DEVELOPMENT OF A SCALE TO MEASURE THE PERCEIVED BENEFITS AND RISKS OF ONLINE SHOPPING

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I n this paper, we report the development of scales to measure the perceived benefits and risks associated with online shopping. Based on an exploratory qualitative inquiry and quantitative assessment, a four-factor scale of perceived benefits and a three-factor scale of perceived risks of online shopping were developed. Results from two national samples support the proposed measures of perceived benefits and risks associated with online shopping in terms of construct, convergent, discriminate, nomological, and predictive validity. Variation of these perceptions over time was also examined to test scale stability over time and to describe the evolution of online shopping.

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INTRODUCTION

The Internet is becoming an increasingly popular medium to facilitate information search, choice, and purchase. The degree to which shoppers are now turning to the Internet as a shopping channel underscores the need to better understand and predict consumers' online shopping behaviors. Previous research has noted that clearly understanding what motivates consumers to shop online can and should inform strategy, technology, and marketing decisions, as well as web site design (Wolfinbarger & Gilly, 2001). Given that online shoppers are known to be motivated to maximize benefits and minimize risks, both the perceived benefits and risks of online shopping are expected to play important roles in explaining consumers' current shopping behaviors and predicting their intention to continue shopping online.

Researchers such as Hoffman, Novak, and Chatterjee (1995), Alba, Lynch, Weitz, and Janiszewski (1997), and Peterson, Balasubramanian, and Bronnenberg (1997) have discussed benefits of online shopping. These benefits provide the sorts of convenience that are not readily available in traditional shopping media. Electronic commerce also magnifies the uncertainties that are involved with purchases through the Internet; and shoppers who perceive more risk associated with this shopping channel are less willing to purchase online (Bhatnagar, Misra, & Rao, 2000).

Bhatnagar and Ghose (2004a; 2004b) investigated the impact of a few shopping benefits and risks and concluded that consumers were more concerned about web attributes associated with perceived risks than web attributes associated with benefits. However, their research included only one benefit—convenience. Other researchers have examined non-functional benefits of shopping online (Mathwick, Malhotra, & Rigdon, 2001; Parsons, 2002); however, these studies did not examine the impact of perceived risks. No published research has investigated, in a comprehensive manner, consumers' perceptions of both the benefits and risks associated with online shopping.

To address these deficiencies, we integrated elements from traditional consumer decision-making frameworks and innovation adoption literature to develop scales with which to measure the perceived benefits and risks associated with online shopping. A sound measure of the perceptions associated with online shopping is needed to provide a firm foundation for research to investigate the interrelationships between benefit-risk perceptions and attitudes toward online shopping, specific online shopping behaviors (e.g., visiting vs. purchasing), shopping outcomes (e.g., purchase frequency, dollar amount spent), and future online shopping intentions. Further, the scales developed will provide a useful tool, enabling online retailers to better understand their shoppers' current and potential future shopping behavior in the online environment.

The objectives of this research were to:

1. Qualitatively investigate the perceived benefits and risks of online shopping;

2. Develop and purify scales measuring perceived benefits and risks of online shopping;

3. Validate the scales of perceived benefits and risks of online shopping with a separate sample of online shoppers.

We first discuss the theoretical background and previous research on perceived benefits and risks of online shopping, offering a rationale for developing the scales of perceived benefits and risks of online shopping. Second, we present the results of a qualitative investigation into perceived benefits and risks of online shopping, based on which we then develop an initial pool of scale items. Third, we present the results of a multi national sample investigation that serves to purify and validate the scales. Finally, a general discussion of the findings, implications, and limitations of the study and directions for future research are provided.

BACKGROUND

Perceived Benefits

Here, we draw from two related research streams: research on traditional retail patronage issues (largely theoretical in nature) and research dealing with non-store patronage behavior. Sheth (1983) postulated that personal determinants of shopping in traditional formats can be broadly understood as being influenced by functional and nonfunctional motives. Functional motives are related to utilitarian functions such as convenience, variety and quality of

merchandise, and price, whereas nonfunctional (hedonic) motives are related to social and emotional needs for enjoyable, interesting shopping experiences (Bhatnagar & Ghose, 2004a, 2004b; Chilers, Carr, Peck, & Carson, 2001; Menon & Kahn, 2002).

Previous research examining shopping motives has typically focused on the functional or utilitarian aspects of the shopping experience, often characterized as task related (Batra & Ahtola, 1991), with the objective of maximizing the utility of the shopping experience (cf. Babin, Darden, & Griffin, 1994). Prior research on non-store shopping has suggested that functional motives including convenience (Bhatnagar & Ghose, 2004a, 2004b; Eastlick & Feinberg, 1999; Korgaonkar & Wolin, 2002); greater merchandise selection (Eastlick & Feinberg, 1999; Rowley, 2000); unique merchandise offerings (Januz, 1983), and lower prices (Korgaonkar, 1984) Reynolds (1974) are the primary reasons for shopping non-store formats. The dominance of functional motives on non-store shopping is consistent with previous research suggesting that most online shoppers are goal-directed.

Because traditional product acquisition explanations may not fully reflect the totality of the shopping experience (Bloch & Richins, 1983), nonfunctional or hedonic motives for shopping have also been examined (Babin et al., 1994; Dholakia, 1999; Tauber, 1972; Wakefield & Baker, 1998). Given the role of hedonic motives for shopping in traditional retail formats, it seems likely that hedonic uses of the Internet may also be important benefits to online consumers. Childers et al. (2001) concluded that both functional and hedonic motives for online shopping were important predictors of attitudes toward online shopping. Parsons (2002) found that some of the personal motives and the social motives introduced by Tauber (1972) are applicable to online shopping as well. Although several researchers (Alba et al., 1997) have discussed the benefits of online shopping, little published research has provided support for the impact of these perceived benefits on consumers' Internet shopping behaviors.

Perceived Risks

Even though consumers perceive the Internet as offering a number of benefits, the Internet tends to magnify some of the uncertainties involved with any purchase process. Consumers perceive a higher level of risk when purchasing on the Internet compared with traditional retail formats (Lee & Tan, 2003; Tan, 1999). This is not surprising, since studies have consistently shown that consumers perceive higher risks in non-store shopping formats, such as telephone shopping (Akaah & Korgaonkar, 1988), mail order (Van den Poel & Leunis, 1999), catalog (Eastlick & Feinberg, 1999), and direct sales (Peterson, Albaum, & Ridgway, 1989).

Product performance and financial risk are two types of risk that have been associated with Internet shopping (Bhatnagar & Ghose, 2004a, 2004b; Bhatnagar et al., 2000). Other studies (Forsythe, Petee, & Kim, 2002; Forsythe & Shi, 2003) have investigated the various types of risk perceived by Internet shoppers and found that three types of risk—product performance risk, financial risk and time/convenience risk—were related to frequency of online search with intent to purchase.

