

Online Purchase Intentions for Product Categories -The Functions of Internet Motivations and Online Buying Tendencies-

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상품 범주별 온라인 구매의도 -인터넷 동기와 온라인 구매성향의 기능-

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Abstract

This study explores an initial framework for online product categorization by examining the relationships among Internet motivations, buying tendencies, and online purchase intentions for product categories. A total of 217 usable questionnaires were obtained from respondents in a southwestern state in the United States. A path model using a correlation matrix with maximum likelihood was estimated using LISREL 8.53. Findings indicated that Internet motivations consisted of four factors: *Diversion, Economic, Information, and Social* motivations. In addition, online products were classified into three categories based on purchase intentions: *Sensory, Cognitive, and Search* products. Estimated path model showed that diversion and economic motivations affected impulse buying tendency, whereas economic, information and social motivations influenced planned buying tendency in the online context. Also, the buying tendencies were significantly related to online purchase intentions for the product categories. Purchase intentions for sensory products were more strongly affected by impulse buying tendency, whereas purchase intentions for cognitive and search products were more strongly affected by planned buying tendency. Theoretical and managerial implications were discussed for devising an appropriate e-market strategy for specific product categories.

Key words: Buying tendencies, Internet motivation, Online purchase intentions, Product category; 구매 성향, 인터넷 동기, 온라인 구매의도, 상품 범주

I. Introduction

Internet has grown considerably and viewed as a tool for communication, entertainment and market exchange. Given the competing electronic commerce, a successful retailing depends to a large extent on the characteristics of the products and services being offered in online market. In particular, product categorization has been dis-

cussed in terms of goods that can be evaluated on the basis of information search and products that must be tried; cognitive(e.g., books, software) and sensory experiential(e.g., apparel, accessories) goods(Klein, 1998; Peterson et al., 1997; Shim et al., 2000). The researchers dealt with product categorization primarily at the conceptual level rather than on empirically tested results based on consumer motivational and behavioral variables in the context of online shopping.

From a motivational perspective, previous studies

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extended the notion of consumer buying tendencies to a more product-specific variable (Hausman, 2000; Jones et al., 2003; Rohm & Swaminathan, 2004). Rohm and Swaminathan (2004) profiled consumers based on their motivations for online shopping and identified product classes they would most likely purchase. Particularly, supportive researchers (Cho et al., 2003; Jones et al., 2003; Phau & Lo, 2004) have focused on hedonic aspects of impulse buying behavior for a specific product. They suggested that impulse buying tendencies played an important role in predicting their purchase behaviors. In addition, purchased product is influenced consumer buying tendencies driven from specific motivations, predicting their online purchase intentions (Girard et al., 2003; Shim et al., 2000). Those researches had just a specified product, not incorporated various products for predicting hedonic aspect of purchase behavior. Also, there has been little study to ascertain relative magnitudes in predicting hedonic function of the Internet motivations and buying tendencies on purchase intentions per product categories. Therefore, it is necessary to understand an approach to online product depending classification scheme by motivational aspect of buying tendencies and online purchase intentions. This study seeks to categorize online products depending on buying tendencies driven by their motivations in an online retail setting by focusing on college students. Specifically, this study were to: (a) identify dimensions of Internet motivations, (b) classify product categories based on online purchase intentions, and (c) estimate path model for examining causal relationships among Internet motivations, buying tendencies, and online purchase intentions for product categories in the online shopping context. This study provides insight into an online product classification scheme that consumers perceive to be related and/or substitutable, which can assist online retailers develop merchandising strategies.

II. Conceptual Background

1. Motivations for Internet Use

Within a consumer behavior context, *motivation* refers to “an activated state within a person that leads to goal-directed behavior. It consists of the drives, urges, wishes or desire that initiate the sequence of events leading to a

behavior” (Mowen, 1995). In the Internet context, researchers considered a gratification approach to understanding consumers' Internet uses, including process, content, and social gratifications (Stafford et al., 2004). According to Korgaonkar and Wolin (1999), web users' motivation was conceptualized as followings: (a) Social escapism or entertainment, (b) Information search or self-education, (c) Economic or utilitarian benefits that include free download and price comparisons, (d) Interactive control that allows the user to customize the experience, and (e) Socialization for users who want to share the experience with friends.

Recently, researchers (Hoffman et al., 2003; Roy, 1994; Sánchez-Franco & Roldán, 2005) have suggested that Web usage encompassed two aspects: extrinsic (utilitarian) and intrinsic (hedonic) motives. When conducting online information searches, consumers are generally extrinsically motivated and seek utilitarian benefits, which lead to planned purchases (Hoffman et al., 2003). In contrast, consumers are intrinsically motivated for the Internet usage. They enjoy the processing of the Internet uses and random browsing for hedonic benefits, such as pleasures and entertainment (Hoffman & Novak, 1996) that can lead to compulsive shopping and impulse purchases (Hoffman et al., 2003). This supports the dichotomy of motivations in traditional retail channels (Bloch et al., 1994; Roy, 1994). Thus, the Internet uses may be motivated for various purposes which are driven from hedonic and utilitarian needs.

