Exploring Consumers' Adoption of Highly Technological Fashion Products: The Role of Extrinsic and Intrinsic Motivational Factors

By: Kittichai Watchravesringkan, Nancy Nelson Hodges, and Yun-Hee Kim

***Note: This version of the document is not the copy of record. Made available courtesy of Emerald Publishers. Link to Full Text:
http://www.emeraldinsight.com/journals.htm?articleid=1858875&show=abstract
***Note: Tables and figures can be found at the end of the document.

Abstract:
Purpose – This study seeks to develop and test a model of consumers' adoption of highly technological fashion products (HTFPs) through modifying the technology acceptance model (TAM).
Design/methodology/approach – Using a convenience sampling method, students between 18 to 26 years old were chosen as the sample population from a mid-size southern university in the USA. The final sample consisted of 268 responses. Confirmatory factor analysis and path analysis were employed to answer all hypotheses using the structural equation model.
Findings – Empirical results revealed that consumers' intentions to adopt an innovation (i.e. highly technological fashion product) are driven by the multi-dimensional nature of consumers' extrinsic (i.e. perceived ease of use and perceived usefulness) and intrinsic (i.e. perceived innovativeness and perceived fashionability) motivation. Additionally, these motivational dimensions contribute to consumers' utilitarian and hedonic attitudes toward using an innovation, which in turn affects their purchase intentions.
Practical implications – Consumers' utilitarian and hedonic consumer attitudes may enable retailers and marketers to design effective advertising campaigns by helping them to determine whether the functional or sensational components of the product need to be emphasized. Furthermore, when developing a new product, marketers need to focus on product attributes that possess both functionality and hedonic benefits.
Originality/value – This is the first known study to examine the underlying relationships between motivations, two-dimensional consumers' attitudes (utilitarian and hedonic), and purchase intentions in the consumer-related product context. The study has broadened the TAM by integrating extrinsic and intrinsic motivational variables into the model. It has also deepened the TAM by conceptualizing consumers' attitudes as comprising two distinct dimensions: utilitarian and hedonic.

Article:
A significantly increased number of domestic and foreign firms, a spate of mergers and acquisitions, and increasingly sophisticated and demanding consumers have intensified the competition among retailers, creating considerable challenges for many to differentiate themselves by delivering products and services that fulfill customers' needs better than their

competitors. These changes in the competitive retail landscape have motivated some retailers to enter into strategic alliances, defined as "a cooperative arrangement between two or more independent firms that exchange or share resources for competitive advantage" (Huang *et al.*, 2006, p. 1216), in which collaboration between two or more firms may have synergized them, generating a greater effect on a product's success (e.g. adoption) than that of an individual firm alone. As such, many distinctive products and services are created in an attempt by these participating firms to differentiate themselves from their competitors and thereby communicate the competitive strengths of their goods to consumers.

Such an approach has been widely adopted by several firms in the retail market. For instance, LG Telecom, the world's leading electronic company, recently collaborated with Prada, a luxury apparel brand, to create the "Prada Mobile Phone," a high-tech, buttonless, touch screen cellular phone with a distinctive, fashionable design (Ramstad and Fowler, 2007). This collaboration between LG and Prada enhanced the product's strengths through the combination of high-tech elements and a fashionable appearance that may attract consumers. Although similar collaborative strategies seem to be well-accepted among participating firms, little is known on the consumer level whether these products and services affect consumers' attitudes and behavioral intentions in the way these firms anticipate.

This phenomenon of new product development has gained significant interest among academics and practitioners who wish to learn what motivates consumers to adopt or not adopt a new product. While previous studies related to consumers' adoption of new products have been largely examined from the innovativeness perspective (Hirunyawipada and Paswan, 2006), other research suggests that motivation plays an important role in predicting a person's behavior (Bruner and Kumar, 2005; Davis *et al.*, 1992). This study therefore seeks to develop and test a model of consumers' adoption of highly technological fashion products (HTFPs) through modifying the technology acceptance model (TAM). In addition, the proposed TAM-based model also incorporates the hedonic components of consumer motivation (i.e. perceived innovativeness and perceived fashionability) that have been reported as important factors in the development of a consumer product adoption model (e.g. Bruner and Kumar, 2005; Dabholkar and Bagozzi, 2002). The proposed model also incorporates the two-dimensional component of consumer attitudes (i.e. utilitarian and hedonic) to better understand consumers' adoption of new products. These utilitarian and hedonic consumer attitudes are important because of their predictive ability of consumers' behavior (Batra and Ahtola, 1990; Voss *et al.*, 2003).

The current study focuses on college-aged or "generation Y" consumers because they tend to be high-tech and fashion-savvy. This generation is a prime market for high-tech, fashionable products and services because of this group's great spending power, over $170 billion a year (Solomon, 2007). In addition, these individuals are likely to seek immediacy and instant gratification when consuming products and services. They are early adopters and active users of technological fashion products (Roberts, 2006). Therefore, it is important to study their attitudes and consumption patterns regarding this new trend.

The current study contributes to the existing literature in several ways. Theoretically, the study applies and extends the TAM to study consumers' adoption of a continuously innovative product. In addition, conceptualizing consumer attitudes as a two-dimensional construct (i.e. utilitarian

and hedonic) may better explain a greater proportion of variance in the consumer behavior research model. Managerially, external variables investigated under the current study (i.e. perceived ease of use, perceived usefulness, perceived innovativeness, and perceived fashionability) might aid one in better understanding consumers' adoption of a new product. These four external variables seem to possess some prerequisites that are critical in the determination of the success of a new product (i.e. complexity, observability, and relative advantages) as identified by Rogers (1995). Lastly, utilitarian and hedonic dimensions of consumer attitude may enable retailers to design effective advertising campaigns by determining whether the functional or the sensational components of a product need to be emphasized.

LITERATURE REVIEW

Technology acceptance model

The technology acceptance model (TAM) was developed through modification of the theory of reasoned action (TRA) proposed by Fishbein and Ajzen (1975) in order to explain consumers' acceptance of information systems (Davis, 1989). TAM has gained popularity as a model capable of explaining and predicting an individual's behavioral intention and actual behavior, but at the same time it has been criticized as being both parsimoniously and theoretically justified (Davis *et al.*, 1989). The major objective of TAM is to provide an explanation of underlying determinants of behavior (Davis, 1989). TAM theorizes that an individual's actual system usage is predicted by his/her behavioral intention to use a system which is in turn directly influenced by his/her internal beliefs and attitude toward system usage. These internal beliefs are viewed as motivational factors that drive an individual to achieve a goal (MacInnis *et al.*, 1991). Motivation is an internal psychological state that stimulates an individual to become involved in a particular task and is central to the explanation of individuals' conscious choices among different alternatives (Brown and Peterson, 1994). Motivation is necessary to understand behaviors because it sheds light on individuals' choices to initiate an action on a particular task, expend an amount of effort on the task, and persist in the application of effort over a period of time (Deci, 1972; Ryan and Deci, 2000).