Financial risk is defined as potential net loss of money (Derbaix, 1983) and includes consumers' sense of insecurity regarding online credit card usage, which has been evidenced as a major obstacle to online purchases (Maignan & Lukas, 1997). Product performance risk, the loss incurred when a brand or product does not perform as expected (Horton, 1976), is largely due to the shoppers' inability to accurately evaluate the quality of the product online (Bhatnagar et al., 2000). Time/convenience risk includes the inconvenience incurred during online transactions, often resulting from difficulty of navigation and/or submitting orders, or delays receiving products (GVU, 1998). Currently, there is limited empirical evidence to indicate what types of risks have the greatest impact on Internet shopping behaviors. We expect that overall attitudes toward online shopping and online search/purchase behaviors will be influenced by consumers' perceptions of both functional and nonfunctional benefits, as well as by their perceptions of the risks associated with purchasing online.

Tradeoff Between Perceived Benefits and Risks

The online retail experience must deliver value if it is to turn a one-time visitor into a repeat customer. Perceived value has been characterized as a primary motivation for entering into marketing relationships

and the essential outcome of marketing activity (Babin et al., 1994; Holbrook, 1994). The value that motivates purchase behavior has traditionally been interpreted as the tradeoff between what is given up and what is received in return (Dodds & Monroe, 1985; Dodds, Monroe, & Grewal, 1991; Yadav & Monroe, 1993)—that is, the perceived net gain or benefit versus the perceived net loss or risk. Chen and Dubinsky (2003) defined perceived value as a consumers' perception of the net benefits gained in exchange for the cost incurred in obtaining the desired benefits. We propose that consumers strive to maximize the perceived value of their shopping experience by assessing the tradeoffs between the expected benefits and the perceived risks associated with shopping online.

QUALITATIVE INQUIRY AND INITIAL SCALE DEVELOPMENT

Our model is grounded in the accepted paradigm for scale development provided by (Churchill, 1979) and augmented by other researchers (e.g., Arnold & Reynolds, 2003; Bagozzi, 1980; Gerbing & Anderson, 1988; Nunnally & Bernstein, 1994; Peter, 1981; Wolfinbarger & Gilly, 2003), while also incorporating some recommendations by Rossiter (2002) with respect to conceptualization of constructs. Figure 1 provides a flow chart of the scale development procedure employed in this research. The scale development procedures are discussed in subsequent sections.

Conceptualization of Constructs

Step 1 was to conceptualize the constructs and specify the domains associated with online shopping (cf., Churchill, 1979). Based on Edwards and Bagozzi's (2000) definition of a construct as "a conceptual term used to describe a phenomenon of theoretical interest" we defined our construct as "online shoppers' perceived benefits and risks of shopping on the Internet." Consistent with Rossiter (2002), this definition describes the construct in terms of the objective (Internet shopping), the attribute (perceived benefits and risks) and rater entity (online shoppers). We then developed a list of potential benefits and risks associated with online search and purchase behaviors through a comprehensive search of the literature, interviews with consumer groups and surveys of consumers. Based on our initial research, we concluded that perceived benefits and perceived risks actually represent two components that provide different functions in the online shopping behaviors of consumers. It was thus deemed appropriate to develop two separate scales to measure these constructs.

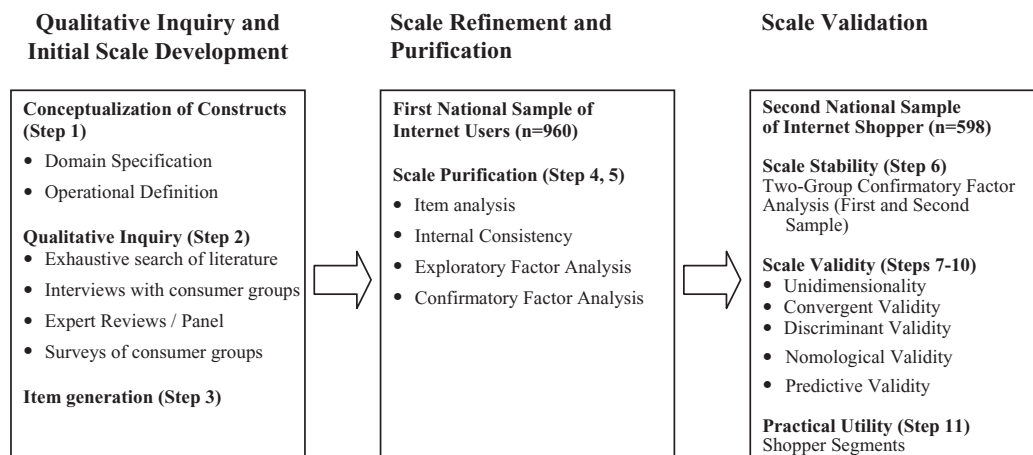| Qualitative Inquiry and Initial Scale Development	Scale Refinement and Purification	Scale Validation
Conceptualization of Constructs (Step 1) • Domain Specification • Operational Definition **Qualitative Inquiry (Step 2)** • Exhaustive search of literature • Interviews with consumer groups • Expert Reviews / Panel • Surveys of consumer groups **Item generation (Step 3)**	**First National Sample of Internet Users (n=960)** **Scale Purification (Step 4, 5)** • Item analysis • Internal Consistency • Exploratory Factor Analysis • Confirmatory Factor Analysis	**Second National Sample of Internet Shopper (n=598)** **Scale Stability (Step 6)** Two-Group Confirmatory Factor Analysis (First and Second Sample) **Scale Validity (Steps 7-10)** • Unidimensionality • Convergent Validity • Discriminant Validity • Nomological Validity • Predictive Validity **Practical Utility (Step 11)** Shopper Segments

FIGURE 1

Scale Development and Validation Process

Conceptual definitions of constructs include

- Perceived benefits of shopping online is the consumer's subjective perception of gain from shopping online.
- Perceived risks of shopping online is the consumer's subjective perception of potential loss from shopping online.

Operational definitions of constructs may be conveyed as follows:

$OPB = \sum_{i=1}^{n} PG_i$ The overall perceived benefits of shopping online (OPB) is a function of the sum of perceptions of gain from each perceived benefit of Internet Shopping (PG_i).

$OPR = \sum_{i=1}^{n} PL_i$ The overall perceived risks of shopping online (OPR) is a function of the sum of perceptions of loss from each perceived risk associated with Internet Shopping (PL_i).

Qualitative Inquiry

In step 2, we started with a comprehensive literature review to identify all potential benefits and risks that consumers may associate with online shopping. Interviews were then conducted to confirm the perceived benefits and risks of online shopping identified from the literature and to identify additional perceived benefits and risks of shopping online that were not revealed by the literature review (Hudson & Ozanne, 1988). The initial list of respondents was prescreened by the researchers to ensure that the sample would include respondents with different points of view and backgrounds (for instance, family income, ethnic group, gender). The interviewer guided the discussion probing the reasons for making online purchases (or not). The interviews were reviewed by a coding team made up of two of the researchers and one graduate student who identified the key themes and illustrative quotes from the data. The goal at this point was to search for commonalities that would allow for the most accurate representation of each domain.