2. Consumer Buying Tendencies: Impulse vs. Planned

Subsequent research on consumer Internet motivations combined with consumer buying tendencies (Hoffman et al., 2003; Joines et al., 2003; Park & Lennon, 2006). Traditionally, *impulse buying* behavior is “a sudden and immediate purchase with no pre-shopping intentions either to buy a specific product category or to fulfill a specific buying task” (Beatty & Ferrell, 1998). The nature of impulse buying is that of a novelty or an escape purchase that deviates from a consumer's typical decision-making pattern (Madhavaram & Laverie, 2004). According to Hausman's (2000) study on traditional retail setting, impulse buying tendency was strongly related to hedonic motivations for diversion, variety seeking, and novelty because it provided hedonic rewards. Other researchers

seem to agree that impulse buying involves a hedonic component (Cobb & Hoyer, 1986; Park et al., 2006). Similarly, Ramanathan and Menon (2006) argued that hedonic gratification underlies most impulse buying in online shopping.

In contrast to impulse buying, *planned buying* refers to purchase behavior that can involve a time-consuming information search followed by rational decision making (Piron, 1991). Primarily, planned buying emphasizes the rational, information-processing approach to consumer purchase behavior. Online consumers are primarily motivated by utilitarian reasons and convenience which encourage planned purchases rather than seekers of hedonic or experiential value (Bakos, 1997; Donthu & Garcia, 1999; Madhavaram & Laverie, 2004; Overby & Lee, 2006; Taylor & Cosenza, 2001). Planned buying involves utilitarian components because it provides a functional reward. The planned buying increases the tendency for individuals to think about the reward (Sánchez-Franco & Roldán, 2005). Therefore, the following hypotheses were developed:

Hypothesis 1: Consumers' Internet motivations are positively related to online buying tendencies in the context of online shopping. Specifically, hedonic-driven motivation is more strongly related to impulse buying tendency (H1a), while utilitarian-driven motivation is more strongly related to planned buying tendency (H1b).

3. Product Classification Scheme for the Online Market

1) Online Product Classification

A product classification scheme is identified based upon consumers' manageable product attributes in an online retail setting because online transactions differ from traditional exchanges. For instance, Peterson et al. (1997) classified products and services as being either search or experience goods. The features of search goods can be objectively assessed using readily available information, whereas experience goods need to be personally inspected or tried. Also, Klein (1998) suggested that online product classification is determined by its two types of attributes. Search goods are defined as those dominated by product attributes for which full informa-

tion can be acquired prior to purchase; however, experience goods are dominated by attributes that cannot be known until purchase and use of the product or for which the information search is more costly and/or difficult than direct product experience.

Another approach to the product classification scheme is to redefine experience products as different types of products in the online shopping context. Cho et al. (2003) identified the experience products classification by segmenting them into two categories: Sensory products (e.g., suits) were defined as products with attributes that can be conveyed through our senses (e.g., touch); and non-sensory products (e.g., books) were defined as products with attributes that can be conveyed reasonably well in words. Similarly, Shim et al. (2000) suggested that product categories may differ by the type of information that consumers typically need for evaluation prior to purchase. They classified online products into two categories: cognitive and sensory experiential products. Cognitive products refer to goods (e.g., books, computer software, music, and video) for which purchase decisions would involve predominantly perceptual and/or intellectual skills to examine various forms of product data (e.g., facts, figures, and testimony of experts). In contrast, sensory experiential products (e.g., apparel and accessories) are goods for which consumers seek evaluative information through one or more of the five senses (e.g., touch, sight, and smell).

2) Buying Tendencies and Purchase Intentions for Product Category

Traditionally, the taxonomical research approach classified products into impulse and non-impulse categories based on buying tendencies (Bellenger et al., 1978; Cobb & Hoyer, 1986; Rook, 1987). Of particular interest is whether impulsive buying tendency is an important driver of purchase intentions for sensory products, such as clothing and jewelry that are the most impulsively purchased items (Bellenger et al., 1978; Phau & Lo, 2004). According to Jones et al. (2003), the impulse buying tendency for clothing was positively associated with clothing impulse purchases. For online shopping, sensory fashion products (e.g., clothing) were more likely than others to be impulsively purchased (Phau & Lo, 2004). It can be speculated that consumer impulse buying tendency is likely to increase purchase intentions for sensory

products over the Internet.