Extrinsic versus intrinsic motivators

Motivational theorists have suggested that an individual can be motivated extrinsically and intrinsically (Davis *et al.*, 1992; Deci, 1971, 1972) to engage in performing certain activities. Those who are extrinsically motivated are likely to perform an activity because it is perceived to be instrumental in achieving valued outcomes distinct from the activity itself (Mitchell and Biglan, 1971). In addition, behaviors driven by extrinsic motivation are likely to be caused by reinforcement outcomes (Davis *et al.*, 1992).

In TAM, Davis and his colleagues (Davis, 1989; Davis *et al.*, 1989, 1992) propose that consumers' perception of using the product are critical to decision-making because these motivate consumers to either engage in or shy away from certain behaviors. Consumer perception is the intervening internal process involving "perceptual, physiological, feeling, and thinking activities" that help consumers convert stimuli (i.e. the product) into meaningful information and utilize them to comprehend benefits they may gain in using the product before making any decisions (Bagozzi, 1986, p. 46).

Davis and his colleagues (Davis, 1989; Davis *et al.*, 1989, 1992) further suggest that perceived ease of use and perceived usefulness are two major extrinsic motivators that influence an individual's acceptance and use of a system. Perceived ease of use is defined as the degree to which an individual believes that the use of the system (e.g. the product) is free of effort and perceived usefulness is defined as the degree to which consumers believe that the use of a product will help them to perform certain tasks. According to the theory, these two extrinsic motivators have direct effects on consumers' attitudes toward the use of a system (i.e. the product). In addition, studies have reported that, based on factor analysis, perceived ease of use and perceived usefulness are two distinct constructs (Larcker and Lessig, 1980). TAM also postulates that, along with attitudes toward system usage, perceived usefulness has a direct effect on consumers' behavioral intention to use a system.

While extrinsic motivation influences behavior because of rewards and benefits, individuals who are intrinsically driven tend to perform an activity because of a desire to perform the activity that comes from within themselves, not because of apparent outside reinforcement (Berlyne, 1966). Intrinsic motivation involves engaging in an activity for the pleasure and satisfaction derived from it. Researchers also have criticized TAM for not considering other motivational influences that may help to improve the predictive and explanatory power of the model (Hu *et al.*, 1999). Although several studies have extended TAM by incorporating some intrinsic motivations, such as perceived enjoyment, goal orientation, and self-efficacy (Davis *et al.*, 1992; Lee *et al.*, 2005; Yi and Hwang, 2003), these previous studies focused on consumers' use of a system. Thus, because the context of the current study is to understand and explain consumers' purchase intention of HTFPs, we extend TAM by proposing two additional intrinsic motivations that are inherently related to attributes of a product that may impact consumer behavior: consumers' perceived product innovativeness (hereafter perceived innovativeness) and consumers' perceived product fashionability (hereafter perceived fashionability).

Perceived innovativeness, or "possession of newness," is the degree to which consumers believe that the product possesses important attributes of innovation such as newness and uniqueness. The definition of perceived innovativeness is related to the product itself and consumers' perception of a product: it reflects the newness of the technology and/or its uniqueness in the marketplace (Kleinschmidt and Copper, 1991). This definition is different from the concept of "consumer innovativeness," a personality trait that focuses on "consumption of newness" by consumers (Midgley and Dowling, 1978). In addition, perceived innovativeness conveys excitement and interest (Blythe, 1999; Venkatraman, 1991); therefore consumers can be intrinsically motivated to exhibit tendencies to consume such products as well.

The term "fashion" has been associated with various consumer products and services. It can be used to refer to the style or component of the product, symbolic meanings associated with the product, or the adoption process of the product. Sproles and Burns (1994) refer to fashion as "a style of consumer product … that is temporarily adopted by a discernible proportion of members" (p. 4). Thus, in the current study, perceived fashionability is defined as the degree to which the consumer believes that certain attributes (e.g. style, brand name) attached to the product imply popularity and fashionability. Individuals may then rely on certain product cues (e.g. style or brand name) to determine if a product is fashionable. The way a consumer perceives fashionability of a product is critical in determining his/her behavior because such

perception provides a direction of new fashion awareness as it may be related to brand or trends (Law *et al.*, 2004). An individual may believe that consuming a fashionable product will enhance his or her self-esteem and alter his or her physical appearance. Such psychological impacts of a fashionable product may intrinsically drive an individual to engage in purchasing behavior.

Two-dimensions of consumer attitudes

Studies have long revealed that attitudes influence behavioral intentions (Ajzen, 1991; Ajzen and Fishbein, 1980; Bruner and Kumar, 2005; Davis *et al.*, 1992). This relationship has received substantial empirical support. Related to the focal behaviors, consumer attitude toward the act of using a product (A_{act}) is defined as the consumer's positive or negative overall evaluation of the relevant behavior (action). That is, a positive attitude is likely to encourage a consumer to purchase a product. Historically, researchers have conceptualized attitude holistically, as a one-dimensional construct. However, a growing number of researchers have stated that consumers purchase products and services and perform consumptive behaviors because of instrumental (utilitarian) and affective gratification (hedonic) reasons (Babin *et al.*, 1994; Batra and Ahtola, 1990; Holbrook and Hirschman, 1982). In addition, Bagozzi and Burnkrant (1979) argue that attitudes are complex and multidimensional. In response to these concerns, Voss *et al.* (2003) proposed that consumer attitudes toward the act of using or consuming a product are comprised of two distinct dimensions: utilitarian and hedonic. They believe these two dimensions of attitude capture the outcome and process of consuming a product (i.e. the sensation derived from the experience of using the products and the functions derived from product performance). Such conceptualization of an attitude would aid researchers in developing a consumer behavior model that explains a greater proportion of variance (Bagozzi and Burnkrant, 1979; Olney *et al.*, 1991).

RESEARCH HYPOTHESES

In Figure 1, we present a theoretical model based on the technology acceptance model (TAM). Although originally found in a work-place environment where perceived ease of use positively affected perceived usefulness, studies related to the consumer products domain have not yet examined such a relationship, with one exception: Bruner and Kumar (2005). They found empirical support for the relationship between perceived ease of use and perceived usefulness in understanding consumer acceptance of handheld Internet devices. Thus, in the current study, it is expected that as consumers believe that a product is easier to use, they are more likely to view the product as useful. We hypothesized that:

> *H1*. A favorable perceived ease of use is more likely to positively influence perceived usefulness of a product.