Based on the literature review and the interviews, we identified ten potential dimensions for the domain of perceived benefits and 11 potential dimensions for the domain of perceived risks. The potential dimensions initially identified for perceived benefits included convenience, time saving, information, no pressure, reference from experts, access to opinions of others, money savings, variety, shop at home, and self-control of shopping. The potential dimensions identified for perceived risks included product quality, security, privacy, technology difficulty, time delay, can't interact with real people, extra costs, lack of information, bad experience, and lack of confidence in shopping online.

Item Generation

Step 3 was to generate a comprehensive list of scale items that captured each of the potential domains specified in steps 1 and 2. The purpose was to create item pools for both constructs by identifying items from the existing scales and by creating additional items that appeared to fit the construct definitions. Following guidelines established by other survey researchers (Fink, 2003; Patton, 2001), we developed a pool of items that were candidates for eventual inclusion in the scales through a survey of the literature, expert evaluations, interviews with Internet users, and surveys of consumers who shop online. The content validity of the items was assessed by two judges/experts who had completed considerable research in online retailing. Items were screened by the research team in order to identify duplicate items and potential sources of ambiguity, after which several of the items were eliminated. The resulting item pools, containing 44 items for online shopping benefits, and 33 items for online shopping risks, were then submitted to a multi-sample scale purification and validation process, as described below.

SCALE REFINEMENT AND PURIFICATION

Step 4 was to conduct item refinement and further assess content validity. To purify the measures, an iterative approach was adopted that included both quantitative and qualitative assessment (Netemeyer, Bearden, & Sharma, 2003). Scale refinement and purification included detailed item, exploratory factor, and confirmatory factor analyses to provide an initial assessment of scale reliability, unidimensionality, and convergent and discriminant validity. Standard scale development guidelines (e.g., Anderson & Gerbing, 1988; Churchill, 1979; Gerbing & Anderson, 1988; Hair, Anderson, Tatham, & Black, 1998), as well as emerging recommendations for scale development, were employed in item reduction and assessment of

the resulting factor structure (e.g., Finn & Kayande, 2004; Netemeyer et al., 2003; Rossiter, 2002).

The initial data were gathered from a national sample using a questionnaire containing the perceived benefit and risk items (assessed in terms of a seven-point agree/disagree response format) and items regarding age, income, gender, and shopping outcome items such as purchasing frequency, and amount of dollars spent online. The measure, a mailed survey, was administered to a national sample of 2,000 Internet shoppers using a proprietary research system for conducting surveys that attempts to provide a representative sample of current online households. We received 960 survey responses, for a response rate of 48%. Since not all Internet users had ever visited online retail sites and our research focused specifically on online shopping behavior, only respondents who had either shopped or browsed online were included. Therefore, participants were qualified based on whether they had access to the Internet, had used the Internet for browsing or searched online for product information, as only these consumers would have the experience needed to answer the survey questions. Furthermore, only consumers who met these conditions could be broadly defined as "Internet shoppers" and consequently considered a sample from a relevant population of interest (Netemeyer et al., 2003). After carefully checking responses for completeness, we retained 937 survey responses for the quantitative assessment of scales.

Internal Consistency, Item Analysis, and Exploratory Factor Analysis

Step 5 was to purify the measure to produce maximum internal consistency. Using data obtained from the first national sample, an item analysis was performed on responses to the original items to select those items that correlated strongly ($r > .50$) with the measure as a whole and with the dimension to which they were hypothesized to belong. This allowed us to identify those items that had maximum internal consistency. Items that failed to correlate strongly with other items within a construct were eliminated (cf., Tian, Bearden, & Hunter, 2001). In addition, items that did not have statistically higher correlations with the dimension to which they are hypothesized to belong than with the remaining dimensions'

were also deleted (Bearden, Richard, & Teel, 1989). Based on the above criteria, ten items were removed from the scale of perceived benefits and eight items were removed from the scale of perceived risks.

The assumption of a normal distribution was tested and satisfied before an exploratory factor analysis was conducted. We used principle component factor analysis (PCA) followed by an oblique promax rotation, with the scree test criterion to identify the number of dimensions of the scales. A four-factor model of perceived benefits and a three-factor model of perceived risks were estimated. Consistent with leading researchers (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Netemeyer et al., 2003; Nunnally & Bernstein, 1994), multiple criteria were used to determine the number of factors to include in the model and which items to retain for each factor. More specifically, items with low factor loadings ($<.40$), high cross-loadings ($>.40$), or low communalities ($<.30$) were candidates for elimination. After inspection of item content for domain representation, seven items for perceived benefits and two items for perceived risks were deleted. The remaining 27 items for perceived benefits and 23 items for perceived risks were submitted for further exploratory factor analysis, applying the same criteria in item reduction. Item-to-total correlations were examined and all items that reduced the internal reliability were deleted. The resulting scales demonstrated good reliability, with coefficient alphas of .70 or greater (Table 1). A four-factor model of perceived benefits was estimated with 16 items, and a three factor model of perceived risks was estimated with 16 items. The items retained here were included in the second benefit/risk questionnaire.

The four dimensions emerging for perceived benefits of online shopping included shopping convenience, product selection, ease/comfort of shopping, and hedonic/enjoyment. Shopping convenience is perceived to be the ability to shop almost anytime from a variety of locations without visiting a store. Ease/comfort of shopping is thought of as avoiding the physical and emotional hassles of shopping in other channels. These benefits have been shown to be the dominant motives for non-store shopping (Bhatnagar & Ghose, 2004a, 2004b; Eastlick & Feinberg, 1999; Korgaonkar & Wolin, 2002). Product selection, the availability of a wide range of products and product

TABLE 1	Scale Items with Factor Loadings and Scale Reliability (*N* = 960, Sample 1)

RISKS AND BENEFITS	FACTOR LOADING	ALPHA
Perceived Benefits of Shopping Online		
Shopping Convenience		0.898
Can shop in privacy of home	0.833	
I don't have to leave home	0.832	
Can shop whenever I want	0.762	
Can save the effort of visiting stores	0.702	
Product Selection		0.797
Items from everywhere are available	0.732	
Can get good product information online	0.730	
Broader selection of products	0.617	
Access to many brands and retailers	0.616	
Ease/Comfort of Shopping		0.780
Don't have to wait to be served	0.815	
No hassles	0.749	
Not embarrassed if you don't buy	0.691	
No busy signal	0.608	
Hedonic/Enjoyment		0.771
To try new experience	0.882	
Exciting to receive a package	0.786	
Can buy on impulse in response to ads	0.674	
Can custom design products	0.604	
Perceived Risks of Shopping Online		
Financial Risk		0.892
Can't trust the online company	0.879	
May not get the product	0.872	
May purchase something by accident	0.780	
My personal information may not be kept	0.732	
I may not get what I want	0.697	
My credit card number may not be secure	0.681	
Might be overcharged	0.677	
Product Risk		0.844
Can't examine the actual product	0.857	
Size may be a problem with clothes	0.847	
Can't try on clothing online	0.776	
Inability to touch and feel the item	0.700	
Must pay for shipping and handling	0.676	
Must wait for merchandise to be delivered	0.644	
Time/Convenience Risk		0.738
Too complicated to place order	0.838	
Difficult to find appropriate websites	0.773	
Pictures take too long to come up	0.557	

information to support consumer decision-making, has also been shown to be an important benefit of online shopping. Hedonic/enjoyment, has to do with the fun and excitement experienced by trying new

experiences, custom designing products, etc. There is considerable empirical support for the role of hedonic motives in non-store shopping (e.g., Childers et al., 2001) and some support for hedonic motives in online shopping (Parsons, 2002, Wolfinbarger & Gilly, 2001).