On the other hand, planned buying tendency involving utilitarian goal-directed information processing may be an important antecedent to increase consumers' purchase intentions. The higher level of online purchase intentions for cognitive products was expected because perceived risk in the purchase of cognitive products is generally lower than that of sensory experiential products in online shopping environments (Shim et al., 2000). Rohm and Swaminathan (2004) also suggested that consumers who seek various information tended to plan purchases and shopping trips and exhibited the most online purchase frequencies in books/magazines (i.e., cognitive products) and travel (i.e., search products). Therefore, it is assumed that purchase intentions may differ by buying tendencies (i.e., impulse vs. planned) across product categories. Thus, the following hypotheses were posed:

Hypothesis 2: Online buying tendencies are significantly related to online purchase intentions for product category. Specifically, impulse buying tendency is more likely to encourage online purchase intentions for sensory products (H2a); and planned buying tendency are more likely to encourage online purchase intentions for cognitive and search products (H2b).

III. Methods

1. Measures

A self-administered questionnaire was developed based upon existing scales in the literatures. For *Internet motivation*, a 26-item scale comprised of utilitarian and hedonic aspects measured motivations to use the Internet (Korgaonkar & Wolin, 1999). Five items of *online buying tendencies* were identified from the existing literature on traditional impulse and planned purchases (Beatty & Ferrell, 1998; Rook & Fisher, 1995). For measuring *online purchase intentions*, respondents were asked, "How likely would you be to purchase these products via the Internet in future?" for products including 11 of the top-ranked online products: books or magazines, computer related products, music tapes, CDs or videos, travel tickets or reservations, electronics, entertainment or leisure, financial services, clothing, accessories and

jewelry, and cosmetics and beauty products. All items were measured on a 7-point rating scale (1=very unlikely, 7=very likely).

2. Sampling and Data Collection

A convenience sample was drawn from college students at universities in a southwestern state in the United States. Self-administered questionnaires were completed during regularly scheduled classes, from January to February in 2006. Respondents were informed in writing that completing the questionnaire was anonymous, voluntary, and that there were no penalties for not participating. A total of 217 usable questionnaires were obtained from respondents who represented more female (59.9%) than male (40.1%) students. Average age of respondents was 21.7 years, ranging from 19 to 25 years. Respondents averaged 2.08 hours per day online ranging 1 to 10 hours. Also, they spent US \$30.42 per month for online purchases that ranged from \$1 to \$200 and considered themselves experts in computer knowledge ($M=5.07$, $SD=1.12$).

3. Data Analysis

Preliminarily, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were used for assessing validity and reliability of measurements. Cronbach's alpha established inter-item reliability between items for each factor. Also, path model was estimated by using correlation matrixes via LISREL 8.53. Overall model fit was assessed by statistic indexes: Chi-square (χ^2), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI) and Root Mean Squared Residual (RMR).

IV. Results and Discussion

1. Preliminary Factor Analysis

An exploratory factor analysis revealed four factors with eigenvalues of 1.0 or higher accounted for 67.74% of the total variance. In a confirmatory factor analysis, six items were deleted by using a criterion for factor loadings of .60 or higher. The result indicated that χ^2 values were 289.55 with 140 degrees of freedom, which was signi-

ficant($p < .001$). Other model fit indexes were within an acceptable range (GFI=.86, AGFI=.81, CFI=.96, RMR=.06). The factor loadings ranged from 0.67 to 0.96, which were significant ($p < .001$), and Cronbach's alphas of the factors ranged 0.82 to 0.93 (Table 1). Therefore, it was deemed that the factor of each motivation was valid and reliable.

The first factor, *Diversion motivation*, included 8 items

regarding consumers' Internet use for diversion, arousal of emotions, alleviating loneliness, and relieving stress. The second factor, *Economic motivation*, consisted of 4 items reflecting economic and convenient shopping, such as hunting for bargains or comparison shopping. The third factor, *Information motivation*, included 5 items indicating the Internet uses for obtaining information. This factor exhibits the highest mean score ($M=5.49$),