The model also suggests that extrinsic motivational factors (i.e. perceived usefulness and perceived ease of use) affect consumers' utilitarian and hedonic attitudes toward the act of using the product. That is, consumers tend to be cognitively-driven, reason-based and goal-oriented when they believe that their task performance can be improved if they perceive a product to be useful (Babin *et al.*, 1994; Dhar and Wertenbroch, 2000). Thus, those with high degree of perceived product usefulness are likely to exhibit a favorable utilitarian attitude toward using a product. At the same time, those with favorable perceptions of product usefulness who also tend to be frequent product users may be more likely to experience pleasure and fun with frequent product usage because they are likely to be hedonically driven by an affective and sensory

experience related to the use of a product (Batra and Ahtola, 1990; Holbrook and Hirschman, 1982). As such, those with higher degrees of perceived product usefulness are likely to exhibit a favorable hedonic attitude toward using a product as well. Therefore, it is expected that:

> *H2*. A favorable perceived usefulness is more likely to positively influence (a) utilitarian and (b) hedonic attitudes toward using a product.

Since consumers' perceived ease of use refers to process leading to outcome (Davis, 1989), consumers who believe that a product is easy to use may be likely to display a favorable utilitarian attitude toward using the product because these consumers may be likely to assess the amount of efforts they could spend in learning to use a product to enhance their task performance as well as to improve task efficiency (Davis *et al.*, 1989). In the meantime, they are likely to display a favorable hedonic attitude toward using a product because perceived product ease of use may help to enhance the enjoyment of using a product in its own right, aside from the instrumental value of using a product that may be anticipated (Davis *et al.*, 1992). Hence, it is predicted that:

> *H3*. A favorable perceived ease of use is more likely to positively influence (a) utilitarian and (b) hedonic attitudes toward using a product.

Furthermore, intrinsic motivational factors (i.e. perceived innovativeness and perceived fashionability) are expected to affect consumers' utilitarian and hedonic attitudes toward using a product. That is, while consumers who believe a product is innovative are likely to express their interest in using a product to perform their task because of challenge of using an innovation (Deci, 1972; Ryan and Deci, 2000), they also tend to receive sensory stimulation, arousal, or enjoyment from using the product because of excitement and fun that an innovation tends to convey (Blythe, 1999; Venkatraman, 1991). Thus, it is hypothesized that:

> *H4*. A favorable perceived innovativeness is more likely to positively influence (a) utilitarian and (b) hedonic attitudes toward using a product.

Fashion is concerned with newness (Evans, 1989) and is often considered as a way to express one's self (Sproles and Burns, 1994). As such, consumers who perceive a product as being fashionable tend to exhibit a favorable hedonic attitude toward using the product because of sensory and pleasurable experiences gained from symbols (e.g. style, brand name) associated with an innovation (Sproles and Burns, 1994). Despite the hedonic benefits, consumers may be likely to use a product to perform general tasks because consumers generally consume a product not only on a basis of affective gratification, but also on a basis of function as well (Batra and Ahtola, 1990). Thus, consumers' utilitarian and hedonic attitudes toward using a product tend to be influenced by their perceived fashionability. Therefore, we predicted that:

> *H5*. A favorable perceived fashionability is more likely to positively influence (a) utilitarian and (b) hedonic attitudes toward using a product.

Generally, consumers tend to develop their intention to engage in behaviors once their attitude towards such behaviors is positive. Although the relationship between attitude and behavioral

intention has been supported in several studies (Bruner and Kumar, 2005; Davis *et al.*, 1992), few studies have examined the impact of the two-dimensional construct of attitudes on behavioral intention. For example, Voss *et al.*'s (2003) reported that, in the consumer products context, consumers' utilitarian and hedonic attitudes have a positive impact on behavioral intention. Hence, it is anticipated that:

> *H6*. Consumers' favorable (a) utilitarian and (b) hedonic attitudes toward using a product are likely to positively influence behavioral intention.

METHODOLOGY

Sample and data collection

Using a convenience sample, the population under study was comprised of 268 undergraduate students enrolled in general education and business-related courses offered at a mid-size southern university. Although it is recognized that the student population could pose limitations related to the generalizability of the findings, this population has certain characteristics that seem homogenous (i.e. age, interests, and experience with fashion and technology). In addition, since the purpose of this study is to examine the purchase intentions of Generation Y college-aged students, it is appropriate to use this student population.

Students were asked to voluntarily participate in the study and were offered extra credit as an incentive. The self-administered questionnaires were personally handed by researchers to participants to be completed in class. This data collection method was selected to encourage response rate, ensure clarification, and solve any problems and/or questions related to questionnaires from participants completing the survey.

Instrument

The questionnaire comprised five major sections. Participants were first asked to view two pictures: the front and back versus a front close-up of a highly technological fashion product (i.e. the LG Prada cell phone's touch screen) and the product description (e.g. collaborative work between LG, a leader in high-tech cell phones, and the Italian fashion house Prada: product features such as graphical icons, a two-megapixel camera, memory card, and so on).

After viewing the products' pictures and descriptions, participants were guided to answer questions related to their intrinsic and extrinsic motivations to use the product. These questions were measured using Likert-type items with the words strongly disagree, disagree, neutral, agree, and strongly agree. Scales assessed two extrinsic motivations comprised of seven items in total: four items for perceived ease of use (e.g. "using a Prada cell phone will be complicated) and three items for perceived usefulness (e.g. "I think that using a Prada cell phone will improve my communication ability"). They were adapted from studies conducted by Davis and his colleagues (Davis, 1989; Davis *et al.*, 1989, 1992). However, scales assessing intrinsic motivations, i.e. perceived innovativeness (e.g. "this product is new") and perceived fashionability (i.e. "this product is fashionable"), were developed by the researchers. Perceived innovativeness scales were comprised of three items and perceived fashionability was comprised of one item.

Third, participants were asked about their attitudes toward using the product. As discussed, consumers' attitudes in this study were comprised of utilitarian and hedonic aspects. Scales

assessing consumers' utilitarian and hedonic attitudes comprised eight items, where four items captured utilitarian aspects (e.g. effectiveness/ineffectiveness) and the other four captured hedonic (e.g. fun/not fun) aspects. These items were adapted from Voss *et al.*'s (2003) hedonic and utilitarian dimensions of consumer attitude and all were measured using semantic differential scales.

Fourth, purchase intentions (e.g. "I would be likely to purchase the product if available in my area") were assessed using Likert-type items with the words strongly disagree, disagree, neutral, agree, and strongly agree. These items were adapted from Petty *et al.* (1983) and Schumann *et al.* (2003). Last, participants were asked to complete their demographic information.

RESULTS
Descriptive statistics
Descriptive statistics for demographic characteristics of the participants are shown in Table I. The final sample size comprised 268 usable responses. The participants were predominantly female (87 percent) with a mean age of 20.64 years old (maximum age reported was 26 years old). Almost 70 percent were from the school of Human Environmental Sciences; 13 percent were from the College of Art and Sciences; and the others were from the Schools of Education, Business, Nursing, and Health and Human Performance. Almost 35 percent were sophomores, and 26 percent were seniors. Regarding their annual household income, almost 40 percent were from upper-lower class families earning less than $40,000 a year.

