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The Influences of shopping motivation on adolescent online-shopping perceptions

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Adolescents are a major proportion of Internet users. Accordingly, this study attempts to explore the effects of online shopping motivations on shopping perceptions (that is, hedonic and utilitarian perceptions) among adolescents. Based on Westbrook and Black's (1985) typologies, this study proposes alternative types of online shopping motivations to address the online shopping context, by integrating previous studies and characteristics of online shopping. Besides, adolescents usually form their judgments and make decisions based on not only their own evaluation but also others' perceptions and thus, their involvement and subjective norm are treated as moderating effects. The findings indicate that shopping motivations of role enactment, sensory stimulation, and choice optimization are significantly and positively associated with utilitarian shopping perceptions. Social interaction and emotional utility are positively and significantly related to hedonic perception. In addition, our results support the moderating effect of involvement on the relationships between sensory stimulation and hedonic perception, emotional utility and hedonic perception, as well as choice optimization and utilitarian perception. Surprisingly, the moderating effect of subjective norm on an adolescent's shopping motivations and shopping perceptions is not significant.

Key words: Shopping motivation, shopping perception, involvement, subjective norm, online shopping.

INTRODUCTION

Adolescents are a major proportion of Internet users, and a large number of them are virtually addicted to the messages and activity on the Internet (Tsai and Lin, 2003). According to the Pew Internet and American Life Project Surveys (2008), 93% of American adolescents currently use the Internet. Consequently, the Internet is becoming the most popular medium among adolescents (Camerona et al., 2005; Grant, 2005). Moreover, several research studies have shown that younger people spent more time on the Internet than other age groups (Lueg et al., 2006), and engaged in various online activities, such as emailing, downloading content (Teo, 2001), and shopping online

(Joines et al., 2003), to a greater extent than the older generation. Nonetheless, research that, specifically, focuses on adolescent behavior online is limited (Grant, 2005; Hartman et al., 2006). A better understanding of adolescent behavior online would certainly help marketers to profile the characteristics of adolescent segments of the market, and to develop relevant strategies. Due to the growing importance of online shopping (Shim et al., 2001) and the fact that adolescents are stick to Internet, this study focuses on adolescent behavior related to online shopping. Since motivation is ultimately the driving force of human behaviors (Iguisi, 2009), the primary objective of this study lies in identifying the effects of shopping motivations on the adolescent's online shopping perceptions. Delafrooz et al. (2009) argues that through motivation and perception, attitudes are formed and directly influence online-shopping decision making.

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Accordingly, it is necessary to explore the relationship between motivation and online shopping perceptions. Moore et al. (2005) and Morschett et al. (2005) state that perceptions matter in the online context. Online shopping perception refers to the process whereby a shopper interprets the online shopping experience (Morschett et al., 2005). A shopper's positive perception not only creates a positive attitude (Childers et al., 2001; Morschett et al., 2005) but also influences shopping behavior (Jones et al., 2006; Moore et al., 2005; Morschett et al., 2005; Wick et al., 2005). Accordingly, online shopping perception deserves attentions in studying adolescents' online shopping behaviors.

In order to understand an adolescent's perception of online shopping, this study places our emphasis on its antecedents. Motivation theory, which suggests that both cognitive and affective motivations are primarily geared to individual gratification, offers the theoretical basis for why people shop (Rohm and Swaminathan, 2004). Shopping motivation is described as the persistent needs or desire to expend one's effort on shopping (Jiang, 2002; Kim et al., 2005; Noble et al., 2006; Westbrook and Black, 1985) and the trigger that compels the shopper to close the gap between the actual and the desired state of being (Jiang, 2002; Morschett et al., 2005; Rodgers and Sheldon, 2002). Motivation is widely deemed a critical antecedent to a shopper's behavior (Lee, 2006; Morschett et al., 2005; Rajamma et al., 2007; Roy and Tai, 2003; Tauber, 1972; Westbrook and Black, 1985), including decisions behind preference or choice (e.g., Dawson et al., 1990), the amount of money spent on shopping (e.g., Wolfinbarger and Gilly, 2001), and perceptions of and attitudes toward the shopping environment or transaction (e.g., Morschett et al., 2005). Due to the vital role of shopping motivation, some studies examined and proved the relationship between motivation and usage/acceptance of online shopping (Cameron and Galloway, 2005; Cheong and Park, 2005; Foucault and Scheufele, 2002; Parsons, 2002; Rohm and Swaminathan, 2004; Shang et al., 2005). However, such research used mainly adults in their samples to investigate the influence of motivation, and rarely focused on shopping perceptions or attitudes. In addition, these studies do not provide enough information on what underlying motivations of shoppers for visiting websites and the gratifications derived from online shopping (Joines et al., 2003; Parsons, 2002). Yet, an understanding of shopper's perceptions will offer a deeper insight into shopper's motivations for continued consumption (Joines et al., 2003). Various research recognised the need to understand shopping motivation to help marketers make marketing decisions and design their websites (Wolfinbarger and Gilly, 2001), enhance shopper value (Smith and Whitlark, 2001), segment markets (Stafford and Stafford, 2001), and predict shopper's attitudes and behaviors (Rodgers and Sheldon, 2002). Thus, this study concentrates on the effects of online shopping motivations on shopping perceptions,

among adolescents, to address the gap in the existing literature.

In addition, the moderating effects of involvement and subjective norms are also considered. The Elaboration Likelihood Model (ELM) suggests that attitude formation occurs through either the central route or peripheral route (Petty and Cacioppo, 1984). While attitude formed by central route results from individual diligent consideration, attitude formed by peripheral route relies on mental shortcut or simple cue. The former is associated with high degree of involvement (Lee, 2009; Petty and Cacioppo, 1984). Besides, information is comprised of suggestions from others (Bailey, 2004) based on social information processing theory. Accordingly, subjective norm can be a source of simple cue. Based on ELM, it is necessary to consider involvement and subjective norm in relation to exploration of the formation of perception. Both involvement and subjective norms are relevant to the adolescent's decision-making process. Involvement refers to the degree to which an individual is willing to attend to an object based on his/her own inherent needs, values, and interest (Zaichkowsky, 1985), whereas subjective norms refers to how behavior is influenced by the perceived opinions of others (Fishbein and Ajzen, 1975). As young consumers shop online, they may collect information by themselves and refer to others' opinions. When comes to involvement, Morschett et al. (2005) argue that the perceptual process, wherein a shopper can transform stimuli into perception and attitude, is influenced by involvement levels and shopping motivations. Accordingly, the effect of involvement cannot be ignored, considering the relationship between motivations and shopping perceptions. On the other hand, subjective norm is closely related to adolescent behavior (Trafimow et al., 2002). Some research indicates that consumers regard the Internet as a supportive environment for shopping if their friends or relatives shop online (Foucault and Scheufele, 2002). Parsons (2002) states that the reference group is a driver of online shopping. Makgosa and Mohube (2007) also focus on peer influence among young adults' purchase decisions. Accordingly, subjective norms should be concerned with adolescent perceptions in the context of online shopping. Therefore, involvement and subjective norms may serve as moderators that reinforce the influence of adolescent motivations on their online shopping perceptions. The results of this study may provide a substantial contribution to the existing literature on how to promote online shopping among adolescents through the manipulation of involvement and subjective norms.