The three dimensions emerging for perceived risks included financial risk, product risk, and time/convenience risk. These three types of risk are consistent with previous research showing that common risks associated with online shopping include credit card security (financial risk), concerns about the quality and suitability of the product (product risk), and the time required for finding a suitable web site, searching for information and processing the transaction (time risk) (Forsythe & Shi, 2003).

The four-factor solution of perceived benefits accounted for approximately 65% of the total variance; the three-factor solution of perceived risks accounted for approximately 61% of the total variance. Total variance explained for both perceived risks and perceived benefits exceeded the minimum of 50% suggested for social science research (Hair, Anderson, Tatham, & Black, 1998; Tabachnick & Fidell, 2001). Furthermore, all retained items had a .60 or greater loading on the dominant factor and less than a .40 loading on other factors, confirming the independence of the constructs and ensuring maximum internal consistency. These are considered to be excellent loadings (Comrey, 1973).

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was then used to further purify scales with the goal of improving the congeneric measurement properties of the scales (Anderson & Gerbing, 1988; Gerbing & Anderson, 1988; Netemeyer et al., 2003). A 16-item, four-dimension, confirmatory factor model of perceived benefits and a 16-item, three-dimension, confirmatory factor model of perceived risks were estimated using AMOS 4.0 (Byrne, 2001). The indices of chi-square, goodness of fit index (GFI), comparative fit index (CFI), and root mean square residual (RMSEA) were assessed to evaluate overall fit of the two measures. Criteria were established for fit indices based on a review of "rules of thumb" and empirical research (Guarino, Shannon, & Ross, 2001; Hu & Bentler, 1999). Specific cutoffs were set for CFI (>.90) and RMSEA (<.06).

The confirmatory factor analysis indicated that the four-dimension scale of perceived benefits had a good model fit: $\chi^2 = 460.43$, $df = 98$; GFI = .94; CFI = .95; and RMSEA = .06. No further modification was needed for this scale. For the three-dimension model of perceived risk, the confirmatory factor analysis indicated some modification was needed. Specifically, one item that was not clearly related to financial risk and a second item that had a low item-total loading, were removed from the dimension of financial risk. In addition, two items were removed from the dimension of product risk because they were not considered to be conceptually valid items for the product risk dimension. The final 12-item, three dimension scale of perceived risks had a good model fit: $\chi^2 = 231.85$, df = 50; GFI = .96; CFI = .96; and RMSEA = .06 (c.f., (Guarino et al., 2001; Hu & Bentler, 1999; Jöreskog & Sorbom, 1984).

Initial Scale Validity Assessment

As the goal of most research is to build and test theory, assessment of construct validity is essential (Gerbing & Anderson, 1988). One method commonly used to assess construct validity is to determine whether the measure reflects theoretical relationships with other constructs. The literature indicates that Internet shoppers who perceive more benefits from online shopping will shop online more than those who perceive fewer benefits (Rohm & Swaminathan, 2004). Conversely, shoppers who perceive more risks associated with online shopping will be deterred from shopping online. The relationship between online purchase frequency and shoppers' overall perceptions of benefits and risks was tested using MANOVA analysis. Results showed the relationship between online purchase frequency, dollar amount spent online and perceived benefits and risks were highly significant (Wilks' Lambda = .775; $p < .001$), thereby confirming that shoppers' purchase behavior was indeed related to their perception of benefits and risks. Results from this multivariate analysis of construct validity are summarized in Tables 2 and 3.

SCALE VALIDATION

The purpose of scale validation is fourfold. First, it is important to replicate the confirmatory factor structure for an independent sample, thereby reducing error due to capitalization on chance (MacCallum, Roznowski, & Necowitz, 1992) and demonstrating the extent to which the measurement model is stable across independent samples, as well as its convergent and discriminant validity. Second, the constructs of perceived benefits and perceived risks are then correlated with theoretically related constructs to establish

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TABLE 2   Relationship between Online Shopping Motivations and Purchase Frequency[a]

	PURCHASE FREQUENCY					
	NONE	1–3 TIMES	4–6 TIMES	7–10 TIMES	MORE THAN 10 TIMES	UNIVARIATE
DEPENDENT VARIABLES	*n* = 234	*n* = 392	*n* = 193	*n* = 61	*n* = 50	*F*
Perceived Benefits						
Shopping convenience	5.67	5.94	6.18	6.29	6.41	14.95*
Product selection	5.06	5.24	5.51	5.68	5.80	13.07*
Ease of shopping	4.64	5.00	5.18	5.23	5.29	8.92*
Enjoyment	4.46	4.55	4.72	4.61	4.81	2.40
Perceived Risks						
Financial risk	5.18	4.56	4.14	3.91	3.55	42.80*
Product risk	5.97	5.63	5.35	5.36	5.10	17.85*
Time risk	4.47	4.12	3.86	3.82	3.40	14.53*

[a] Multivariate test is significant at .001 level.

* $p < .05$.

TABLE 3	Relationship between Online Shopping Motivations and Dollar Amount Spent Online[a]

	MEAN				
	$1–99	$100–500	$500–1000	MORE THAN $1000	UNIVARIATE
DEPENDENT VARIABLES	$n = 208$	$n = 392$	$n = 193$	$n = 61$	F
Perceived Benefits					
Shopping convenience	5.97	6.06	6.25	6.49	14.95*
Product selection	5.21	5.40	5.72	5.85	13.07*
Ease of shopping	4.99	5.09	5.29	5.30	8.92*
Enjoyment	4.59	4.63	4.72	4.49	2.40
Perceived Risks					
Financial risk	4.67	4.23	4.15	3.56	42.80*
Product risk	5.72	5.39	5.40	5.26	17.85*
Time risk	4.23	3.87	3.98	3.45	14.53*

[a]Multivariate test is significant at .001 level.

* $p < .05$.

evidence of nomological validity. Third, to ensure usefulness, the scale must demonstrate predictive validity. Fourth, comparison of the results with independent parallel research is important to establish additional evidence of validity and practical utility. Scale validation activities were accomplished in a systematic and rigorous way using recommended psychometric techniques. Data from the second sample were used to further establish the stability, reliability and validity, including convergent validity and discriminate validity. A nomolgical network was then proposed to facilitate further testing of nomological validity and predictive validity. Finally, the practical utility of the developed scales was tested.

A Web-based survey included the perceived benefit and risk items resulting from the first national sample and variables for nomological and predictive validity tests. Target respondents were a cross-section of Internet shoppers, including both online visitors and purchasers. Following a successful pre-test with a university student sample, the research instrument was administered online to a national sample of 1,500 Internet users using a stratified sampling procedure. Panel members were sent an invitation through email with a hyperlink to the URL of the online survey. A total of 789 responses were received, representing a response rate of 52.6%. After response verification,

598 complete and valid responses were included for data analysis.