In addition, Table II reveals descriptive statistics related to means and standard deviation for the seven latent constructs and correlation matrix among latent constructs. The means of all constructs were close to or above 3.00, except the purchase intention (M=2.57). The standard deviations ranged from 0.82 ($M_{PerceivedInnovativeness}$=3.71) to 0.98 ($M_{PurchaseIntention}$=2.57), suggesting a substantial amount of variance in the responses. The values of the correlations ranged from 0.06 to 0.67. In addition, correlations between constructs, as hypothesized, were all significant ($p<0.05$), except the correlation between perceived usefulness and perceived ease of use, perceived ease of use and hedonic attitudes.

Confirmatory factor analysis and assessment of validity and reliability
We followed the two-step procedure recommended by Anderson and Gerbing (1998) to establish measurement and structural model. Confirmatory factor analysis (CFA) was performed on all seven 24-item constructs using maximum likelihood estimation in LISREL 8.54 in the analysis and the sample covariance matrix as input prior to incorporating the structural restrictions (Jöreskog and Sörbom, 1993). In addition, we also followed the recommendation suggested by Jöreskog and Sörbom (1993) to establish a conservative error variance for the single-item scale (i.e. perceived fashionability). According to the CFA results, the chi-square test was statistically significant, $\chi^2(232)=379.13$, $p<0.001$, suggesting a lack of satisfactory model fit (i.e. the hypothesized model was incongruent with the observed data). However, chi-square test tends to be discounted by researchers because this statistical test is known to be sensitive to the sample size (Bearden *et al.*, 1982) and to the model complexity (Bollen, 1989). We then further assessed the model fit through a variety of model fit indexes, i.e. normed chi-square (χ^2/df), the goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root-mean-square error of approximation (RMSEA). Table

III revealed that each index displayed an acceptable level of model fit, suggesting a good adjustment (χ^2/df=1.63, GFI=0.90, AGFI=0.86, CFI=0.98, TLI=0.98, and RMSEA=0.048). Thus, it is concluded that the CFA model fit the data reasonably well based on latter fit indices considered in this study.

CFA was also further used to assess the psychometric properties of the measures, i.e. validity and reliability. Table IV revealed that factor loadings of the indicators for the underlying constructs were all significant at the 0.001 level and completely standardized factor loadings were quite high, suggesting that convergent validity was established (Bagozzi *et al.*, 1991). That is, each indicator taps facets of the intended construct. Discriminant validity among the constructs was also assessed by examining whether the square correlation between two constructs was lower than the average variance extracted for each construct (Fornell and Larcker, 1981). Results revealed that these conditions were met, and therefore the constructs investigated in the study were distinct from each other, confirming discriminant validity.

Composite reliability was also assessed using CFA. According to Fornell and Larcker (1981), composite reliability represents shared variance among a set of observed variables measuring an underlying construct. Table IV shows that all composite reliability estimates were higher than the desirable level, i.e. ≥0.70 as recommended by Nunnally and Bernstein (1994). However, the composite reliability of the perceived fashionability was not reported because we employed only one item to capture this construct. Therefore, it is concluded that the measurement model meets all requirements for psychometric property.

Structural model
After the measurement model was confirmed, structural equation modeling was then performed to test the hypothesized relationships. The model fit statistics revealed a χ^2 of 456.57 with a degree of freedom of 228 at $p<0.001$, χ^2/df of 2.00, GFI of 0.88, AGFI of 0.83, CFI of 0.97, TLI of 0.96, and RMSEA of 0.061, suggesting that the hypothesized structural relationships fit the data well. Perceived ease of use explained 0.8 percent variance in perceived usefulness, intrinsic (perceived innovativeness and perceived fashionability) and extrinsic (perceived ease of use and perceived usefulness) motivators explained 39 percent of variance in utilitarian attitude and 43 percent of variance in hedonic attitude, and the overall variance explained in purchase intention was 21 percent.

Test of hypotheses
Each hypothesized relationship was examined based on path significance. Figure 1 shows the direction and magnitude of the paths of the structural model. *H1* proposed that perceived ease of use would have a significant effect on the perceived usefulness of a product. Results showed that perceived ease of use did not significantly affect perceived usefulness (γ_{11}=0.09, t=1.37, $p>0.05$). Thus, *H1* was not supported. This finding was inconsistent with the results of Bruner and Kumar (2005) who found empirical support for this relationship in the context of purchasing technological products.

H2 predicted that perceived usefulness would have significant effect on (a) utilitarian and (b) hedonic attitudes toward using a product. Results showed that perceived usefulness has a significant, positive effect on both utilitarian and hedonic attitudes, i.e. β_{21}=0.40, t=5.84,

$p<0.001$; $\beta_{31}=0.17$, $t=2.96$, $p<0.01$; respectively. Therefore, *H2a* and *H2b* were supported. *H3* predicted that perceived ease of use would have significant effects on (a) utilitarian and (b) hedonic attitudes toward using a product. Results showed that perceived ease of use has a significant, positive effect on only utilitarian attitudes ($\gamma_{21}=0.15$, $t=2.39$, $p<0.05$), accepting *H3a*. However, results revealed that perceived ease of use has no significant effect on hedonic attitudes ($\gamma_{31}=0.05$, $t=0.98$, $p>0.05$), rejecting *H3b*. Such results may be explained by the idea that perceived ease of use tends to reflect more on accomplishments relative to the use of a product for a task rather than the immediate gratification of using a product.

H4 proposed that perceived innovativeness would have a significant effect on utilitarian and hedonic attitudes toward using a product. Results showed that perceived innovativeness has a significant, positive effect on both utilitarian and hedonic attitudes, i.e. $\gamma_{22}=0.29$, $t=3.53$, $p<0.01$; $\gamma_{32}=0.39$, $t=5.04$, $p<0.001$; respectively. Thus, *H4a* and *H4b* were supported. *H5* proposed that perceived fashionability would have a significant effect on utilitarian and hedonic attitudes toward using a product. Results showed that perceived fashionability has a significant, positive effect on both utilitarian and hedonic attitudes, i.e. $\gamma_{23}=0.20$, $t=2.67$, $p<0.01$; $\gamma_{33}=0.33$, $t=4.86$, $p<0.001$; respectively. Thus, *H5a* and *H5b* were also supported.

Lastly, *H6* proposed that consumers' utilitarian and hedonic attitudes toward using a product would have significant effects on their behavioral intentions. Results showed that both consumers' utilitarian and hedonic attitudes have a significant, positive effect on their purchase intentions, i.e. $\beta_{42}=0.39$, $t=5.09$, $p<0.001$; $\beta_{43}=0.14$, $t=2.07$, $p<0.05$; respectively. Thus, *H6a* and *H6b* were also supported.