LITERATURE REVIEW

Shopping motivation

There are diverse shopping motivations identified by

previous studies (Liu et al., 2008). Although, these classifications of shopping motivations (e.g., Arnold and Reynolds, 2003; Bloch et al., 1994; Tauber, 1972; Westbrook and Black, 1985; Wolfinbarger and Gilly, 2001) differ in terms of their composition, some conceptual overlaps exist. Among these research, Westbrook and Black's (1985) concepts are comprehensive and prevalent. Westbrook and Black (1985) extends Tauber's (1972) ideas and propose seven types of shopping motivation, including role enactment, stimulation, affiliation, anticipated utility, negotiation, choice optimization, and power and authority. However, Westbrook and Black's (1985) classification does not exactly apply to online shopping. Hence, this study proposes alternative types of online shopping motivations to address the online shopping context, by integrating Westbrook and Black's (1985) typologies and characteristics of online shopping. The conclusion is summarized in Table 1. Note that power and authority, which describes how well a consumer is treated by the salesperson (Westbrook and Black, 1985), were excluded from this study because this motivation is not relevant in the context of online shopping. The first type of shopping motivation is role enactment, which describes the motivation to identify with and fulfil prescribed roles regarding online shopping (Arnold and Reynolds, 2003; Westbrook and Black, 1985). The second motivation for online shopping is sensory stimulation, which captures the concepts of diversion, new product learning (Tauber, 1972), stimulation (Westbrook and Black, 1985), escape, exploration (Bloch et al., 1994), adventure and idea shopping (Arnold and Reynolds, 2003), as well as variety seeking (Rohm and Swaminathan, 2004). Westbrook and Black (1985) define stimulation motivation as seeking novelty during shopping. Novelty seeking can help shoppers escape from reality (Bloch et al., 1994; Hur et al., 2007), which is akin to an adventure (Arnold and Reynolds, 2003). In addition to seeking novelty, stimulation motivation describes the desire to explore new products (Arnold and Reynolds, 2003; Bloch et al., 1994) in that new trends can offer novelty and stimulation to shoppers. Accordingly, sensory stimulation here is the combination of seeking novelty and the exploration of new trends.

Social interaction is the third motivation for online shopping. The social interaction motivation focuses on the pleasure of interacting with others (Arnold and Reynolds, 2003; Bloch et al., 1994). Online shoppers develop social relationships through the Internet as it offers various communication tools (Parsons, 2002; Stafford and Stafford, 2001). Shoppers can share their experience and knowledge to bond with others (Hur et al., 2007). The fourth motivation is emotional utility focuses on the enjoyment derived from shopping process (Rajamma et al., 2007). In Westbrook and Black's (1985) language, this motivation is anticipated utility which is defined as the expectation of certain benefits or hedonic states. This hedonic benefit is akin to Tauber's (1972) self-gratification.

Given this motivation, shoppers will be motivated to engage in shopping activities due to the shopping process itself rather than consumption (Parsons, 2002), and they often regard shopping as a leisure-based activity (Rohm and Swaminathan, 2004). This hedonic benefit is also parallel to the concept of flow (Bloch et al., 1994), which refers to a pleasurable absorption in shopping (Kim et al., 2005). Sometimes, people with negative emotions will resort to shopping (Arnold and Reynolds, 2003).

Apart from the hedonic benefit, people may go shopping for a utilitarian reason, such as economic utility and choice optimization. Westbrook and Black (1985) defined negotiation as "the motivation to seek economic advantage through bargaining interactions with sellers." Referring to online shopping, negotiation here is renamed as economic utility, which refers to the desire for sales, discounts, low prices, and other economic advantage (Arnold and Reynolds, 2003; Hur et al., 2007; Morschett et al., 2005). The final motivation, choice optimization, is described as the desire to search for the right product (Westbrook and Black, 1985). The mechanism behind the process of "searching for the right product" can be divided into three aspects. First, variety of merchandise (Morschett et al., 2005; Rajamma et al., 2007) and ability to search for information (Bosnjak et al., 2006; Rohm and Swaminathan, 2004) can help shoppers choose the right product. The Internet offers a shopping environment where the shopper can choose from a relatively wide variety of products (Rajamma et al., 2007), and it provides the infrastructure whereby shoppers can easily search, access, and compare related information in great detail (Rohm and Swaminathan, 2004). In this regard, the cognitive cost that results from evaluating alternatives and making decisions can be reduced (Bosnjak et al., 2006). The second aspect is shopping efficiency, which involves saving time and effort (Dittmar et al., 2004; Morschett et al., 2005) and offers convenience (Rajamma et al., 2007; Rohm and Swaminathan, 2004). These advantages encourage online shopping (Rajamma et al., 2007). Besides, Rajamma et al.'s (2007) assurance and responsiveness dimensions offer another aspect. Although, these two dimensions are not directly associated with optimizing choices, they can reduce a shopper's perceived risk and help with decision-making. Consequently, the motivation behind choice optimization here denotes the desire to make an optimal purchasing decision in an efficient manner.

Online shopping perceptions

Online shopping perception refers to the process whereby a shopper interprets the online shopping experience (Morschett et al., 2005). Previous studies identified that shopping experiences produce both hedonic and utilitarian outcomes (Babin et al., 1994; Bridges and Florsheim, 2008; Roy and Tai, 2003). Correspondingly,

Table 1. Structures of shopping motivations.