Table 1. Confirmatory factor analysis

Factors and Items	Factor Loadings ^a (t-value)	Mean	S.D
Internet Motivations			
<i>Diversion</i> ($\alpha=.87$; $AVE^b=.56$)			
Because I can forget about my problem.	.82 (13.91)	2.43	1.69
Because it arouses my emotions and feelings.	.76 (11.64)	2.13	1.35
Because it takes me into another world.	.79 (12.46)	2.72	1.73
Because it stirs me up.	.70 (10.47)	2.14	1.38
Because it make me feel less lonely.	.74 (11.28)	2.07	1.39
Because it shows me how to get along with others.	.74 (11.28)	1.78	1.33
Because I can get away from the routine.	.69 (10.20)	2.89	1.69
Because I relieve my stress.	.74 (11.65)	3.23	1.77
<i>Economic</i> ($\alpha=.93$; $AVE=.70$)			
To hunt for bargains.	.96 (16.99)	3.55	2.05
To find reasonable prices.	.96 (17.40)	3.76	1.93
To do comparison shopping.	.90 (15.55)	3.81	2.02
To enjoy the convenience of online shopping.	.79 (12.98)	3.78	2.07
<i>Information</i> ($\alpha=.86$; $AVE=.63$)			
Because I can obtain useful information.	.91 (15.62)	5.71	1.31
Because I can obtain inexpensive information.	.81 (13.43)	5.44	1.54
Because I can learn about things happening in the world.	.77 (12.12)	5.19	1.58
Because it gives me quick and easy access to a large volume of information.	.79 (12.45)	5.88	1.48
Because I can learn a lot from using the Web.	.67 (9.95)	5.20	1.57
<i>Social</i> ($\alpha=.82$; $AVE=.76$)			
To chat with my friends.	.82 (13.12)	3.88	2.10
Because I can visit my friends on the Web.	.94 (16.89)	4.27	1.91
Online Buying Tendencies			
<i>Impulse buying Tendency</i> ($\alpha=.86$; $AVE=.79$)			
I tend to make impulse buying via the Internet.	.93 (16.20)	2.43	1.84
I often make an online purchase, and think about it later.	.91 (15.66)	2.57	1.86
I have purchased online on the spur-of-the moment after seeing ads in the Internet.	.83 (13.59)	2.07	1.67
<i>Planned buying Tendency</i> ($\alpha=.83$; $AVE=.77$)			
I carefully plan most of my online purchase.	.82 (13.08)	4.07	2.08
I tend to make planned purchases online.	.93 (16.51)	4.20	2.10

^aall significant at .001

^bAverage Variance Extracted

supporting that young(i.e., college students) consumers are curious about new things and know what they want via the Internet(Brandt, 2005; Park & Lee, 2005). The fourth factor, *Social motivation*, included 2 items representing social interaction via chatting and meeting friends over the web.

For online buying tendency, a confirmatory factor analysis also provided that χ^2 values were 28.81 with 5 degrees of freedom($p<.001$) and other model fits were relatively acceptable(GFI=.94, AFGI=.82, CFI=.96, RMR=.07): *Impulse buying tendency* included three items; and *Planned buying tendency* consisted of two items. Mean score of planned buying tendency($M=4.13$) is higher than that of impulse buying tendency($M=2.36$).

2. Product Categories by Online Purchase Intentions

In aforementioned literatures, products conceptually differ in consumer information processing to evaluate products, which may vary purchase intentions across different products. The purchase intentions may be useful in product classifications to contingent upon a shopping situation. Therefore, this study utilizes consumers' purchase intention to categorize products in the online context.

A confirmatory factor analysis was employed for vali-

dating the product categories associated with online purchase intentions driven from exploratory factor analysis. As shown in <Table 2>, overall model fit of the three-factor structure was relatively good($\chi^2=82.67$, $df=41$, $p=.0001$; $GFI=.93$; $AGFI=.89$; $CFI=.95$; $RMR=.06$). It also shows adequate reliability for three product category factors(i.e., reliability ranging from .69 to .85) with all significant factor loadings at the .001 level.

Product category 1: *Sensory Products* included accessories and jewelry, cosmetics and beauty products, and clothing in which purchase decisions would involve predominantly experiential evaluations by human senses, such as feeling or touching. Product category 2: *Cognitive Products* included four products for which purchase decisions involve predominantly perceptual and/or intellectual evaluation skills(Shim et al., 2000). Although one might expect music tapes and CDs to require sensory experience, consumers are highly involved in cognitive information search when purchasing these items over the Internet(Li & Gery, 2000). The two categories of cognitive and sensory products supports previous product classifications based on different types of information that consumers need to evaluate prior to purchase(Cho et al., 2003; Shim et al., 2000). Product category 3: *Search Products* include four product items(e.g., entertainment or leisure, travel tickets or reservations) for which full information can be typically