DISCUSSION
Through this study, we successfully developed a model of consumers' adoption of highly technological fashion products (HTFPs) by modifying the technology acceptance model (TAM). This is the first known study to examine the underlying relationships between motivations, consumers' two-dimensional attitudes (utilitarian and hedonic) and purchase intentions in a consumer-related product context. Furthermore, this study also responds to concerns raised by researchers who suggest that the modified TAM model should incorporate other motivational variables to enhance the predictive and explanatory power of the model (Davis *et al.*, 1992; Hu *et al.*, 1999). As detailed, this model incorporated intrinsic motivations related to product attributes (innovativeness and fashion) rather than benefits (enjoyment) that have been found in the literature: these intrinsic motivational variables have proved to be a critical factor in influencing consumers' utilitarian and hedonic attitudes and behavioral intentions in our study. In addition, these two intrinsic motivations contribute an almost equal role in influencing behavioral intentions through consumers' attitudes.

In general, our empirical results revealed that consumers' intentions to adopt an innovation (i.e. technological fashion product) are driven by the multi-dimensional nature of consumers' intrinsic (i.e. perceived innovativeness and perceived fashionability) and extrinsic (i.e. perceived usefulness and perceived ease of use) motivation. Additively, these motivational dimensions contribute to consumers' utilitarian and hedonic attitude toward using an innovation, which in turn affects their likelihood to purchase. The study found that all hypothesized relationships are supported except the relationship between perceived ease of use and perceived usefulness (γ

$_{11}$=0.09, t=1.37, p>0.05) and the perceived ease of use and consumers' hedonic attitude (γ $_{31}$=0.05, t=0.98, p>0.05). Although Davis and his colleagues (Davis, 1989; Davis *et al.*, 1989) suggest perceived ease of use as a determinant of perceived usefulness, empirical reports related to this relationship have been mixed. Despite the significant relationship between perceived ease of use and perceived usefulness reported in Bruner and Kumar's (2005) study of consumer acceptance of handheld internet devices, Agarwal and Karahann's (2000) and Yi and Hwang's (2003) studies found that perceived ease of use has no significant effect on perceived usefulness in the contexts of information technology usage and web-based information system usages, respectively. A possible explanation for the result is that perceived ease of use may not be a good predictor of perceived usefulness because these young consumers may have become familiar with the highly technological fashion product (the stimuli used in this study, pictures of LG Prada cell phone's touch screen, shared some similarities with an iphone) as a part of their daily lives. Thus, they may not view the product as being difficult to use and have an expectation that the product will perform what it should do (i.e. communication). In addition, results from the correlation shown in Table II showed that perceived ease of use was not significantly correlated with perceived usefulness (r=0.10, p>0.5) and from the SEM revealed that perceived ease of use explained only 0.8 percent variance in perceived usefulness, implying that perceived ease of use may not be a good predictor of perceived usefulness in the context of the adoption of highly technological fashion products. However, this finding needs further empirical validation.

Another unexpected result revealed in the current study is that perceived ease of use has no significant effect on consumers' hedonic attitude. This may be because consumers perceive a product that is easy to use as irrelevant to affective gratification derived from product usage. In addition, items used to capture the perceived ease of use construct tend to reflect one's effort and the complexity of the product itself; therefore, the ease of use of a product may not correlate with fun and enjoyment of using that product. Also, several studies have reported that perceived ease of use is less likely to influence consumers' attitudes as compared to perceived usefulness (Childers *et al.*, 2001; Davis, 1989; Hu *et al.*, 1999).

Another interesting insight showed by this study involves the introduction of consumers' utilitarian and hedonic attitudes into the model. As stated earlier, no known TAM study has conceptualized consumer attitude as a bi-dimensional construct and examined its effect on purchase intention. Our results shed new light on the relative impact of consumers' utilitarian and hedonic attitude on purchase intentions. The findings reinforced the notion that attitudes are multidimensional in nature (Bagozzi and Burnkrant, 1979) and that complex ramifications in consumers' adoption of an innovation context can be fully understood through two distinct dimensions: utilitarian and hedonic. Thus, conceptualizing consumers' attitudes as a bi-dimensional construct helps one to further understand not only attitude-behavioral phenomena, but also the process and outcome of consumer adoption.

In sum, the overall results confirm the importance of understanding the effect of intrinsic and extrinsic motivations on consumers' adoption of an innovation. These four motivators (i.e. perceived ease of use, perceived usefulness, perceived innovativeness, and perceived fashionability) aid in better understanding consumers' adoption of a new product. In addition, these four motivational variables tend to capture some prerequisites that are critical in determining the success of a new product (i.e. complexity, observability, and relative

advantages) as identified by Rogers (1995). The findings also add to our understanding of the importance of consumers' utilitarian and hedonic attitudes in predicting an adoption of a new product. All in all, our model suggests that the consumer decision-making process relative to high-tech fashion products is complicated, comprising different influences in a multi-dimensional structure of motivational and attitudinal variables.

Implications

The findings of this study provide several unique theoretical and managerial contributions for the adoption of highly technological fashion products among Generation Y consumers. At the theoretical level, this study has demonstrated the development of a theoretical model for exploring consumers' adoption of highly technological products. Particularly, this study has broadened the TAM by integrating extrinsic and intrinsic motivational variables into the model: it has also deepened the TAM by conceptualizing consumers' attitudes as comprised of two distinct dimensions: utilitarian and hedonic. These two dimensions of consumer attitudes have helped researchers gain a better understanding of the relationship between attitudes and behavior. That is, the overall variance explained in purchase intention was partly from utilitarian and hedonic consumers' attitudes, not just consumers' attitudes in the general sense.

At the managerial level, our results provide evidence of consumers' adoption of highly technological products and provide insights into the relative roles of antecedents and consumers' attitudes. Consumers' utilitarian and hedonic consumer attitudes may enable retailers and marketers to design effective advertising campaigns by helping them to determine whether the sensational or functional components of the product need to be emphasized. As the results of our study suggest, there is little need for marketers to focus on the ease of use related characteristics of a highly technical fashion product when targeting the Generation Y consumer. Consumers' utilitarian and hedonic attitudes may be employed as segmenting variables to target different consumer groups. For example, males may be attracted to functionality of an innovation whereas females may be drawn by the style or brand name associated with an innovation. Likewise, younger consumers may be more concerned with the social meanings conveyed by an innovation than older consumers. Furthermore, when developing a new product, marketers need to focus on product attributes that possess both functionality and hedonic benefits. It is evident that that the utilitarian and hedonic benefits of product usage can trigger consumers' extrinsic and intrinsic motivation to engage in purchasing behavior.