	Role enactment	Sensory stimulation	Social interaction	Emotional utility	Economic utility	Choice optimization	Others not considered
Tauber (1972)	Role enactment	Sensory stimulation Diversion New product learning	Social experience Communication with others Peer group attraction	Self-gratification Mental activity	Pleasure of bargaining		Physical activity Status and authority
Westbrook and Black (1985)	Role enactment	Stimulation	Affiliation	Anticipated utility	Negotiation	Choice optimization	Power and authority
Bloch et al. (1994)		Escape Exploration Knowledge	Social affiliation	Enthusiastic Flow			
*Wolfenbarger and Gilly (2001)				Experiential motivation		Goal directed motivation	
Arnold and Reynolds (2003)	Role shopping	Adventure Idea	Social	Gratification	Value		
*Dittmar et al. (2004)	Identify		Social experiential	Emotional	Economic	Efficient	
*Rohm and Swaminathan (2004)		Variety seeking	Social interaction	Retail shopping experience		Convenience Information seeking	Immediate possession
Morschett et al. (2005)				Price orientation	Scope orientation Quality orientation Time orientation		
Noble et al. (2006)		Unique seeking	Social interaction	Browsing	Information attainment Price comparison Assortment seeking Convenience seeking		
*Hur et al. (2007)		Diversion	Socialization		Economic	Convenience Information	
*Rajamma et al. (2007)				Shopping enjoyment		Merchandise Assurance Hassle reduction Pragmatic Responsiveness	

* denote the research which involved online shopping.

Hartman et al. (2006) propose hedonic and utilitarian online perceptions in terms of the adolescent experiences in online context. Accordingly, this study defines online shopping perception as the conjunction of hedonic and utilitarian perceptions resulting from experiences of online shopping. Hedonic online-shopping perception represents multisensory feeling, excitement, fun, fantasy, and enjoyment generated from shopping online, whereas utilitarian online-shopping perception represents the practical, purposeful, and task-related aspects of online shopping (Arnold and Reynolds, 2003; Babin et al., 1994; Bridges and Florsheim, 2008; Hartman et al., 2006).

The Influences of shopping motivations

This study attempts to explore specific relationships between the six motivations mentioned (that is, role enactment, sensory stimulation, social interaction, emotional utility, economic utility, and choice optimization) and online shopping perceptions among adolescents. The effects of motivations can be explained by control theory and uses and gratification theory. According to control theory, individual behavior is determined by motivation rather than merely responses to an external stimulus (Weiler, 2005). On the other hand, uses and gratifications theory proposed that the continuing use of a particular medium is induced by underlying motivations (Joines et al., 2003). Thus, the effects of motivations on individual behaviors appear to be clear. Recently, some studies commenced examining the relationship between motivations and perceptions. Roy and Tai (2003) state that a shopper's subjective perception of shopping trip relies on what they pursued (that is motivation). Morschett et al. (2005) further propose that people with different shopping motivations form different perceptions toward the same store attributes. These studies revealed that shopping motivations would affect shoppers' perceptions, but they did not explore the specific effects of different motivations on different types of perceptions. Thus, this study has conducted research on the relationships between specific motivations and perceptions. Shoppers with motivations related to role enactment, economic utility, or choice optimization often view shopping as a task (Arnold and Reynolds, 2003). When shopping is a deliberate and task-oriented activity, the level of utilitarian perception from shopping trip will be higher (Babin et al., 1994). Besides, Babin et al. (1994) and Roy and Tai (2003) argued that the extent to which certain shopping motivation was met determined the utilitarian perception. Online shopping offers diverse merchandise, along with an economic advantage that helps shoppers shop in a more efficient manner. Adolescents are particularly apt at using Internet because they spent more time on the Internet than other age groups (Lueg et al., 2006), and this increases their opportunities for shopping online (Swinyard and Smith, 2003). Accordingly, their motivation of role enactment, economic utility, or choice optimization

is likely to be met and, therefore, their utilitarian perception takes over in the context of online shopping.

Hypothesis 1a (H1a): An adolescent's shopping motivations, including role enactment, economic utility and choice optimization, are positively associated with utilitarian perceptions in the context of online shopping.

Westbrook and Black (1985) posited that strong shopping motivations tended to result in positive emotional states. The rationale behind this argument is that expected positive emotions further create hedonic shopping perceptions (Dawson et al., 1990; Roy and Tai, 2003). This argument implicates that motivations may lead to hedonic benefits. Although, online shopping is a goal-directed activity and is influenced by motivations (Shang et al., 2005), different motivations lead to different goal. In other words, not all types of motivations can lead to positive emotional states. Young shoppers motivated by sensory stimulation, social interaction, and emotional utility may deem shopping as enjoyment or a leisure activity rather than a task that needs to be completed. Adolescents especially like to use Internet as a tool for entertainment and communication with others (Blais et al., 2008). Hence, they have come to expect positive emotions from the shopping trip. Moreover, online shopping provides shoppers with the experience of an escape (Parsons, 2002). Hence, young shoppers can easily create imagined experiences of adventure through online shopping when they want to escape the daily grind. Therefore, motivations and expectations of young shoppers can be easily met through online shopping, thus providing them with a hedonic benefit.

Hypothesis 1b (H1b): An adolescent's shopping motivations, including sensory stimulation, social interaction and emotional utility, are positively associated with hedonic perceptions in the context of online shopping.

The moderating effects of Involvement and subjective norms

Since adolescents usually form their judgments and make decisions based on not only their own evaluation but also others' perceptions, this study focuses on two moderating variables related to decision making, including involvement and subjective norm. In terms of involvement, it is based on the complexity evaluation (Pires et al., 2004) and can be attributed to the prescriptive approach of decision-making that refers to a search for more information (Beatty and Smith, 1987). In reference to purchasing decision focus, involvement is defined as the "perceived relevance of the object based on inherent needs, values, and interest" of the individual (Zaichkowsky, 1985). In others words, individuals are more likely to involve in shopping to make a careful purchasing decision when they think this decision is relevant and important to their needs and values. Thus, involvement can result in shoppers making better purchasing decisions, thus

increasing their utilitarian perceptions (Demangeot and Broderick, 2007).

In addition, involvement also reflects the hedonic responses that results from the decision (Chaudhuri, 2000; Pires et al., 2004). Demangeot and Broderick (2007) find that involvement produces not only utilitarian perception but also hedonic perception. Lueg et al. (2006) mention that involvement appears as important in adolescent's online shopping trip when they talked about the fun and excitement experienced. Hence, the hedonic benefits can be evoked by involving in shopping process. Moreover, greater involvement is positively associated with greater focused attention in online experience (Novak et al., 2000). Since the Internet offers an interactive interfaces that facilitates a shopper's involvement with website (Richard, 2005), it can further enhance shopping perceptions.