Factor Structure Stability

In step 6, the factorial stability of the perceived benefits and risks scales were assessed through a multi-group analysis procedure using both national samples. This multi-group analysis procedure allowed for the independent estimation of factor loadings, factor correlations, and error variances on the two samples (Byrne, 2001). Using data from the two national samples across three years also allowed us to assess the stability of developed scales over time; for the rapidly developing Internet, three years is considered adequate to demonstrate the stability.

First, we checked the goodness-of-fit indexes bearing on the multi-group model for both perceived benefits and perceived risks models using the key indexes of the χ^2 statistic, GFI, CFI, and RMSEA values. The fit indexes for both the perceived benefits model (chi-square = 1097.99, df = 196, GFI = .914, CFI = .92, RMSEA = .055) and the perceived risks model (chi-square = 541.00, df = 100, GFI = .946, CFI = .95, RMSEA = .054) were good, indicating the four-factor model of perceived benefits and three-factor model of perceived risk were well-fitting across the two

independent samples. In the meantime, these two well-fitting models provided the baseline value against which all subsequent tests for invariance would be compared.

Having established the fit of this model, we then tested for invariance of factorial measurement and structure across groups by placing constraints on particular parameters and then comparing the constrained model with the base model, which has no constraint. A significant $\Delta \chi$ difference indicates a discrepancy across groups. To avoid overly restrictive tests of the data, we focused on testing for the invariant reliability of all factor loadings (Bentler, 1995; Byrne, 1988).

Perceived Benefits. To assess the factorial stability of the perceived benefits scale, a comparison was made between the constrained model and the base model. This comparison yielded a chi-square difference value of 33.27 with df as 12, $p < .001$. Subsequent tests for invariance were conducted in order to pinpoint the location of this variance across the two groups. A series of tests revealed that only the factor loading associated with the item 'can get good product information online' to be group-noninvariant. Since all factor loadings of the other 15 items, factor variances and covariance were group-invariant, this provided sufficient evidence of the factorial stability of the developed scale of perceived benefits across independent samples and over time.

Perceived Risks. The same procedure was applied to assess the factorial stability of the measurement model for perceived risks scale. A comparison between the constrained model and the baseline model yielded a χ^2 difference of 38.92 with 9 degrees of freedom, which is statistically significant, indicating that some equality constraints on factor loadings do not hold across the two independent samples. Subsequent tests for invariance revealed that discrepancies were limited to financial ($\Delta \chi^2 = 16.2$, df $= 5$, $p < .01$) and product risk ($\Delta \chi^2 = 21.34$, df $= 3$, $p < .01$) factors. Participants from the second sample perceived less risk to be associated with two of the financial risk items and two of the product risk items.

Although not all of the perceived risk item loadings were invariant across the two groups, the goodness-of-fit indexes bearing on the multi-group model were good, demonstrating relative factorial stability. The lower perceived risk of the second group may have resulted from (a) greater Internet skill of the second sample, (b) technological advances to simplify online shopping and reduce risk over the three years between surveys, or (c) increased online shopping experience of the second sample.

Unidimensionality

Given that goodness-of-fit indices for the multi-group model were good for both measurement models (perceived benefits and perceived risks), we have evidence that the measures are unidimensional, with each item reflecting one, and only one, underlying construct (step 7). As illustrated in Table 4, coefficient alpha estimates ranged from .65 to .90 for the measure of perceived benefits and from .72 to .84 for the measure of perceived risks. Therefore, reliability of the subscales for each dimension of perceived benefits and perceived risks is acceptable, as all coefficient alpha estimates are above the acceptable threshold (Nunnally & Bernstein, 1994).

Convergent and Discriminant Validity

Convergent validity was assessed again by examining the confirmatory factor loadings of each item with its intended construct in step 8 (see Table 4). All loadings, ranging from .56 to .88, exceeded .50. All corresponding t values were statistically significant ($p < .001$) providing support for convergent validity. Discriminant validity was also supported based on the low factor loadings of items with unintended constructs and the examination of the correlations among the constructs (step 9). All factor loadings between items and unintended constructs were less than .40. Further support for the discrimination of constructs was evidenced in the correlations among them. For the four constructs defining Perceived Benefits, correlations ranged from .54 to .70 while the relationships among the three constructs regarded perceived risks ranged from .49 to .65. Researchers recommend that constructs that are not too highly correlated demonstrate discriminate validity (Byrne, 2001; Tabachnick & Fidell, 2001), while Kline (1998) offers a specific criterion of $r < .85$. All observed correlations among the constructs meet the conditions to demonstrate discriminant validity.

TABLE 4 Scale/Item Measurement Properties

DIMENSIONS	ITEMS	COEFFICIENT α		EFA ITEM LOADING	CORRECTED ITEM-TOTAL CORRELATIONS		CFA ITEM LOADING		SQUARED MULTIPLE CORRELATION		SCALE/ITEM MEAN		Z SCORE	p
		S1	S2	S1	S1	S2	S1	S2	S1	S2	S1	S2		
Shopping Convenience		.90	.83											
	Can shop in privacy of home			.83	.82	.69	.88	.79	.67	.47	6.02	5.97	1.51	ns
	I don't have to leave home			.83	.78	.71	.84	.75	.63	.51	5.94	5.92	.36	ns
	Can shop whenever I want			.76	.72	.60	.78	.69	.53	.37	6.04	6.19	3.00	.05
	Can save the effort of visiting stores			.70	.77	.65	.83	.75	.60	.44	5.90	5.67	4.60	.05
Product Selection		.80	.82											
	Items from everywhere are available			.73	.64	.70	.70	.75	.49	.49	5.38	5.55	2.88	.05
	Can get good product information online			.73	.48	.62	.56	.73	.25	.40	5.56	5.61	.91	ns
	Broader selection of products			.62	.63	.62	.73	.63	.43	.40	4.86	5.34	7.26	.001
	Access to many brands and retailers			.62	.68	.63	.83	.78	.47	.40	5.46	5.86	7.27	.001
Ease of Shopping		.78	.74											
	Don't have to wait to be served			.82	.67	.63	.76	.78	.46	.41	5.32	5.77	7.03	.001
	No hassles			.75	.55	.44	.67	.59	.31	.22	4.78	5.00	3.14	.05
	Not embarrassed if you don't buy			.69	.56	.45	.67	.54	.36	.22	4.97	5.20	3.05	.05
	No busy signal			.61	.56	.59	.66	.69	.32	.38	4.85	5.36	7.24	.05
Hedonic		.77	.65											
	To try new experience			.88	.65	.52	.76	.66	.44	.28	4.64	4.45	2.60	.10
	Exciting to receive a package			.79	.58	.44	.71	.59	.39	.22	4.76	5.15	5.27	.05
	Can buy on impulse in response to ads			.67	.56	.39	.67	.49	.32	.15	4.69	4.60	1.10	ns
	Can custom design products			.60	.50	.38	.59	.53	.25	.15	4.23	4.53	4.58	.05

(continued)

TABLE 4   (Continued)