Limitations and avenues for further research

Like any research effort, some limitations of the current study should be noted. The generalizability of the results may be limited because the current study uses a student sample. Future research needs to replicate this model and examine the underlying relationships with young consumers in general and maybe Generation C (C stands for content) consumers whose focus is on content-related activities such as sending text messages, images, or VDO clips over the web. These Generation C consumers range from Generation Y to generation X consumers. However, since the purpose of the study was to develop and test consumers' adoption of highly technological fashion products with Generation Y college-aged consumers, this is not an overwhelming concern (Calder *et al.*, 1981). Replication of the findings is also needed within the context of consumers' adoption of an innovation, particularly the relationship between perceived ease of use and perceived usefulness that we found insignificant in our study. Lastly, we believe

that personality traits such as innovativeness could play an important role to better explain the effects of intrinsic and extrinsic motivations on consumers' attitudes and behavioral intentions and how the effects of these motivations on consumers' attitudes and behavioral intentions differ.

REFERENCES

Agarwal, R., Karahann, E. (2000), "Time flies when you're having fun: cognitive absorption and beliefs about information technology usage", *MIS Quarterly*, Vol. 24 pp.665-94.

Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50 pp.179-211.

Ajzen, I., Fishbein, M. (1980), *Understanding Attitudes and Predicting Social Behavior*, Prentice-Hall, Englewood Cliffs, NJ.

Anderson, J.C., Gerbing, D.W. (1998), "Structural equation modeling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 No.3, pp.411-23.

Babin, B.J., Darden, W.R., Griffin, M. (1994), "Work and/or fun? Measuring hedonic and utilitarian shopping value", *Journal of Consumer Research*, Vol. 20 No.4, pp.644-56.

Bagozzi, R.P. (1986), *Principle of Marketing Management*, Science Research Associate, Inc., Chicago, IL.

Bagozzi, R.P., Burnkrant, R.B. (1979), "Attitude measurement and behavior change: a reconsideration of attitude organization and its relationship to behavior", *Advances in Consumer Research*, Vol. 6 No.1, pp.295-302.

Bagozzi, R.P., Yi, Y., Phillips, L.W. (1991), "Assessing construct validity in organizational research", *Administrative Science Quarterly*, Vol. 36 No.3, pp.421-58.

Batra, R., Ahtola, O.T. (1990), "Measuring the hedonic and utilitarian sources of consumer attitudes", *Marketing Letters*, Vol. 2 No.2, pp.159-70.

Bearden, W.O., Sharma, S., Teel, J.E. (1982), "Sample size effects on chi square and other statistics in evaluating causal models", *Journal of Marketing Research*, Vol. 19 No.4, pp.425-30.

Bentler, P.M. (1990), *EQS Structural Equations Program Manual*, Multivariate Software Inc., Encino, CA.

Berlyne, D.E. (1966), "Curiosity and exploration", *Science*, Vol. 153 pp.25-33.

Blythe, J. (1999), "Innovativeness and newness in high-tech consumer durable", *Journal of Product & Brand Management*, Vol. 8 pp.415-29.
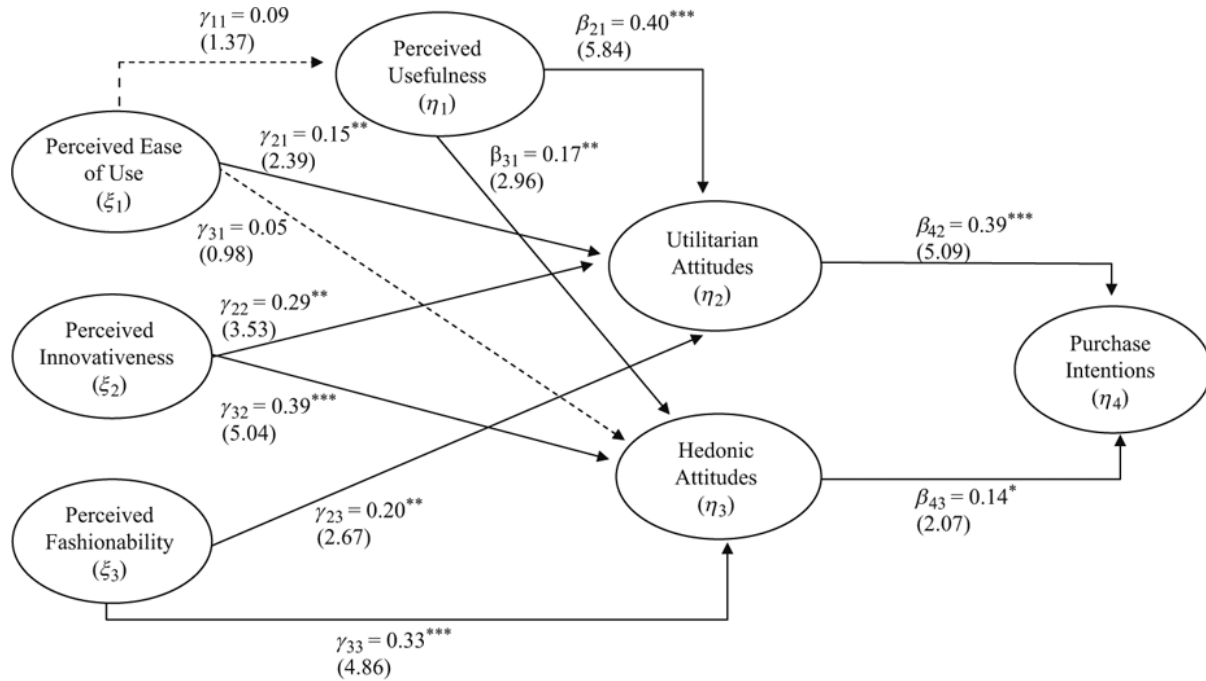
Bollen, K.A. (1989), *Structural Equations with Latent Variables*, John Wiley & Sons, New York, NY.

Brown, S.P., Peterson, R.A. (1994), "The effect of effort on sales performance and job satisfaction", *Journal of Marketing*, Vol. 58 No.2, pp.70-80.

Browne, M.W., Cudeck, R. (1993), "Alternative ways of assessing model fit", in Bollen, K.A., Long, J.S. (Eds),*Testing Structural Equation Models*, Sage, Newbury Park, CA, pp.136-62.

Bruner, G.C. II, Kumar, A. (2005), "Applying TAM to consumer usage of hand-held internet devices", *Journal of Business Research*, Vol. 58 pp.553-8.

Calder, B.J., Phillips, L.W., Tybout, A.M. (1981), "Designing research for application", *Journal of Consumer Research*, Vol. 8 pp.197-207.

Carmines, E., McIver, J. (1981), "Analyzing models with unobserved variables: analysis of covariance structures", in Bohrnstedt, G., Borgatt, E. (Eds),*Social Measurement: Current Issues*, Sage, Beverly Hills, CA, .

Childers, T.L., Carr, C.L., Peck, J., Carson, S. (2001), "Hedonic and utilitarian motivations for online retail shopping behavior", *Journal of Retailing*, Vol. 77 pp.511-36.