Hypothesis 2 (H2): An adolescent's shopping motivations are more positively associated with online shopping perceptions when an adolescent has higher degree of involvement.

Lueg et al. (2006) indicate that interactions between adolescents and various agents (that is parents, peers, friends, etc.) are needed to become functioning consumers based on consumer socialization perspective. This argument reflects the important role of subjective norms in adolescent's behavior. Subjective norm is defined as the perceived opinion of other people in relation to the behavior in question (Fishbein and Ajzen, 1975). When people form a subjective norm, their perception of social pressure will affect whether they perform a certain behavior (Bosnjak et al., 2006). Subjective norms are also found to be related to purchase behavior when it comes to online shopping (Foucault and Scheufele, 2002). Due to the uncertainty and risk inherent in online shopping, shoppers may resort to communicate with relevant referent groups or individuals to obtain normative guidance to help them accomplish shopping duties (Hansen et al., 2004). Opinions from reference groups can confirm their decision (Huang et al., 2004). In this case, shoppers tend to conceive that their decisions are necessary and correct, and this results in higher utilitarian perceptions. Moreover, when their family, relatives, or friends support their shopping activity, they will perceive favorable subjective norms. As a result, they will feel relieved and enjoy shopping online, thus they can produce more hedonic perceptions.

Hypothesis 3 (H3): An adolescent's shopping motivations are more positively associated with online shopping perceptions when an adolescent is more likely to be influenced by positive subjective norms.

METHODOLOGY

Sample and data collection

To clarify, the hypotheses discussed above are summarized in Figure

1, where the solid lines represent direct effects and dotted lines represent moderating effects. This study attempts to examine the specific effects of adolescent online-shopping motivations on both utilitarian and hedonic perceptions toward online shopping. Besides, the moderating effects of involvement and subjective norms are taken into consideration. In this regard, respondents have to meet two prerequisites. First, based on adolescent focus, the age of respondents should range from 11 to 19 years old (Arnett, 2000). Secondly, respondents should have experiences of online shopping. A respondent who had not experienced shopping online will be unable to form a concrete perception toward online shopping.

Data were collected via web-based questionnaire from early May to July, 2009, in Taiwan. According to Taiwan Network Information Center (TWNIC) (2009), approximately 98% of adolescents go online. In addition, Market Intelligence and Consulting Institute (MIC) report indicates that the percentage of adolescent Internet users in proportion to the total Internet users in Taiwan increased from 13% in 2006 to 14% in 2008, whereas the percentage of users across other ages has decreased. The percentage is similar to that of American market based on Rashtchy et al.'s (2007) report. In addition, teenagers are found to be quite similar across regions (Blackwell et al., 2006). Hence, it is reasonable to conduct this survey in Taiwan. In order to increase the response rate, prior to the survey we informed all our respondents about a random lucky draw. This related information was posted on blogs, bulletin board system, and websites that adolescents frequently visit. Two questions, including year of birth and recent online shopping experience, were asked at the beginning of the survey to qualify our respondents. Finally, a total of 293 valid questionnaires were collected. Among others, 48.1% of respondents are male, whereas 51.9% of respondents are female. Their average allowance per month approximates NT 5,120. These adolescents in our sample spent NT 4,480 per month in average. 36.2% of these adolescents spent approximately four hours on Internet a week; 41.3% spent four to six hours a week; 15.4% spent six to eight hours a week; 7.2% spent beyond eight hours a week.

Measurement

The questionnaire was developed in accordance with previous literature in order to measure the four research constructs. First of all, online shopping motivation is an activated state or the fundamental reason for online shopping (Hur et al., 2007; Rohm and Swaminathan, 2004), which is indicated by the level of satisfaction received by consumers from shopping behaviour (Westbrook and Black, 1985). Based on our definitions of six types of motivations, this study picked appropriate items from relevant studies and revised them accordingly. Among others, four items were selected and revised from Arnold and Reynolds (2003), Sheehan (2002), and Westbrook and Black (1985) for role enactment motivation. Five items were selected and revised from Arnold and Reynolds (2003) and Westbrook and Black (1985) for sensory stimulation motivation. Furthermore, five items were selected and revised from Hur et al. (2007), Ko et al. (2005), Roy and Tai (2003), and To et al. (2007) for social interaction motivation. Four items were selected and revised from Arnold and Reynolds (2003) and Dittmar et al. (2004) for emotional utility motivation. Three items were selected and revised from Arnold and Reynolds (2003) and Westbrook and Black (1985) for economic utility motivation. Six items were selected and revised from Dittmar et al. (2004), To et al. (2007), and Westbrook and Black (1985) as to choice optimization motivation. According Morschett et al. (2005), online shopping perception refers to the interpretation consumers draw upon their online shopping experience. There were nine items to measure online-shopping perceptions revised from Hartment et al. (2006), comprising five items for hedonic perception and four items for utilitarian perception. Furthermore, involvement

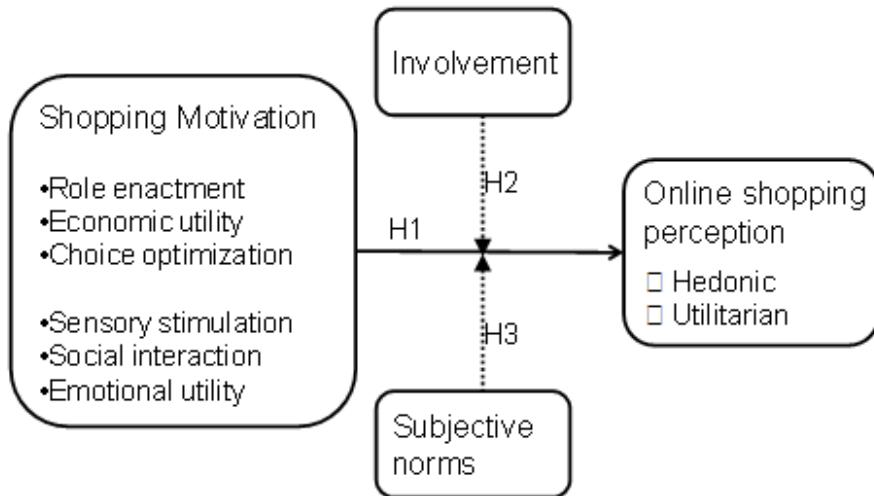


Figure 1. The conceptual model.

reflects the relative importance of shopping activity and hedonic responses resulting from shopping (Chaudhuri, 2000; Pires et al., 2004). Based on this definition, Mittal's (1989) measurement was adopted and revised to measure adolescent involvement with respect to online shopping. Finally, subjective norm is defined as the perceived opinion of significant reference groups or individuals in relation to the behavior in question (Fishbein and Ajzen, 1975). Based on Lwin and Williams (2003), there were two items to assess each subjective norm related to four types of significant reference groups or individuals, including best friend, friend, family, and other people. The product of these two items, indexed normative beliefs and the likelihood to comply with these normative beliefs, denoted the level of subjective norm related to each reference group. All items, except for involvement, were assessed on a seven-point Likert scale (1=strongly disagree; 7=strongly agree). Involvement was measured on an 11-point Semantic Differential scale. The detailed items are shown in Appendix.