Table 2. Product categories by online purchase intentions

Product Categories and Items	Factor Loadings ^a (t-value)	Mean	S.D	Rank ^c
<i>Sensory Products</i> ($\alpha=.86$; $AVE^b=.68$)		3.74	2.01	
Accessories and Jewelry	.92 (16.34)	3.65	2.30	6
Cosmetics and Beauty products	.79 (13.08)	3.05	2.26	10
Clothing	.76 (12.45)	4.53	2.26	2
<i>Cognitive Products</i> ($\alpha=.74$; $AVE=.49$)		3.78	1.51	
Computer related products	.67 (9.69)	3.59	2.08	7
Electronics (T.V, VCR, refrigerator, etc.)	.56 (7.88)	2.93	1.84	11
Music tape, CD, or videos	.69 (10.15)	4.37	2.05	3
Books or magazines	.66 (9.59)	4.25	2.07	4
<i>Search Products</i> ($\alpha=.69$; $AVE=.36$)		4.07	1.49	
Education	.52 (7.15)	3.41	2.01	9
Entertainment or leisure	.69 (10.03)	4.03	2.12	5
Travel ticket or reservation	.67 (9.64)	5.38	1.92	1
Financial service (stocks, banking etc.)	.53 (7.46)	3.48	2.18	8

^aall significant at .001

^bAverage Variance Extracted

^cRanked the mean scores of purchase intention per each product

Goodness of Fit Statistics: $\chi^2=82.67(df=41, p<.001)$, $GFI=.93$, $AGFI=.89$, $CFI=.95$, $RMR=.06$

acquired from externally provided information prior to purchase. This category is consistent with the search products suggested by Klein(1998). Also, its features can be assessed accessing useful resources like server connections as well as online utilities that assist users in accomplishing specific tasks(Hui & Chau, 2002; Peterson et al., 1997). Descriptive analysis determined the mean of purchase intentions for search products, which had the highest mean($M=4.07$), followed by cognitive products($M=3.78$) and sensory products($M=3.74$). This finding also corresponds to a recent report that the younger consumers(less than 30 years) shopped online more for travel services, CD/music, and jewelry(Sorce et al., 2005).

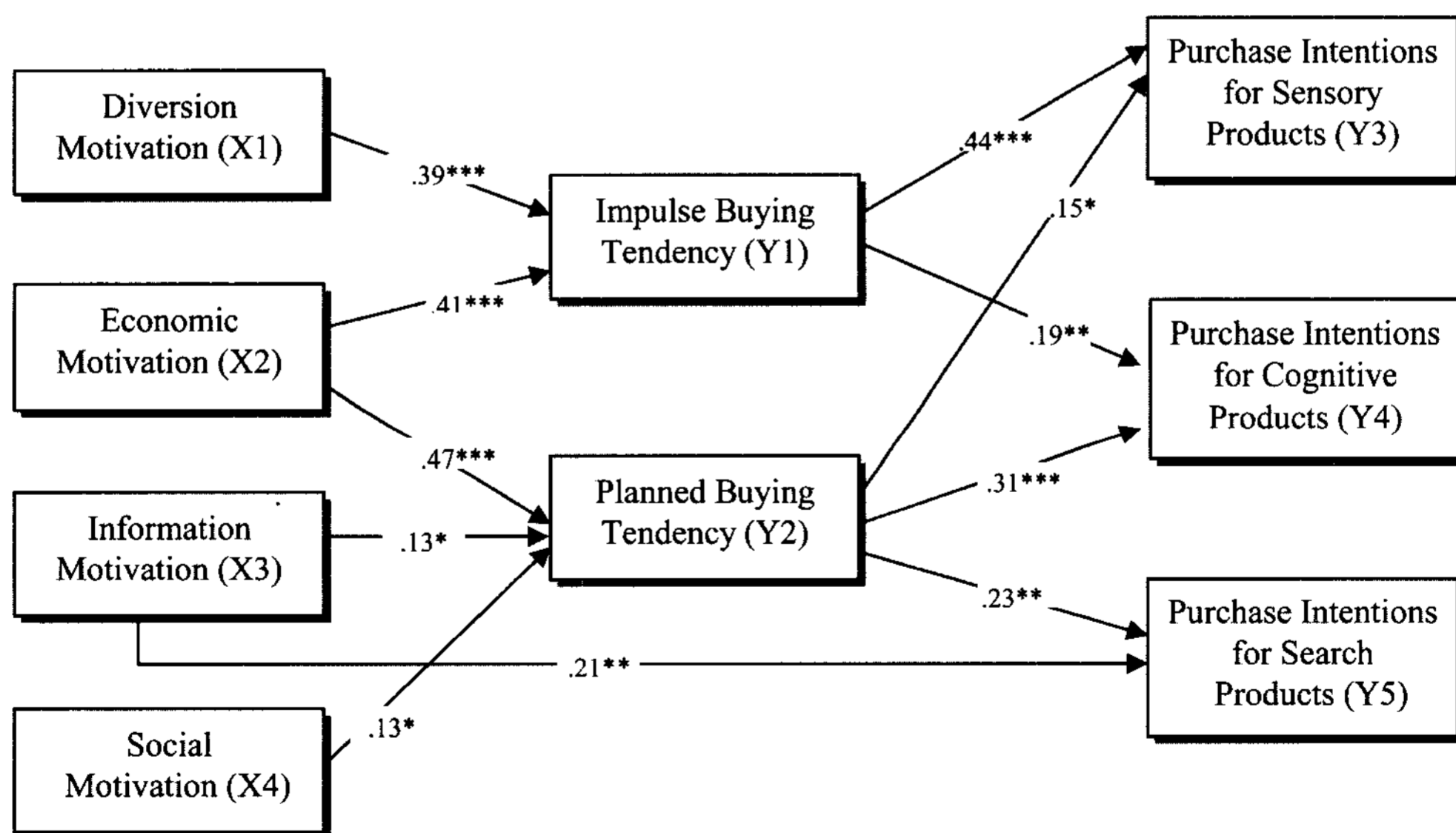
3. Path Analysis of Online Purchase Intentions for Product Categories