DIMENSIONS	ITEMS	COEFFICIENT α		EFA ITEM LOADING	CORRECTED ITEM-TOTAL CORRELATIONS		CFA ITEM LOADING		SQUARED MULTIPLE CORRELATION		SCALE/ITEM MEAN		Z SCORE	p
		S1	S2	S1	S1	S2	S1	S2	S1	S2	S1	S2		
Financial Risk		.85	.83											
	Can't trust the online company			.88	.73	.65	.83	.76	.59	.43	4.20	3.82	5.28	.05
	May not get the product			.87	.70	.59	.82	.66	.55	.35	4.20	3.07	14.68	.001
	May purchase something by accident			.78	.52	.54	.59	.66	.30	.30	4.00	3.01	12.04	.001
	My personal information may not be kept			.73	.72	.70	.73	.69	.61	.55	5.34	4.50	10.24	.001
	My credit card number may not be secure			.68	.66	.70	.66	.69	.55	.55	5.29	4.23	12.77	.001
Product Risk		.84	.84											
	Can't examine the actual product			.86	.68	.70	.77	.80	.49	.51	5.77	5.13	8.49	.001
	Size may be a problem with clothes			.85	.68	.66	.75	.72	.48	.48	5.67	5.40	4.15	.001
	Can't try on clothing online			.78	.65	.67	.72	.71	.43	.48	5.62	5.82	3.28	.05
	Inability to touch and feel the item			.70	.67	.65	.76	.76	.46	.47	5.39	5.18	3.18	.05
Time Risk		.74	.72											
	Too complicated to place order			.84	.60	.55	.73	.74	.38	.32	3.59	3.03	7.61	.001
	Difficult to find appropriate websites			.77	.60	.57	.76	.70	.39	.33	4.18	3.39	11.28	.001
	Pictures take too long to come up			.56	.49	.50	.60	.60	.24	.25	4.53	3.73	10.25	.001

Nomological Validity

The importance of establishing nomological validity has been well documented (e.g., Babin et al., 1994; Bagozzi, 1984; Netemeyer, Durvasula, & Lichtenstein, 1991), and researchers have noted the need for a broader research focus, building on more general theories that link multiple constructs. A nomological model is thus proposed based on a synthesis of consumer decision-making (Sheth, Mittal, & Newman, 1999) and innovation adoption (Rogers, 1995) theories.

The Internet Web site has been viewed as a new business model (O'Cass & Fenech, 2003). When consumers accept and use an Internet Web site to fulfill their shopping activities, they are adopting an innovation (Dutta & Biren, 2001; Liu, 2003; Sultan, 2002). Even though the Internet is no longer a "new" business model, the way consumers use the Internet to facilitate their shopping continues to evolve, so they are still adopting the Internet to facilitate new shopping purposes. Therefore, we apply constructs from the innovation adoption process (Rogers, 1995) to explain and predict online shopping behavior. Rogers proposed that prior conditions such as felt needs influence an individual's perception of an innovation,

thus directly predicting the individual's decision to adopt the innovation. In the context of online shopping, perceptions of benefits and risks are antecedents of consumers' perceptions of Internet shopping and of their online shopping behaviors. Previous research on innovation adoption suggests that perceptions of relative advantage, compatibility and ease of use are related to the adoption of Internet related technology (Chen, Gillenson, & Sherrell, 2002; Tornatzky & Klein, 1982). In addition, the innovation decision process postulates a causal relationship between perceived innovation characteristics and trial (temporary usage) of an innovation (i.e., online shopping behaviors) and adoption (continued usage of an innovation) (Davis, 1989; Rogers, 1995).

The consumer decision-making process is integrated into our model to conceptualize adoption of the Internet as a shopping medium with respect to several of the steps of the decision-making process completed through the Internet (e.g., search, purchase). The proposed nomological network to explain the role of perceived benefits and risks on consumers' perceptions of the Internet as a shopping medium and their online shopping behaviors is presented in Figure 2. Given
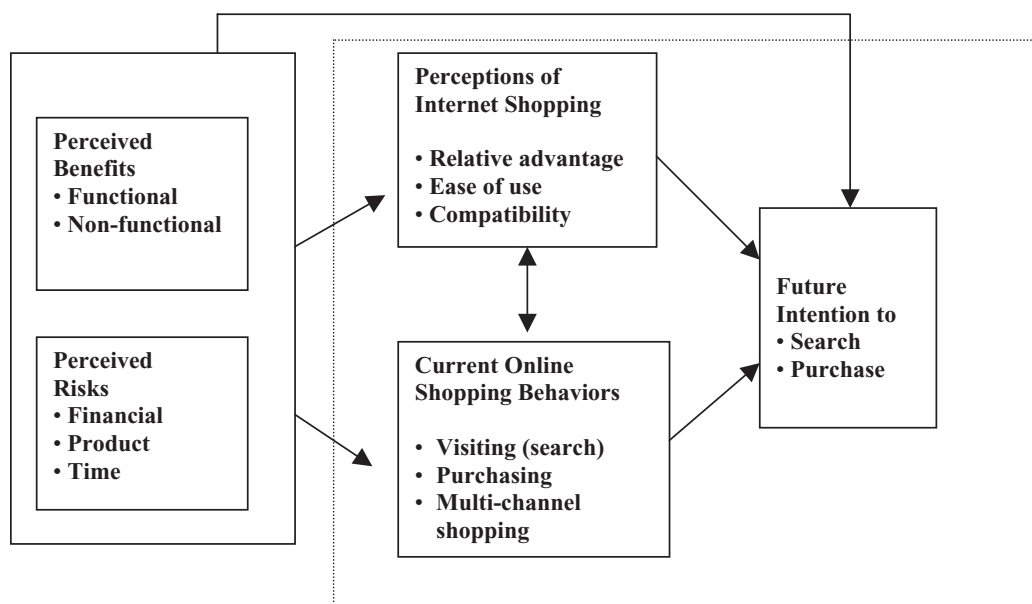
FIGURE 2

Conceptual Model to Explain the Role of Perceived Benefits/Risks on Consumers' Online Perceptions and Shopping Behaviors

that the perceived benefits and risks associated with online shopping are antecedents of individual adoption, and hence consumers' online shopping behaviors, we may determine the effectiveness of perceived benefits and risks in explaining and predicting information search and purchase behavior in online environments. Consequently, the scales for perceived benefits and perceived risks were investigated within a nomological network of theoretical related constructs, including perceptions of Internet as a shopping medium (i.e., relative advantage, ease of use, compatibility), frequency of online shopping, dollar amount spent online, and decision-making steps completed online (i.e., search, purchase, and multi-channel shopping) (step 9). Each of these constructs is briefly discussed below.

Perceptions of Internet Shopping. The potential to derive more value from shopping the Internet provides significant impetus for consumers to use this shopping medium. Liu (2003) found that perceived relative advantage of shopping online was positively associated with online shopping. Perceived advantages of shopping online over traditional retail formats should facilitate online shopping.