A two-stage analytic process, containing exploratory (EFA) and confirmatory factor analysis (CFA), was applied to confirm the dimensionality, validity, and reliability of constructs. The results are shown in Table 2. According to Hair et al. (2010), the factor loading of each item and Cronbach's alpha for all constructs are greater than critical levels and, thus, the dimensionality and reliability of all constructs are acceptable as to EFA. With regard to CFA, the chi-square was 1357.196 with 537 degrees of freedom, which indicates a quotient of 2.53. CFI reached 0.9 and RMSEA equaled 0.072. Overall, these fit indices reveal that the measurement model is reasonably consistent with the data.

Furthermore, Table 2 displays that standardized loading estimates for each item exceed 0.5 in the part of CFA. The variance explained by each latent factor and its reliability values were higher than 0.5 and 0.7. Accordingly, the results indicate that the convergent validity and reliability for each factor are adequate. In addition, each of the variance-extracted estimates from Table 2 is greater than the corresponding interfactor squared correlation estimates (that is, values above the diagonal) in Table 3. Thus, the results suggest no problem with discriminant validity.

RESULTS

Structural Equation Model (SEM) is performed to examine

hypothesized relationships among variables. All the results are condensed in Table 4. H1a proposes that shopping motivations of role enactment, economic utility, and choice optimization are positively related to utilitarian shopping perceptions, whereas H1b proposes that shopping motivations of sensory stimulation, social interaction, and emotional utility are positively related to hedonic shopping perceptions. The results of the full model in Table 4 show that role enactment ($\beta=0.33$, $p < 0.001$), sensory stimulation ($\beta=0.18$, $p < 0.05$), and choice optimization ($\beta=0.31$, $p < 0.001$) are significantly and positively associated with utilitarian shopping perceptions. The relationship between sensory stimulation motivation and utilitarian perceptions emerges as a surprise. The rationale behind this result may lie in the importance of fashion or new trends among adolescents. Fashion or new trends are important for adolescents as referring to shopping and sense of psychosocial wellbeing (Kostanski and Sallechia, 2003). Accordingly, fashion and new trends are regarded as practical information for adolescents. If adolescents feel motivated to shop online for seeking novelty and learning new trends, they may easily produce utilitarian perceptions in that their needs can be met by Internet.

However, economic utility does not have a significant effect on utilitarian perceptions ($\beta=0.11$, $p > 0.05$) which is not consistent with expects. This result implicates that it is not practical to find a better price in online stores for adolescents. Therefore, H1a is partially supported. Furthermore, shopping motivations of social interaction ($\beta=0.22$, $p < 0.01$) and emotional utility ($\beta=0.50$, $p < 0.001$) are positively and significantly related to hedonic perception, which are exactly in line with our hypothesis. Nevertheless, the motivation of sensory stimulation is surprisingly negatively correlated to hedonic perception ($\beta=-0.20$, $p < 0.05$). A probable rationale is that adolescents

Table 2. Results of two-stage factor analysis.

Second-order		EFA			CFA		
Construct	Factor	Accumulated explained variance (%)	Cronbach's α	Standardized estimate	Variance extracted (%)	Construct reliability	
Shopping motivation	Role enactment	10.36	0.83	0.71	***	41.00	0.81
	Sensory stimulation	20.32	0.83	0.72	***		
	Social interaction	35.59	0.87	0.58	***		
	Emotional utility	47.16	0.89	0.61	***		
	Economic utility	55.58	0.89	0.62	***		
	Choice optimization	80.50	0.97	0.58			
Online shopping perception	Hedonic perception	37.09	0.90	0.62	***	64.75	0.78
	Utilitarian perception	81.78	0.92	0.95			
Involvement	--	72.82	0.81	-			
Subjective norm	--	78.05	0.85	-			
First-order		EFA			CFA		
Construct	Number of Variables	Factor loading	Item-to-total correlation	Standardized estimate	Variance extracted (%)	Construct reliability	
Role enactment	3	0.79-0.80	0.61-0.73	0.67-0.87 ***	62.50	0.83	
Sensory stimulation	3	0.75-0.83	0.58-0.75	0.60-0.89 ***	62.73	0.83	
Social interaction	5	0.71-0.83	0.68-0.74	0.69-0.83 ***	57.83	0.87	
Emotional utility	3	0.82-0.89	0.77-0.82	0.82-0.85 ***	72.36	0.89	
Economic utility	2	0.84-0.84	0.80-0.80	0.88-0.91 ***	79.59	0.89	
Choice optimization	6	0.87-0.92	0.87-0.92	0.89-0.93 ***	83.05	0.97	
Involvement	3	0.82-0.91	0.60-0.76	0.67-0.95 ***	61.26	0.82	
Subjective norm	3	0.86-0.91	0.69-0.71	0.80-0.89 ***	69.13	0.87	
Hedonic perception	3	0.85-0.90	0.78-0.84	0.84-0.91 ***	76.53	0.91	
Utilitarian perception	4	0.83-0.88	0.75-0.84	0.78-0.90 ***	72.97	0.92	

Items which did not reach criteria were deleted from Table 2, *** p < 0.001.

Table 3. Correlation matrix.

	1	2	3	4
1. Motivation	1.00	0.43	0.13	0.03
2. Online shopping perception	0.65	1.00	0.25	0.00
3. Involvement	0.37	0.50	1.00	0.02
4. Subjective norm	0.17	-0.07	-0.14	1.00

motivated by sensory stimulation consider online shopping to be a learning process where they can learn about new trends and fashions. In this regard, hedonic perception decreases as motivation to learn increases. Thus, H1b is partially supported.