For hypotheses testing, a proposed path model was estimated in order to examine the relationships four motivational factors, two factors of buying tendencies, and online purchase intentions for three product categories. All nine constructs were represented in the model by single indicators using summated scales. According to Bagozzi and Heatherton(1994), the summations allow for the

smoothing of random indicator error and are useful in the molar assessment of behavior as reflected in hypotheses in this study.

An initial path analysis demonstrated that the χ^2 value of 54.49 was significant with 16 degrees of freedom ($p=.000$). Other fit statistics were not highly acceptable($GFI=.95$; $AGFI=.85$; $CFI=.83$; $RMR=.07$). A maximum modification index and supportive literatures were considered for model improvement. According to Korgaonkar and Wolin (1999), consumers' online purchase behavior is directly predicted by Internet users' motivations. Rohm and Swaminathan(2004) also suggested that travel was the most purchased online by shoppers who were motivated for actively seeking information. Thus the free parameters for direct effect of information motivation on search product were added, and resulting in a significant direct path. Also, partial covariance between impulse and planned buying tendencies, which was significant($\psi_{21}=-0.21$, $t=-3.87$, $p<.001$). This supports that impulse buying has been conceptualized by distinguishing planned purchase behavior(Cobb & Hoyer, 1986; Piron, 1991; Rook, 1987).

As a result, revised model indicated that the χ^2 value decreased to 27.88($df=14$, $p=.03$). The chi-square differences between initial and revised models was significant



Note: * $p<.05$, ** $p<.01$, *** $p<.001$

Goodness of Fit Statistics: $\chi^2=27.88(df=14, p<.05)$, $GFI=.97$, $AGFI=.91$, $CFI=.94$, $RMR=.04$

Fig. 1. Path model for product categorization by Internet motivation, buying tendencies and online purchase intentions.

($\Delta\chi^2=26.61$, $df=2$, $p<.001$), implying that the free parameters imposed in our model are accepted. Other fit statistics also were improved ($GFI=.97$; $AGFI=.91$; $CFI=.94$), which exceeded the .90 standard for model fit (Hair et al., 1998). The RMR was also reduced from .07 to .04, which indicates a better fit. The final path model illustrated in Figure 1 included significant path coefficients.

1) Testing Hypotheses 1

Consumer buying tendencies were significantly and partially related to Internet motivation factors. Specifically, the impulse buying tendency was significantly related to diversion ($\gamma_{11}=.39$, $t=6.45$, $p<.001$) and economic ($\gamma_{12}=.41$, $t=6.77$, $p<.001$) motivations. According to an idea that consumers engage in impulse buying to meet hedonic-driven motivations for fun and diversion (Hausman, 2000), the Internet motivations for diversion and economics may be hedonic components which leads to impulse buying behavior. Also, the significant relationship between economic motivation and impulse buying tendency implies that consumers are likely to tend to make impulse purchases by price or special offers over the Internet. However, information and social motivations were not significantly related to impulse buying tendency. Thus, *hypothesis 1a* was partially supported, suggesting that consumers' Internet motivations for diversion or economics encourage to impulse buying online.

Otherwise, planned buying tendency was significantly affected by economic ($\gamma_{22}=.47$, $t=7.37$, $p<.001$), information ($\gamma_{23}=.13$, $t=2.06$, $p<.05$) and social ($\gamma_{24}=.13$, $t=2.02$, $p<.05$) motivations. That is, consumers with Internet utilitarian-driven motivation for economics, information or social interaction were more likely to make planned purchases over the Internet. Thus, *hypothesis 1b* was supported.

Interestingly, economic motivation had significant effects on impulse buying tendency and planned buying tendency. This indicates that online consumers with high motivation for economic (e.g., hunting for bargains, reasonable prices, comparison-shopping) were likely to make both impulsive purchases and planned purchases over the Internet. This supports Babin et al.'s (1994) contention that consumers' economic perceptions are related to both hedonic and utilitarian shopping value.