Although the Internet offers considerable potential as a retail format, some consumers may not have the necessary expertise to use it efficiently. If consumers perceive shopping on the Internet as requiring too much cognitive effort, they will be reluctant to purchase online (GVU, 1998; O'Cass & Fenech, 2003). Alternatively, the perceived ease of use of a retailer's web site is likely to lead to feelings of confidence and, consequently, enhanced online purchasing.

An innovation perceived as compatible with an individual's needs is more likely to gain acceptance (Rogers, 1995). From a consumer's perspective, a retailing format is most desirable when it matches the consumer's lifestyle, shopping experience preference and shopping habits. Therefore, compatibility can be viewed here as the degree to which consumers perceive shopping via the Internet as being consistent with their needs, past experiences, existing knowledge or skills, and shopping habits.

Decision-making Online. The Internet plays an increasingly active and important role in facilitating consumer decision-making at each stage of the decision-making process. Consequently, broadly defining adoption of the Internet for shopping as using the Internet as a retail medium to implement one or more steps of the decision-making process makes it possible to examine the various online shopping behaviors of consumers. For example, consumers may search for information and make product choices online, but actually purchase in another retail format in an effort to leverage multi-channel shopping to maximize shopping value. Pre-purchase shopping activities such as searching for information, comparing products, and making a choice impact the productivity of multi-channel retailers and have practical implications for product or brand marketing.

Future Intention to Shop. Consumers' use of the Internet for shopping is dynamic in that online shoppers tend to change their online shopping behaviors over time, as Internet consumers' perceptions and shopping experiences shift. Current Internet shoppers may discontinue online purchasing and switch to other retail formats if their desired online shopping benefits are not satisfied by their current online shopping experiences; therefore, it is necessary to examine consumers' intention to continue shopping online to better understand the role of online shopping benefits and risks in predicting future online shopping behaviors.

Testing Nomological Validity

Literature suggests that Internet shoppers who perceive more benefits from online shopping are likely to perceive more relative advantage, ease of use and compatibility of this shopping medium and be more likely to shop online than those who perceive few benefits (Rohm & Swaminathan, in press). Conversely, shoppers who perceive more risks associated with purchasing online are expected to be less likely to purchase online. Seven online shopping constructs were investigated by the two domains (perceived benefits and perceived risks) within the nomological network of rationally related constructs, including perceptions of Internet as a shopping medium, frequency of online shopping, dollar amount spent online, and specific online shopping patterns (step 9). Hypotheses were developed and correlations between each of the four dimensions of perceived benefits and three dimensions of perceived risks and (a) perception of the Internet as a shopping medium, (b) frequency of

online visiting, (c) frequency of purchasing, (d) dollar amount spent, and (e) amount of time spent shopping online were assessed to test the hypotheses, and hence, to establish nomological validity of the developed scales. The results of testing these hypotheses are discussed below.

H1: The four perceived benefits of online shopping will have significant positive correlations with (a) perceptions of the Internet (i.e., relative advantage, compatibility, ease of use) as a shopping medium; (b) frequency of online visiting; (c) frequency of online purchasing; (d) dollar amount spent online; and (e) mount of time spent shopping online.

The resulting correlations used to tests these hypotheses are summarized in Table 5. All but one of the 28 correlations used to test the hypothesized relationships were positive and statistically significant ($p < .05$). Therefore, H1a, H1b, H1c, and H1e were fully supported, while H1d was partially supported (three of the four positive motivations were correlated as hypothesized).

H2: The three perceived risks will have significant negative correlations with (a) perceptions of the Internet as a shopping medium; (c) frequency of online purchasing; (d) dollar amount spent online; and (e) weekly hours spent on Internet shopping. (b) Only perceived time risk will have a significant negative correlation with frequency of online visiting because no financial or product risk is associated with online visiting.

Eight of the 19 correlations hypothesized were significant and negative ($p < .05$), as hypothesized. Therefore, H2b, H2c, H2d, and H2e were fully supported, while H2a was partially supported.

Predictive Validity

Predictive validity is demonstrated by the correlation between the instrument and the criterion variable (Nunnally & Bernstein, 1994). To assess predictive validity of the measures for perceived benefits and risks of online shopping, a measure of future intention to shop online was employed as the criterion variable (step 10). Since predictive validity is shown

TABLE 5	Nomological Validity Assessment

	PERCEIVED BENEFITS				**PERCEIVED RISKS**		
	SHOPPING CONVENIENCE	**PRODUCT SELECTION**	**EASE OF SHOPPING**	**HEDONIC/ ENJOYMENT**	**FINANCIAL RISK**	**PRODUCT RISK**	**TIME RISK**
	Hypotheses 1a to 1f				**Hypotheses 2a to 2f**		
Relative advantage	.54	.59	.49	.31	−.32	−.23	−.33
Compatibility	.57	.53	.43	.23	−.36	−.22	−.30
Ease of use	.52	.48	.45	.26	−.26	−.08[b]	−.32
Online visiting	.26	.30	.21	.19	−.05[b]	−.07[b]	−.10
Online purchasing	.22	.22	.20	.18	−.19	−.26	−.12
Amount spent online	.19	.18	.10	.00[b]	−.19	−.13	−.16
Weekly hours spent							
Internet shopping	.20	.20	.19	.20	−.08	−.13	−.17
	Hypothesis 3				**Hypothesis 4**		
Intent to visit	.21	.31	.20	.18			
Intent to purchase	.23	.27	.23	.21	−.19	−.25	−.11

[a] All correlations significant at $p < .05$ (two tailed) unless otherwise noted.

[b] Correlation not significant at $p > .05$ (two-tailed).

by a significant correlation between two focal constructs, we hypothesized that all four perceived benefit constructs would be positively correlated with the measure of intention to shop online (both visiting and purchasing behaviors) and that all three perceived risk constructs would be negatively correlated with the measure of intention to purchase online. Therefore:

H3: All four perceived benefits will correlate positively with future visiting and purchasing intentions.

H4: All three perceived risks will correlate negatively with future purchasing intentions.

Correlation analyses revealed that our measure of visiting and purchasing behaviors correlated positively ($p < .05$) with the four positive motivations and that purchasing behaviors correlated negatively ($p < 0.5$) with the three negative motivation (Table 5). Therefore, both H3 and H4 were fully supported.

Practical Utility

Shopper Segments. In step 11 we use the data to group respondents into meaningful shopper segments to provide additional practical utility of the scale for Internet marketers. We divided respondents into two groups (purchasers and visitors) based on their current online shopping behaviors to determine how perceptions of shopping motivations differed for the two groups. A MANOVA test revealed that purchasers rated each of the four benefits of Internet shopping higher than visitors (Wilks' lambda = 87; $p < .001$). Purchasers also evaluated the perceived risks to be less risky than did visitors (Table 6).

We further divided online purchasers into two segments (heavy and light purchasers) based on their online purchase frequency. Based on a MANOVA test (Wilks' lambda = 87; $p < .001$), we found that heavy purchasers perceived more shopping convenience and product selection than light purchasers. There was no difference between these two groups regarding risk perception.

