use (PEOU)

In context of online shopping the most obvious element in purchasing intention on the first time is ease of use. Online shoppers are looking at the process of transaction especially when they want to make payments. If they understand the process of purchasing then they are more likely to purchase and repurchase from the online retailers. According to research finding, ignoring PEOU in post-adoption era is a big mistake. Since this element is in the hands of online vendors, so the possibility to get result by investment on PEOU could led to higher company performance in the long run. The online marketer should understand that perceived beauty of simplicity of online shopper should be managed in the right way. The layout and forms of interaction by customer must be seen as comfortable. One of the best practices is dell.com.my. Online users are interacting with that website that makes more sense and more simple to customers. Therefore, online marketers should implement the beauty of simplicity as strategy to perform better in online competition.

5.1.3 Privacy concern

One of the biggest issues that faces both online retailers and online customers is privacy concern. In fact, online retailers are looking to get customer attention by the implementation of new technology to prevent any misuse of online customer information that they provide but online customers still worry about this issue. According to findings in previous section, even in post-adoptions of online shopping customers still are thinking of this issue. Experienced customers are concerned about information of payment methods and other information that they provide for the first time. Therefore, flow experience is another issue that should be in focus of online marketer. The flow of user through website must be tangible in the way that makes sense to online customers. The second time when customers are accomplishing a purchase should have confidence about the online vendor. The best practice in this area is cimbclicks.com.my. The flows on cimbclicks.com.my make sufficient confidents to a customer who wants to purchase for the second time. Online retailers' managers should understand that the attitudes of online shoppers are affected by information that they want from customers. For example, online retailers should not get information about customers that is not necessary. The needed information about targeted customer should be taken, therefore customer will feel better.

5.1.4 Internet literacy and affinity

Another important variable among pre-purchase user attitudes which was discussed in previous section was internet literacy and affinity. This is important element to predict future online behavioural intention because when customers do not know about how to protect their PC and use it they are not likely to transact with online businesses. Marketing managers could give efficient and sufficient information by providing online promotion to enable their customer to get free access to information that is required in becoming a knowledgeable online user. Moreover, online customers who got experienced about buying a product from specific online retailers feel that they can carry out an online transaction. Managing authenticity of knowledge online marketer could impact on user attitude and behavioural intention. For example, tm.com.my in Malaysia is using this strategy to retain more customers. In fact, tm.com.my is providing much usable information about its related core business then online customers perceived this knowledge as value.

5.1.5 Satisfaction

Another and only variable which represents post-purchase user attitudes is satisfaction. Satisfaction is important issue in any market. It is critical to implement a strategy to achieve customer satisfaction. According to related study, Khalifa and Liu (2005) state it has been reported that only 15–35% of satisfied customers did return after their first purchase. Satisfaction is happening before customer retention and loyalty. Internet marketer should use the information about experienced customer who has already made a purchase, then according to variables that were found in this study shape the behaviour of targeted customers. Both academics and practitioners recognise the importance of loyal customers because they usually spend more, buy more frequently, have more motivation to search for information, are more resistant to competitors' promotions, and are more likely to spread positive word of mouth (e-word of mouth). This should help companies to design more effective strategies to achieve customer loyalty (Hernandez et al., 2009). The best practice of managing e-word of mouth is maybank2u.com.my. Online marketer at maybank2u.com.my understood that after the need of customer fulfilled the best way to spread positive e-word of mouth is to show how their customers were satisfied. Table 10 summaries the managerial implication and strategy recommendations based on above discussion.

Table 10 Summary of managerial implications and strategy recommendations

<i>No.</i>	<i>Variable</i>	<i>Strategy Recommendations</i>	<i>Example Of Successful Online Retailer</i>
1	PU	Opt-in Marketing and Conveniences of post-sales services	http://www.airasia.com.my/
2	PEOU	Beauty of Simplicity	http://www.dell.com.my/
3	Privacy Concern	Flow Experience	http://www.cimbclicks.com.my/
4	Internet interest, literacy & affinity	Aesthetic Knowledge	http://www.tm.com.my/
5	Satisfaction	E-word of mouth	http://www.maybank2u.com.my/

5.2 *Research contribution*

The research contribution can be explained in research gap contributions and the contributions towards the understanding and development of online shopping experience for customers and new understanding of online shopper for marketer to improve marketing strategy. According to Chen (2008), factors influencing consumer choices in a virtual environment are a challenge facing online businesses. This study was performed to fill the gaps that were found in a previous related study in the context of online shopping behaviour intention. This study fulfilled all research gaps founded in the area of online shopping and left some other limitation for future study that are explained in the next part. Another main contribution of this study is employing an integrated model of online shopping model proposed by Taylor and Strutton (2010). According to their finding through a meta-analysis 'A+' level marketing journals that published between 1996 and 2007 they proposed future research direction and research framework (see Figure 1). This study carries out primary research to examine whether there is a relationship between proven variables that they suggest or not (see Figure 2). According to this study, the significant relationships were not proven as Taylor and Strutton (2010) suggested in their study. In fact, this study just proved the significant relationship between PU, PEOU, privacy concern, internet literacy, satisfaction with repurchase intention (RI). Accordingly, the relationships between perceived value, perceived risk, trust and repurchase intention (RI) in this study are not proven.