2) Testing Hypotheses 2

With respect to product categories, there were significant positive relationships between buying tendencies and online purchase intentions that varied across three product categories. Purchase intentions for sensory products (e.g., accessories and jewelry, cosmetics and beauty products and clothing) were more dominantly affected by impulse buying tendency ($\beta_{31}=.44$, $t=6.86$, $p<.001$) than by planned buying tendency ($\beta_{32}=.15$, $t=2.34$, $p<.01$). This supports previous findings that consumers were more likely to make impulsive purchases for fashion goods online (Phau & Lo, 2004). Also, the result reflects the product-specific nature of impulse buying tendency for clothing on the Internet (Jones et al., 2003). Thus, *hypothesis 2a* was supported.

For cognitive products, online purchase intention was more strongly related to planned buying tendency ($\beta_{42}=.31$, $t=4.49$, $p<.001$) than impulse buying tendency ($\beta_{41}=.19$, $t=2.76$, $p<.01$). Also there was a significant relationship between planned buying tendency and online purchase intentions for search products ($\beta_{52}=.23$, $t=3.24$, $p<.01$). Thus, *hypothesis 2b* was supported.

In addition, the new set of paths from information motivation and purchase intentions were found for search products. The information motivation had a direct effect on online purchase intentions for search products ($\gamma_{53}=0.21$, $t=3.03$, $p<.01$). Consumers with higher information motivation were likely to purchase search products, such as travel tickets or reservations, entertainment or leisure, financial services (e.g., stocks, banking) by the Internet.

3) Direct and Indirect Effects

<Table 3> presents the direct and indirect effects of motivations and buying tendencies on online purchase intentions across the three product categories. That is, there were indirect effects of Internet motivational factors on online purchase intentions, and online buying tendencies played an important role in mediating effects on the relationships between motivations and purchase intentions.

In sensory products, online purchase intentions had significant indirect effects of diversion [$(\gamma_{11}\times\beta_{31})=.18$, $p<.001$] and economic [$\{(\gamma_{12}\times\beta_{31})+(\gamma_{22}\times\beta_{32})\}=0.25$, $p<.001$] motivational factors by the mediating effect of buying tendency (i.e., diversion (or economic) motivation \rightarrow impulse buying tendency \rightarrow online purchases for sensory prod-

Table 3. Direct and indirect effects on online purchase intentions for product categories

	Online Purchase Intentions					
	<i>Sensory Products</i>		<i>Cognitive Products</i>		<i>Search Products</i>	
	Direct Effects	Indirect Effects	Direct Effects	Indirect Effects	Direct Effects	Indirect Effect
<i>Motivational Factors</i>						
Diversioin	-	.18***	-	.09*	-	.04
Economic	-	.25***	-	.22***	-	.14**
Information	-	.04	-	.05*	.21*	.03*
Social	-	.02	-	.04	-	.03
<i>Buying Tendency Factors</i>						
Impulse	.44***		.19**		.08	
Planned	.15**		.31***		.23**	
<i>R² for Structural Equations</i>		.22		.13		.12

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

ucts). Also, the direct effect of impulse buying tendency on purchase intentions for sensory products was higher than was that of planned buying tendency. It is documented that sensory products are more likely to be impulsively purchased by consumers who are motivated to use the Internet for diversion, supports hedonic perspective on product-specific impulse buying behavior for sensory products (Bellenger et al., 1978; Jones et al., 2003).

With respect to cognitive products, online purchase intentions had significant indirect effects of economic [$\{(\gamma_{21} \times \beta_{41}) + (\gamma_{22} \times \beta_{42})\} = 0.22, p < .001$], diversion [$(\gamma_{11} \times \beta_{41}) = 0.09, p < .05$], and information [$(\gamma_{23} \times \beta_{42}) = 0.05, p < .05$] motivations. In addition, planned buying tendency had greater direct effect on purchase intentions for cognitive than did impulse buying tendency. It is suggested that economic motivation plays an important role in increasing online purchase intention for cognitive products by mediating the effect of planned buying tendency (i.e., economic motivation \rightarrow planned buying tendency \rightarrow online purchases for cognitive products). This reflects a utilitarian aspect of consumers' economic motivation driving planned decision making for cognitive products via the Internet.

For search product, information motivation had the greatest total effect on online purchase intentions [$\{\text{effect } \gamma_{53} + (\gamma_{23} \times \beta_{52})\} = 0.24, p < .001$], followed by indirect effect of economic motivation [$(\gamma_{22} \times \beta_{52}) = 0.14, p < .01$] on purchase intentions for search products. Also, planned buying tendency alone had a significant direct effect on

online purchase intentions for search products. Thus, information motivation is an important antecedent to encourage planning and making purchases for search products (i.e., information or economic motivations \rightarrow planned buying tendency \rightarrow online purchase for search products). It is suggested that consumers' information or economic shopping motivation may lead to goal-directed flow activities (Sánchez-Franco & Roldán, 2005) for purchasing search products on the Internet.