Dabholkar, P.A., Bagozzi, R.P. (2002), "An attitudinal model of technology-based self-service: moderating effects of consumer traits and situational factors", *Journal of the Academy of Marketing Science*, Vol. 30 pp.184-202.

Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and end user acceptance of information technology", *MIS Quarterly*, Vol. 13 pp.318-39.

Davis, F.D., Bagozzi, R.P., Warshaw, P.R. (1989), "User acceptance of computer technology: a comparison of two theoretical models", *Management Sciences*, Vol. 35 pp.982-1003.

Davis, F.D., Bagozzi, R.P., Warshaw, P.R. (1992), "Extrinsic and intrinsic motivation to use computers in the workplace", *Journal of Applied Social Psychology*, Vol. 14 pp.1111-32.

Deci, E.L. (1971), "Effects of externally mediated rewards on intrinsic motivation", *Journal of Personality and Social Psychology*, Vol. 18 pp.105-15.

Deci, E.L. (1972), "Intrinsic motivation, extrinsic reinforcement, and inequity", *Journal of Personality and Social Psychology*, Vol. 22 pp.113-20.

Dhar, R., Wertenbroch, K. (2000), "Consumer choice between hedonic and utilitarian goods", *Journal of Marketing Research*, Vol. 37 pp.60-71.

Doll, W., Xia, J., Torkzadeh, G.A. (1994), "A confirmatory factor analysis of the end-user computing satisfaction instrument", *MIS Quarterly*, Vol. 18 pp.453-61.

Evans, M. (1989), "Consumer behavior towards fashion", *European Journal of Marketing*, Vol. 23 No.7, pp.7-16.

Fishbein, M., Ajzen, I. (1975), *Belief, Attitude, Intention, and Behavior: An Introductory to Theory and Research*, Addison-Wesley, Reading, MA.

Fornell, C., Larcker, D.F. (1981), "Structural equation models with unobservable variables and measurement error: algebra and statistics", *Journal of Marketing Research*, Vol. 18 pp.382-8.

Hirunyawipada, T., Paswan, A.K. (2006), "Consumer innovativeness and perceived risk: implications for high technology product adoption", *Journal of Consumer Marketing*, Vol. 23 No.4, pp.182-98.

Holbrook, M.B., Hirschman, E.C. (1982), "The experiential aspects of consumption: consumer fantasies, feelings, and fun", *Journal of Consumer Research*, Vol. 9 pp.132-40.

Hu, P., Chau, P., Sheng, O.L., Tam, K.Y. (1999), "Examining the technology acceptance model using physician acceptance of telemedicine technology", *Journal of Management Information Systems*, Vol. 16 pp.91-113.

Huang, J-J., Tzeng, G.-H., Ong, C.-S. (2006), "Choosing best alliance partners and allocating optimal alliance resources using the fuzzy multi-objective dummy programming model", *Journal of the Operational Research Society*, Vol. 57 pp.1216-23.

Jöreskog, K.G., Sörbom, D. (1993), *LISREL 8 User's Reference Guide*, Scientific Software, Chicago, IL.

Kleinschmidt, E.J., Copper, R.J. (1991), "Impact of innovativeness on performance", *Journal of Product Innovation Management*, Vol. 8 No.4, pp.240-51.

Larcker, D.F., Lessig, V.P. (1980), "Perceived usefulness of information: a psychometric examination", *Decision Sciences*, Vol. 11 No.1, pp.121-34.

Law, K.M., Zhang, Z.-M., Leung, C.-S. (2004), "Fashion change and fashion consumption: the chaotic perspective", *Journal of Fashion Marketing and Management*, Vol. 8 No.4, pp.362-74.

Lee, M.K.O., Cheung, C.M.K., Chen, Z. (2005), "Acceptance of internet-based learning medium: the role of extrinsic and intrinsic motivation", *Information and Management*, Vol. 42 No.8, pp.1095-104.

MacInnis, D.J., Moorman, C., Jaworski, B.J. (1991), "Enhancing and measuring consumers' motivation, opportunity, and ability to process brand information from ads", *Journal of Marketing*, Vol. 55 No.4, pp.32-53.

Marsh, H.W., Balla, J.R., McDonald, R.P. (1988), "Goodness-of-fit indices in confirmatory factor analysis: the effect of sample size", *Psychological Bulletin*, Vol. 103 pp.391-410.

Midgley, D.F., Dowling, G.R. (1978), "Innovativeness: the concept and its measurement", *Journal of Consumer Research*, Vol. 4 pp.229-42.

Mitchell, T.R., Biglan, A. (1971), "Instrumentality theories: current uses in psychology", *Psychological Bulletin*, Vol. 76 No.6, pp.432-54.

Nunnally, J.C., Bernstein, I. (1994), *Psychometric Theory*, 3rd ed., McGraw-Hill, New York, NY.

Olney, T.J., Holbrook, M.B., Batra, R. (1991), "Consumer responses to advertising: the effect of ad content, emotions, and attitude toward the ad on viewing time", *Journal of Consumer Research*, Vol. 17 No.4, pp.440-53.

Petty, R.E., Cacioppo, J.T., Schumann, D.W. (1983), "Central and peripheral routes to advertising effectiveness: the moderating role of involvement", *Journal of Consumer Research*, Vol. 10 pp.135-46.

Ramstad, E., Fowler, G.A. (2007), "The cellphone wears Prada", *Wall Street Journal*, Vol. 249 No.15, pp.B5.

Roberts, A. (2006), "A time for business to act fast", *Chartered Accountants Journal*, Vol. 85 No.3, pp.6-8.

Rogers, E.M. (1995), *The Diffusion of Innovation*, The Free Press, New York, NY.

Ryan, R.M., Deci, E.L. (2000), "Intrinsic and extrinsic motivations: classic definitions and new directions", *Contemporary Educational Psychology*, Vol. 25 No.1, pp.54-67.

Schumann, D.W., Lee, J., Watchravesringkan, K. (2003), "The case of separation of Asian Americans ethnic groups as we consider our target-market strategies", in Williams, J.D., Lee, W.-N., Haugtvedt, C.P. (Eds),*Diversity in Advertising: Broadening the Scope of Research Directions*, Lawrence Erlbaum, Mahwah, NJ, pp.341-55.

Solomon, M. (2007), *Consumer Behavior: Buying, Being, and Having*, 7th ed., Pearson Education Inc., Upper Saddle River, NJ.

Sproles, G., Burns, L. (1994), *Changing Appearances: Understanding Dress in Contemporary Society*, Fairchild, New York, NY.

Venkatraman, M. (1991), "The impact of innovativeness and innovation type on adoption", *Journal of Retailing*, Vol. 67 No.1, pp.51-67.

Voss, K.E., Spangenberg, E.R., Grohmann, B. (2003), "Measuring the hedonic and utilitarian dimensions of consumer attitude", *Journal of Marketing Research*, Vol. 50 pp.310-20.