5.3 *Limitations and directions for future research*

As with any research, care should be taken when generalising the results (Chang and Chen, 2008) of the study. This study is not without limitations. (a) Future research should employ longitudinal study to carry out the relationship that exists between present and future behaviour which has been widely analysed in the classic research of consumer behaviour (Gefen et al., 2003; Hausman and Siekpe, 2009; Hernandez et al., 2009; Jaiswal et al., 2010; Taylor and Strutton, 2010; Al-Maghrabi et al., 2011). However, websites are dynamic in their developments so, it need long time to analyse (Hausman and Siekpe, 2009). A longitudinal study, however, would provide valuable insight into other factors that enhance satisfaction and retailer loyalty (Wallace et al., 2004; Yoo et al., 2008). Therefore, a longitudinal approach is needed to identify the changing roles of internet features as perceived by consumers alongside internet technology advancements and consumer continued use of the internet services. (b) This study focused on B2C trading and did not consider the other categories of e-commerce, thus limiting the breadth of the conclusions (Chang and Chen, 2009). (c) Research proposed that university students as respondents are not representative of all consumers (Yoo et al., 2008; Lu et al., 2011). In addition, students as subjects may limit the generalisability of findings to other contexts of website usage. Since with globalisation of e-commerce the cultural effects online shopping behaviour there is a need to be better understood this issue (Tan et al., 2007). Therefore, future study is needed to fill this gap by targeting both students and professionals in different cultures.

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Appendix A

Measurement scales

1 *Pre-purchase user perceptions of attributes*

a *Perceived ease of use (PEOU)*

PEOU1 – The website is flexible to interact with.

PEOU2 – My interaction with the web site is clear and understandable.

PEOU3 – The website is easy to use.

b *Perceived Usefulness (PU)*

PU1 Using this website can improve my shopping performance.

PU2 Using this website can increase my shopping productivity.

PU3 I find using this website useful.

c *Perceived value (PV)*

PV1I will be attracted to repurchase a product online, if I experience tangible values.

PV2I will repurchase online provided the web site offers good value for money.

PV3 Perceive value for time used online will attract me to repurchase a product/service online.

PV4 Greater value-added services provided on the web site would attract me to shop online.

PV5I will repurchase online if the online store provides a promise to refund, or an exchange policy.

d *Perceived Risk (RIS)*

RIS1 If I want to buy a product/service online, I fear that the expenditure is worthwhile.

RIS2 I am worried about wasting time buying online.

RIS3 I want to buy a product/service online I fear not obtaining the desired results.

RIS4 I fear that the product/service bought online will not be as I want.

2 *Pre-purchase user attitudes*

a *Trust (TR)*

TR1 Based on my experience with the online store in the past, I know it is honest.

TR2 Based on my experience with the online store in the past, I know it cares about its customers.

TR3 Based on my experience with the online store in the past, I know it keeps its promises to its customers.

TR4 Based on my experience with the online store in the past, I know it is trustworthy.

b *Privacy Concern (PC)*

PC1 The personal information that I provide on this website is secure.

PC2 The monetary information that I provide on this website is well protected.

PC3 This website does not apply my personal information for other purposes.

c *Internet Literacy (IL)*

Rate the extent to which you are able to do the following tasks:

IL1 Identify and delete a program which you consider intrusive (spyware) and which was installed through the Internet without your knowledge and permission.

IL2 Manage virus attacks by using antivirus software.

3 *Post-purchase user attitudes*

a *Satisfaction (SAT)*

SAT1 I am satisfied with my decision to purchase from this website.

SAT2 If I had to purchase again, I would feel differently about buying from this website.

SAT3 My choice to purchase from this website was a wise one.

Repurchase Intention (RI)

RI1 If I could, I would like to continue using the web site to purchase products

RI2 It is likely that I will continue to purchase products from the web site in the future.

RI3 I intend to continue purchasing products from the web site in the future.

Sources: Adapted from Lee et al. (2011), Chang and Chen (2009), Chiu et al. (2009), Dinev and Hart (2005), Hausman and Siekpe (2009), Martín and Camarero (2009) and Yu-Hui and Stuart (2007).