As expected, online purchase intentions were determined by hedonic and utilitarian aspects of motivations and buying tendencies in the Internet context. Specifically, consumers with an economic motivation are more likely to make a planned decision for cognitive products, whereas they are more likely to engage in information gathering for planned purchases for search products. Conclusively, results increase the theoretical understanding of consumer decision making for a specific product category in the electronic market.

V. Conclusions and Implications

This study explored an online product classification scheme associated with consumers' buying tendencies from a motivational perspective. Based on purchase intentions linked to Internet users' motivations and consumer buying tendencies, this study classified online products into three categories: *Sensory*, *Cognitive*, and *Search*. Using this categorization scheme, this study

found relationship linkages among four motivations for Internet uses (e.g., diversion, economic, information, and social), and purchase intentions by the mediating effects of online buying tendencies. Especially for sensory products, diversion and economic motivations were found to be significant driving factors of impulse buying, eventually encouraging purchase intentions via the Internet. This result supports a notion that impulse buying is driven by hedonic motivation (Hausman, 2000; Smith & Rupp, 2003). However, cognitive or search products emphasized more of a utilitarian focus on economic and informational gratification by planned buying behavior, which supports an informational processing perspective on consumer decision making (Hansen, 2005).

This study also provides managerial implications into e-marketers' efforts for building product category-dependent strategies to simplify marketing decisions in the online consumer market. With a hedonic approach to sensory products, the Internet can be a channel to fulfill diversion motivation by (a) emphasizing sensory experience with online atmospherics (Xia, 2002) using advanced technology (e.g., 3D virtual models) and (b) introducing products or brands in a new version or innovative style, which could lead to "fashion-oriented impulse buying" (Park et al., 2006; Phau & Lo, 2004). For offering cognitive products online, e-retailers should focus on utilitarian need-driven motivations for economic values, leading to planned purchases (or impulse purchases) by online special promotions, sweepstakes, and complementary lines of products offered for comparison-shopping. These messages can be conveyed in an attractive and exciting market stimulus to appeal to young consumers who need diversion from routine daily life as well as economic rewards. For search products, consumers tend to be motivated by information to make planned buying after gathering substantial information over the Internet. As services-oriented products, such as travel ticket or reservation, are assessed using readily available information, product assortments should be different enough in price to warrant comparison shopping over the Internet. An e-retailer seeking to market explicitly to this segment may want to develop a strategic alliance with retailers specializing in these product or complementary service areas because consumers seek information with various forms of product-related data (Shim et al., 2000).

Due to the exploratory nature of the study, these results should be interpreted with caution. The sample was limited to college students in one U.S. metropolitan area. Theoretical considerations should be given to the consumers' buying tendencies in conjunction with marketing stimuli and situations for the product-specific nature of purchase behavior. Such studies can expand online decision making theory including consumer and market variables across product categories.

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요 약

본 연구는 소비자의 인터넷 사용동기, 온라인 구매성향과 제품구매의도 사이의 관계를 밝힘으로써 온라인 상품 범주화의 기초 개념을 밝히고자 하였다. 조사대상은 미국 남서부 지역에 거주하는 대학생 총 217명으로 구성되었으며, 자료분석을 위해 요인분석과 경로모형을 추정하였다. 분석결과, 소비자의 인터넷 동기는 기분전환, 경제적, 정보적, 사회적 동기의 4개 요인으로 분류되었다. 또한 온라인 제품은 구매의도에 따라 감각상품, 인지상품과 탐색상품의 3개 범주로 분류되었다. 경로모형의 추정결과, 인터넷 사용의 기분전환과 경제적 동기요인이 충동구매성향에 영향을 주는 반면, 경제적, 정보적, 사회적 동기요인은 계획구매성향에 영향을 주는 것으로 나타났다. 온라인 구매의도에 있어서, 감각상품은 충동구매성향과 더 높은 관계를 나타낸 반면, 인지상품과 탐색상품은 계획구매성향과 더 높은 관계를 나타냈다. 또한, 인지상품은 경제적 동기에 근거한 계획구매성향에 의해 더 강한 효과를 보였으며, 탐색상품은 정보적 동기에 의한 계획구매성향에 의해 더 강한 효과를 나타냈다. 따라서 본 연구는 특정 상품 범주에 따른 이론적 정립과 적절한 E-마케팅 전략의 관리적 측면이 논의되었다.