In terms of the moderating effects of involvement and subjective norm, two competing models of SEM are examined respectively. Hair et al. (2010) suggest multigroup SEM is an appropriate approach to examine the effect of metric moderator. In doing so, respondents were classified into high and low groups based on their

scores of involvement and subjective norm by cluster analysis technique. Then the coefficients of respective SEMs for different groups are compared. The results are shown in Table 4. The middle column in Table 4 shows that emotional utility has a more positive correlation with hedonic perception for adolescents with higher involvement ($\beta=0.37$ and 0.88 , $t=2.75$), whereas choice optimization becomes more significantly associated with utilitarian perception for adolescents with higher involvement ($\beta=0.13$ and 0.73 , $t=2.25$). On the contrary, motivation of role enactment has more positive effect on either hedonic or utilitarian perceptions for adolescents with low involvement ($\beta=0.37$ and -0.37 , $t=-4.10$; $\beta=0.50$ and -0.10 , $t=-3.58$). As a result, involvement does not exactly play the role of moderating variable, which means that H2 are not supported. In terms of the moderating effect of subjective norm, the results conclude that the relationship between economic utility and hedonic perception ($\beta=-0.24$ and 0.26 , $t=3.17$) and the relationship between emotional utility and utilitarian ($\beta=-0.10$ and 0.24 , $t=2.27$) are significantly different between adolescents with low subjective norm and those with high subjective

Table 4. Results of SEM.

Path		Full model		Competing models for involvement				Competing models for subjective norm					
Exogenous construct	Endogenous construct			Low involvement n=179		High involvement n=114		t-value	Low subjective norm n=189		High subjective norm n=104		t-value
		Standardized estimate		Standardized estimate		Standardized estimate			Standardized estimate		Standardized estimate		
Role enactment	→ Hedonic	0.12		0.37	***	-0.37	*	-4.10	0.14		0.10		-0.14
	→ Utilitarian	0.33	***	0.50	***	-0.10		-3.58	0.27	*	0.29	**	0.32
Sensory stimulation	→ Hedonic	-0.20	*	-0.48	***	0.15		2.85	-0.11		-0.24	*	-1.13
	→ Utilitarian	0.18	*	-0.07		0.22		1.25	0.25	*	0.17		-0.14
Social interaction	→ Hedonic	0.22	**	0.13		0.27		0.90	0.07		0.21		0.88
	→ Utilitarian	-0.11		-0.03		0.13		0.70	-0.19		-0.01		1.22
Emotional utility	→ Hedonic	0.50	***	0.37	***	0.88	***	2.75	0.67	***	0.38	**	-0.24
	→ Utilitarian	-0.06		0.13		0.16		-0.06	-0.10		0.24	*	2.27
Economic utility	→ Hedonic	0.01		0.10		-0.56	*	-2.78	-0.24	*	0.26	*	3.17
	→ Utilitarian	0.11		-0.02		-0.41		-1.69	0.26	*	-0.01		-1.71
Choice optimization	→ Hedonic	0.06		0.03		0.38		1.64	0.12		-0.14		-1.45
	→ Utilitarian	0.31	***	0.13		0.73	**	2.25	0.22		-0.03		-1.36
Fit Index													
Chi-square (df)		941.87 (346)		1769.80 (700)				2062.84 (871)					
CFI		0.92		0.86				0.86					
RMSEA		0.08		0.07				0.07					

The results of the measurement model are omitted from Table 4, * p < 0.05; ** p < 0.01; *** p < 0.001.

norm. The result implies that seeking better prices online will lead to hedonic benefits, provided there is support from relatives and friends. Additionally, the pursuit of emotional utility will result in utilitarian benefits given friends' identification. Therefore, H3 do not hold.

DISCUSSION

This study attempts to examine the influences of

shopping motivations on shopping perceptions online among adolescents. The results show that shopping motivations are significantly associated with shopping perceptions, except for economic utility motivation. Specifically, motivations of role enactment, sensory stimulation, and choice optimization are positively correlated with utilitarian perception, whereas motivations of social interaction and emotional utility are positively correlated with hedonic perception. These findings imply that adolescent's shopping

motivations can indeed be satisfied by online shopping. Thus, stronger motivations will lead to more positive shopping perceptions.

Our findings are parallel to Babin et al. (1994) and Roy and Tai's (2003) argument, which stated that a shopper's utilitarian perception is determined by the extent to which a specific shopping motivation is fulfilled. In terms of role enactment motivation, shoppers motivated by role enactment live up to their prescribed roles (Westbrook and Black, 1985) and take on the

responsibilities associate with that role (Arnold and Reynolds, 2003). The prescribed role and its responsibility will make a shopper deliberate in the shopping trip. For example, an adolescent shopper who tries to find a gift for a friend will browse all the possible alternatives during that shopping trip. Internet environment lacks salesperson's urging allow shopper for considering. Therefore, a utilitarian perception tends to be predominant here. When it comes to choice optimization motivation, a shopper tries to make a purchasing decision in an efficient manner (Dittmar et al., 2004; Morschett et al., 2005). Literature identified that convenience, information search, time saving, and ease of use were the major causes of online shopping (Foucault and Scheufe, 2002; Joines et al., 2003; Rohm and Swaminathan, 2004; Wolfenbarger and Gilly, 2001). The Internet appears to provide an efficient shopping mode. Bagdoniene and Zemblyte (2009) conclude that convenience is the most important factor motivating online shopping for Lithuanian consumers, like Western countries consumers. Consistent with Bagdoniene and Zemblyte's (2009) conclusion, our findings indicate that adolescent online shoppers will be propelled by choice optimization motivation which contains convenience factor, especially adolescent shoppers with high degree of involvement. As a result, based on Babin et al. (1994), role enactment and choice optimization underlies motivation for online shopping lead to deliberate and efficient manner for shopping, and in turn, aid utilitarian perception creation.

Sensory stimulation reflects the desire to seek novelty and learn new trends (Arnold and Reynolds, 2003; Bloch et al., 1994; Westbrook and Black, 1985). The online shopping environment is full of various sensory stimuli (Parsons, 2002) and information related to offerings (Rohm and Swaminathan, 2004). Therefore, it offers adolescents more opportunity to seek and learn about new trends in a practical manner. However, adolescent motivations that are strongly based on sensory stimulation tend to adversely affect hedonistic perceptions. Too much information obtained from Internet may result an experience of information overload. Many of adolescents are in the stage of acquiring and learning various knowledge. The explosion of information on Internet may become a burden for adolescents. Besides, information overload may hinder their self-confidence since they do not know which piece of information to follow. Adolescents may experience negative emotions during their learning process. Accordingly, they cannot enjoy a shopping trip based on motivation of sensory stimulation.