Yi, M.Y., Hwang, Y. (2003), "Predicting the use of web-based information systems: self-efficacy, enjoyment, learning goal orientation, and the technology acceptance model", *International Journal of Human-Computer Studies*, Vol. 59 pp.431-49.

Figure 1: Model predicting consumers' adoption of technological fashionable product

$\gamma_{11} = 0.09$ (1.37)

Perceived Usefulness (η_1)

$\beta_{21} = 0.40^{***}$ (5.84)

Perceived Ease of Use (ξ_1)

$\gamma_{21} = 0.15^{**}$ (2.39)

$\beta_{31} = 0.17^{**}$ (2.96)

$\gamma_{31} = 0.05$ (0.98)

Utilitarian Attitudes (η_2)

$\beta_{42} = 0.39^{***}$ (5.09)

$\gamma_{22} = 0.29^{**}$ (3.53)

Perceived Innovativeness (ξ_2)

Purchase Intentions (η_4)

$\gamma_{32} = 0.39^{***}$ (5.04)

Hedonic Attitudes (η_3)

Perceived Fashionability (ξ_3)

$\gamma_{23} = 0.20^{**}$ (2.67)

$\beta_{43} = 0.14^{*}$ (2.07)

$\gamma_{33} = 0.33^{***}$ (4.86)

Note: $^*p \leq 0.05$; $^{**}p \leq 0.01$; and $^{***}p \leq 0.001$

Table I: Participants' characteristics (n=268)

Characteristics	n	%
Gender		
Male	35	13.06
Female	233	86.94
School/college		
School of Human Environmental Sciences	187	69.78
College of Art and Science	36	13.43
School of Education	21	7.84
School of Business	13	4.85
School of Nursing	5	1.87
School of Heath and Human Performance	2	0.75
Undecided	2	0.75
Did not answer	2	0.75
Year at school		
Freshman	39	14.55
Sophomore	95	35.45
Juniors	65	24.25
Seniors	69	25.75
Annual household income		
Less than $40,000	105	39.18
Between $40,000-$80,000	56	20.90
More than $80,000	79	29.48
Did not answer	28	10.45
Average age	20.64	

Table I.
Participants'
characteristics ($n = 268$)

Table II: Means, standard deviations, and correlation matrix of latent constructs

			Correlations						
Model variables	Mean	SD	1	2	3	4	5	6	7
1. Perceived ease of use	3.35	0.84	1.00						
2. Perceived usefulness	2.97	0.84	0.10	1.00					
3. Perceived innovativeness	3.71	0.82	0.06	0.27***	1.00				
4. Perceived fashionability	4.08	0.90	0.15*	0.11	0.48***	1.00			
5. Utilitarian attitudes	3.63	0.85	0.22**	0.35***	0.28***	0.27***	1.00		
6. Hedonic attitudes	3.86	0.85	0.12	0.23**	0.45***	0.45***	0.69***	1.00	
7. Purchase intentions	2.57	0.98	0.22**	0.46***	0.30***	0.24***	0.35***	0.33***	1.00

Note: *Correlation is significant at the 0.05 level; **correlation is significant at the 0.01 level; ***correlation is significant at the 0.001 level

Table III: Fit indexes for model

Fit indices	Acceptable value	Sources	Results from the study	
			Measurement model	Structural model
Chi-square	Non-significant ($p > 0.05$)	Jöreskog and Sörbom (1993)	$\chi^2 = 379.13$, df = 232, $p < 0.001$	$\chi^2 = 456.57$, df = 228, $p < 0.001$
Normed chi-squared (χ^2/df)	<3.00	Carmines and McIver (1981)	1.63	2.00
Goodness-of-fit index (GFI)	>0.80	Doll et al. (1994); Marsh et al. (1988)	0.90	0.88
Adjusted goodness-of-fit index (AGFI)	>0.80	Doll et al. (1994); Marsh et al. (1988)	0.86	0.83
Comparative fit index (CFI)	>0.90	Bentler (1990); Bollen (1989)	0.98	0.97
Tucker-Lewis index (TLI)	>0.90	Bentler (1990); Bollen (1989)	0.98	0.96
Root-mean-square of approximation (RMSEA)	<0.08	Browne and Cudeck (1993)	0.048	0.061

Table IV: Measurement model results

Construct/indicators	Standardized factor loading	SE	t value	CR	AVE (%)
ξ_1 (Perceived ease of use)				0.91	73.00
X_1 (Will be complicated to use a product)*	0.92^a	–	–		
X_2 (Will be confusing to use a product)*	0.97	0.036	29.08***		
X_3 (Will take a lot of effort to use a product)*	0.84	0.045	20.42***		
X_4 (Will be easy to use a product)	0.65	0.055	12.79***		
ξ_2 (Perceived innovativeness)				0.79	55.33
X_5 (The product is unique)	0.76^a	–	–		
X_6 (The product is new)	0.72	0.092	10.46***		
X_7 (The product is innovative)	0.75	0.092	10.79***		
ξ_3 (Perceived fashionability)				–	–
X_8 (The product is fashionable)	0.95^a	–	–		
η_1 (Perceived usefulness)				0.90	74.33
γ_1 (Will improve communication ability)	0.83^a	–	–		
γ_2 (Will enhance effectiveness in communication)	0.91	0.063	17.24***		
γ_3 (The use of a product will be advantageous)	0.84	0.063	15.98***		
η_2 (Utilitarian attitudes)				0.85	57.75
γ_4 (Effectiveness/ineffectiveness)	0.80^a	–	–		
γ_5 (Functional/not functional)	0.79	0.073	13.42***		
γ_6 (Practical/impractical)	0.66	0.075	10.86***		
γ_7 (Useful/useless)	0.78	0.073	13.41***		
η_3 (Hedonic attitudes)				0.87	66.25
γ_8 (Fun/not fun)	0.79^a	–	–		
γ_9 (Delightful/not delightful)	0.85	0.079	15.35***		
γ_{10} (Enjoyable/unenjoyable)	0.89	0.069	16.27***		
γ_{11} (Thrilling/not thrilling)	0.72	0.073	12.58***		
η_4 (Purchase intention)				0.95	78.40
γ_{12} (Would actively seek out a product)	0.90^a	–	–		
γ_{13} (Would buy the product next time)	0.92	0.043	23.62***		
γ_{14} (Would be likely to purchase a product, if available in the area)	0.92	0.043	23.57***		
γ_{15} (Would try a product next time I need a product of this nature)	0.86	0.047	20.27***		
γ_{16} (My intention to purchase is strong)	0.82	0.050	18.34***		

Notes: [a]First λ path was set to 1 – therefore, no SEs or t-values are given; *$ps \leq 0.05$; **$ps \leq 0.01$; ***$ps \leq 0.001$; CR = Composite reliability; AVE = average variance extracted