Moreover, the positive relationship between motivation of social interaction and hedonic perceptions is found in previous studies as well. Babin et al. (1994) propose that the hedonic responses are created by social interaction. Additionally, Koo et al. (2008) further indicate that social affiliation produces hedonic benefits in the context of online shopping. Individuals who seek social relationships through shopping online can enjoy making friends with

others around the world, without face-to-face interaction. Since the Internet provides a diverse, accessible, and convenient platform for communication, perceived hedonic benefits may be amplified by the encouragement of social interaction motivation. Consistent with Gaile-Sarkane (2008), this study confirms social motives theory for online shopping. While Gaile-Sarkane (2008) focuses on shoppers in the age group 18 - 25, this study focuses on adolescent shoppers' motivations. She further interprets that consumers choose online shopping because it can raise the standing of consumers in the eyes of friends and virtual communities based on social motives theory. However, this study finds that the effect of social interaction motivation is not swayed by subjective norm, which slightly differs from Gaile-Sarkane's (2008) conclusion.

As to the motivation of emotional utility, this study finds that the dominant influence of motivation on shopping perception is emotional utility. Although Ganesh et al. (2010) mentions that previous studies proposes online shoppers are not strongly motivated to shop for fun and recreation, they do not consider this motivation to reexamine its influence. Consistent with O'Brien (2010), this study suggests that some shoppers, especially teenagers, view shopping as a leisure activity. In this case, shoppers emphasize the enjoyment from shopping trips (Rajamma et al., 2007), which creates a hedonic perception. This result is in line with Dawson et al.'s (1990) and Roy and Tai's (2003) findings, which propose that expected positive emotions further affect hedonic shopping perceptions.

Surprisingly, this study finds that economic motivation is not determinant to online shopping perceptions. This result is discrepant from Delafrooz et al.'s (2009) finding which supports the positive relationship between price factor and attitude toward online shopping. The majority of respondents in Delafrooz et al.'s (2009) study ranges between 20 and 30 years old. The difference in results implies that adolescents may care less about economic factor than other age groups.

Consistent with previous research, our findings have concluded that marketers can enhance the value for shoppers by understanding shopping motivations (Smith and Whitlark, 2001) and can also develop a segmentation strategy (Stafford and Stafford, 2001). First of all, online sellers can design their virtual stores based on this finding. For example, given the positive relationship between shopping motivation of role enactment and utilitarian perception, online sellers can display their merchandises based on themes with a purpose, such as brand, use, function, and gift. In addition, their display themes should be kept simple, to help shoppers identify with them at a first glance. In this way, task-related display is advantageous to remind adolescents' shopping tasks and heighten their motivations on one hand, and help them to complete their shopping chores on the other.

Moreover, according to the negative relationship

between shopping motivation of sensory stimulation and hedonic perception, online sellers should use attractive images and simple information to promote new trends. Looking at images rather than a detailed description can help reduce negative emotions and facilitate learning among adolescents. Hence, the motivation can be met and utilitarian perception will be obtained.

Furthermore, given the positive relationship between choice optimization motivation and utilitarian perception, online sellers should offer efficient interface to stimulate adolescent shoppers' choice optimization motivation. In doing so, sellers have to investigate adolescents' wants and offer diverse ways to pay, bill, and deliver products. Most of Taiwan adolescents do not have credit cards and freedoms of bank account. Hence, online sellers can cooperate with convenient stores to deal with issues of pay, bill, and deliver products.

Second, online sellers can segment their markets by online shopping motivations. If sellers target at a segment with shoppers motivated by role enactment, they should keep reminding shoppers' tasks and do everything in its power to help shoppers live up to their roles. Likewise, sellers who target at a segment with shoppers motivated by choice optimization should position on efficient shopping or diversity of choices. In these cases, adolescent shoppers' utilitarian perceptions toward this seller will form. As to shoppers motivated by social interaction, online sellers can install useful communication platform to encourage interactions among shoppers. Or sellers can participate in some popular internet communities, such as facebook and plurk. These courses of actions can fulfill adolescent shoppers' motivation of social interaction. If online sellers target at shoppers motivated by emotional utility, they have to create and communicate "shopping as leisure" message to their targeting segments. This study additionally explores the moderating effects of involvement and subjective norms in the context of online shopping. Our results support the moderating effect of involvement on the relationships between sensory stimulation and hedonic perception, emotional utility and hedonic perception, as well as choice optimization and utilitarian perception. Hedonic dimension is one of composition of involvement (Chaudhuri, 2000; Pires et al., 2004). Given a higher degree of involvement, young shoppers are more likely to notice hedonic aspects of online shopping and therefore to enjoy it more. Even the negative emotions resulting from the learning process can be mitigated through a higher degree of involvement. Hence, adolescents with motivations of sensory stimulation and emotional utility will produce a stronger hedonic perception given their higher degree of involvement.

In addition, Suri et al. (2003) proposed that shoppers, with stronger shopping motivations, are more involved with their decision making process. As the importance of shopping duty increases, the motivation and level of involvement increase as well. When young shoppers

recognize the shopping activity is important (that is, involvement increases), they develop a stronger utilitarian perceptions on the basis of stronger motivation of choice optimization. Surprisingly, the moderating effect of subjective norm on an adolescent's shopping motivations and shopping perceptions is not significant. This result is not incompatible with Lueg et al. (2006) who prove the effect of peer communication, instead of all agents, on shopping time and money spent as to online shopping for adolescents. Nevertheless, this result confirms ELM, positing that attitude induced by the central route is more predictive of behavior than induced by the peripheral route (Lee, 2009). The findings suggest that, when it comes to shopping online, an adolescent feels responsible for his or her own choice and that the opinions of others have limited influence.

These findings in relation to moderating effects of involvement and subjective norm imply that online sellers should mold a hedonic shopping environment where adolescents can enjoy themselves. This hedonic shopping environment should offer several stimuli to attract adolescent shoppers to be involved in shopping. For example, sellers can use anime rather than written word to describe their brand stories. In this case, adolescent shoppers can learn about the brand in an easy way without overloading and can strengthen their connections with the seller. Their degrees of involvement increase enough thus to enhance the positive relationships between motivations and perceptions. Or sellers should regularly update their websites to increase novelty. Adolescent shoppers will explore the website anew and hence increase their degrees of involvement.

Previous studies used adults as their respondents to examine the role of motivation in the context of online shopping (e.g., Cameron and Galloway, 2005; Foucault and Scheufele, 2002; Shang et al., 2005). Foucault and Scheufele (2002) indicate that college students are more likely to make an online textbook purchase if they perceive their needs are met by online shopping. Foucault and Scheufele's (2002) arguments is akin to our findings that motivations will result in higher online shopping perceptions. Accordingly, shopping motivations underlie adult's and adolescent's behaviors of online shopping. Moreover, Cameron and Galloway (2005) find that ability to purchase items at lower prices than from retail stores is the primary motivation for adults to adopt online auction. Conversely, our findings suggest that economic utility does not lead to both hedonic and utilitarian perception for adolescents. In other words, adolescents' motivation of economic utility cannot be met by online shopping. Besides, Shang et al. (2005) show that fashion involvement, which is deemed as one of intrinsic motivations, is more important than other extrinsic motivations in explaining online shopping behavior. This study further concludes that sensory stimulation, which reflects the desire to explore the fashion trends, can increase the level of utilitarian perception rather than

hedonic perception.

In addition, we provide two avenues to revise theory. First, we revise Westbrook and Black's (1985) shopping motivation typology and propose alternative types of online shopping motivations to address the online shopping context, by integrating previous studies and characteristics of online shopping. The conclusion is summarized in Table 1. After conducting two-stage factor analysis, containing exploratory EFA and CFA, we offer an empirical evidence for a typology of online shopping motivation. Second, based on motivation theory, both cognitive and affective motivations are geared to individual gratification and satisfaction (Rohm and Swaminathan, 2004). We further find that specific motivation trigger off specific perception. Surprisingly, economic motivation is useless to enhance adolescent shoppers' perceptions. This finding implies that adolescent shoppers motivated by economic factors will not produce positive perceptions toward sellers. Accordingly, online seller may not target at shoppers with economic motivation or not position on economic factors in order to attract adolescents.

From our findings, some issues have arisen and cannot be answered by this study. Firstly, the positive relationship between shopping motivation of role enactment and utilitarian perception suggests that online sellers can display their merchandises based on themes with a purpose to encourage motivation of role enactment and thus facilitate utilitarian perception. In-store display has been deemed as a marketing vehicle. It is interesting to address the effective display in virtual store to enhance adolescent role enactment motivation and evoke utilitarian perception. Another topic which future research might probably address is related to comparing adolescent behaviors with adults' by using the same typology of motivations. Finally, this study asked respondents to fill out the items based on their overall online shopping experiences. Zaichkowsky (1985) argues that the evidence for the three factors, including personal, physical, and situational, that influence the consumers' degrees of involvement and purchasing decisions is found in the literature. This study only consider personal factor. The influences of physical factor (e.g., characteristics of product) and situational factor (e.g., advertising and characteristics of websites) should be involved in related issues. Future research may investigate whether product category or webvertising would influence the relationship among variables studied in this study.

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APPENDIX

Online shopping motivation

1. Role enactment

- (1) *I would like to go online shopping to fulfill my responsibility.
- (2) I would like to go online shopping because I have a specific task I need to accomplish.
- (3) I would like to go online shopping because I like shopping for others.
- (4) I would like to go online shopping because I want to find the perfect gift for someone .

2. Sensory stimulation

- (1) I would like to go online shopping because I enjoy seeing interesting displays on website while shopping .
- (2) I would like to go online shopping because I think shopping is an adventure.
- (3) I would like to go online shopping because I find shopping stimulation.
- (4) *I would like to go online shopping because shopping makes me feel like I am in my own universe.
- (5) *I would like to go online shopping because I go shopping to keep up with the new trends.

3. Social interaction

- (1) I would like to go online shopping because I like to feel a part of the group with other shoppers while shopping.
- (2) I would like to go online shopping because I can express myself freely on Internet .
- (3) I would like to go online shopping because I enjoy sharing my opinions about shopping.
- (4) I would like to go online shopping because I enjoy debating shopping-related issues on the Internet.
- (5) I would like to go online shopping because I can develop friendships with other Internet shoppers.

4. Emotional utility

- (1) *I would like to go online shopping because shopping is fun and exciting.
- (2) I would like to go online shopping because it puts me in a better mood.
- (3) I would like to go online shopping because shopping is an important leisure activity for me.
- (4) I would like to go online shopping because shopping is truly enjoyable compared to other things I could do.

5. Economic utility

- (1) I would like to go online shopping because I can get a lower price of a product.
- (2) I would like to go online shopping because there are sales .
- (3) *I would like to go online shopping because I enjoy looking for discounts.

6. Choice optimization

- (1) I would like to go online shopping because I can find exactly the right product.
- (2) I would like to go online shopping because I want buying to be as fast and as efficient as possible .
- (3) I would like to go online shopping because I can shop whenever I want.
- (4) I would like to shop online because I can do this without going out .
- (5) I would like to shop online because online shopping is convenient to me.
- (6) I would like to shop online because I can easily acquire large volumes of useful information.

Online shopping perception

1. *Being online shopping gives me a feeling of excitement, fun, and/or enjoyment.
2. I get a sense of adventure when I shop via Internet.
3. I enjoy passing the time as online shopping.
4. I really get into online shopping.
5. *Compared to other things, being online shopping is really enjoyable.
6. Success online shopping is finding what I'm looking for.
7. I like to shop via Internet with no time wasted.
8. I am disappointed when I have to search a lot of sites for what I need.
9. The online shopping helps me with daily life.

Involvement

1. In selecting from the many types and brands available in the Website, would you say that:
I would not care all as to which one I buy-- I would care a great deal as to which one I buy
2. *Do you think that the various types and brands available in the Website are all very alike or are all very different?
They are like-- They are very different
3. How important would it be to you to make a right purchase in the Website
Not at all important-- Extremely important
4. In making your selection in the Website, how concerned would you be about the outcome of your choice?
Not at all concerned-- Very much concerned
5. *How important will be the purchase for you in the Website?
Not at all important-- Extremely important

Subjective norm

1. It is very important that my best friend approves of my shopping via Internet.
2. When online shopping is concerned, I usually do what my best friend is doing.
3. It is very important that my friends approve of me shopping via Internet.
4. When online shopping is concerned, I usually do what my friends are doing.
5. It is very important that my family approve of my shopping via Internet.
6. When online shopping is concerned, I usually do what my family are doing.
7. *It is very important that other people (except my family and friends) approve of my shopping via Internet.
8. *When online shopping is concerned, I usually do what other people (except my family and friends) are doing.

* Denotes the item which was deleted based on the results of two-stage factor analysis.