Based on the hierarchical comparison among online shopper groups, we found that online shoppers' perceptions of risks separated them as purchasers or visitors, while their perceptions of benefits determined

TABLE 6	Benefit/Risk Perceptions of Online Visitors versus Purchasers[a]

	SHOPPING PATTERN		
PERCEIVED BENEFITS/RISKS	**VISITOR** $N = 160$	**PURCHASER** $N = 438$	**UNIVARIATE *F***
Shopping convenience	5.67	6.04	23.18***
Product selection	5.27	5.71	31.42***
Ease of shopping	5.00	5.45	26.64***
Enjoyment	4.37	4.80	22.00***
Financial risk	4.36	3.82	24.50***
Product risk	5.81	5.23	40.77***
Time risk	3.65	3.29	11.71***

[a] Multivariate test is significant at .001 level.

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

how often they purchase online. Given that marketers can easily segment customers by their shopping behaviors, these findings hold important practical implications for developing marketing strategies to address the benefits and risks important to each market segment. For example, heavy purchasers have more favorable perceptions of online shopping convenience and product selection, suggesting that online retailers may want to emphasize convenience and selection for this group.

TABLE 7	Benefit/Risk Perceptions of Online Light Purchasers versus Heaver Purchasers[a]

	PURCHASE FREQUENCY		
PERCEIVED BENEFITS/RISKS	**LIGHT PURCHASER** $N = 327$	**HEAVY PURCHASER** $N = 111$	**UNIVARIATE *F***
Shopping convenience	5.99	6.18	5.025*
Product selection	5.67	5.84	3.870*
Ease of shopping	5.43	5.54	1.181
Enjoyment	4.75	4.94	3.158
Financial risk	3.84	3.76	.450
Product risk	5.28	5.07	3.297
Time risk	3.28	3.29	.001

[a] Multivariate test is significant at .001 level.

* $p < .05$.

Online Shopping Evolution Over Time. To test for any change in consumers' perceptions of the benefits and risks of shopping online over three years, we compared the perceived benefits and risks for the two samples (Table 4). Consumers in the second sample perceived 10 of the 16 the benefit items more positively than those in sample one and 11 of the 12 perceived risk items as less risky when shopping online ($p < .01$). These findings indicate that risk factors are becoming increasingly less likely to hinder Internet shopping, and that more favorable perceptions of benefits are likely to play an increasingly important role in shaping online shopping behaviors. Further, these findings demonstrate the growing potential of the Internet to impact purchase decisions and underscore the need for multichannel retailers to make effective use of the Internet as a marketing medium.

DISCUSSION AND CONCLUSIONS

The development of the instrument relied on appropriate scale development procedures, supported by information gained from both qualitative inquiry and quantitative analysis. The results from the two national samples supported the proposed measures of perceived benefits and risks associated with online shopping in terms of construct, nomological, convergent and discriminant validity and predictive validity. More specifically, internal consistency analysis, item analysis, exploratory and confirmatory factor analysis supported the construct validity of four dimensions of benefits and three dimensions of risk. These scales demonstrated further evidence of construct validity, as the findings revealed that those shoppers who shopped more frequently and spent more money online perceived greater benefits and less risk to be associated with Internet shopping. Nomological validity was supported in that correlations between the perceptions of the Internet as a shopping medium, frequency of online visiting, frequency of purchasing, dollar amount spent, and amount of time spent shopping online were associated positively with perceived benefits and negatively with risks. Furthermore, perceived benefits were determined to be a positive predictor of future intentions to visit and purchase online, while perceived risks related negatively to future intentions to purchase online. Finally, a practical assessment of these scales revealed that

individuals that purchased (as opposed to just visited) online perceived significantly greater benefit and less risk, and that heavy online shoppers (when compared to light shoppers) perceived significantly greater benefits in terms of convenience and product selection.

Implications

This research offers important theoretical and pragmatic implications for researchers and retailers. Shopping motives have been identified as important determinates of decision-making in classic models of consumer behavior. These motives include achieving desired benefits and avoiding risks. Although numerous conceptual frameworks have been used to examine the motivational determinants of shopping behaviors in traditional contexts, these concepts have not been systematically extended to the online shopping environment. Our research integrated elements from traditional consumer decision-making frameworks and innovation adoption literature to examine nomological validity of the developed scale, contributing to both consumer decision-making and innovation adoption literature. In the context of innovation adoption, the concept of adoption has often been used in a rather limited way to refer to a single decision in most previous research (Gatignon & Robertson, 1985). However, this research conceptualized adoption multidimensionally. The findings support the role of perceived innovation characteristics in consumer adoption of an innovation.

The scales developed here capture a wide variety of reasons why people shop online (or choose not to purchase online) and have a number of applications for retail research. First, the scales can be employed in research investigating the interrelationships between online shopping benefits (or risks), online searching, online purchasing, multi-channel decision-making, and post online shopping experience (e.g., satisfaction, loyalty). Previous research in the traditional store context suggests that perceived shopping benefits, both utilitarian and hedonic, drive the behavior that brings shoppers into the marketplace (Arnold & Reynolds, 2003). Online shoppers, who are driven by either utilitarian or hedonic benefits (or deterred by perceived risks), may be influenced by various website factors such as the quantity and quality of product information, the functionality of a web site, entertainment value, order fulfillment or customer

services. Also, different types of online shopping motives will result in different online shopping behaviors as shoppers with strong utilitarian motives will differ from those with strong hedonic motives for online shopping in their online shopping behaviors.

A related research application examines the relationship between type and intensity of perceived benefits (or risks) of online shopping and search, multi-channel shopping, and online purchase behavior (light vs. heavy). Online shoppers may be categorized as visitors (those who search product information through the Internet without purchasing online) or purchasers (those who purchase online). In this study, the type and intensity of perceived online shopping risks differentiate online visitors and purchasers, while the type and intensity of utilitarian and hedonic benefits distinguish light purchasers and heavy purchasers.

Consumers select retail outlets that meet their expectations for dominant shopping motives and pursue value from the shopping experience, suggesting that consumers trade-off perceived benefits and risks in forming an intention to purchase online. While some earlier research concluded that consumers were more concerned about perceived risks than benefits (Bhatnagar & Ghose, 2004b), the current findings suggest that risk concerns are diminishing with increased online shopping experience, while perceived benefits are becoming increasingly important. The two scales developed in this study provide measures to examine the role of perceived benefits and risks, as well as the trade-offs that occur in consumers' decisions to shop online.

A greater knowledge of distinct shopper segments is useful for retailers in constructing marketing communication strategies and designing appealing web site environments. For example, to convert some visitors into purchasers, web sites may need to be redesigned to address security, privacy and order fulfillment concerns. On the other hand, to better serve online purchasers, it may be necessary to emphasize convenience and selection.

Aside from shopper segmentation, online retailers could use the scales to investigate the direction and strength of various benefits and risk perceptions among their current customers. An online benefit/risk profile could be constructed of an online store's current customer base, thereby providing the online retailer with additional knowledge regarding intensity and types of online shopping perceptions influencing its customers. Based on such knowledge, the online retailer would be able to position their marketing strategies to attract new online shoppers (or to retain current purchasers) by addressing the shopping perceptions of different shopper groups. Examining perceptions of online shopping over time provides online retailers with direction to improve their business. For instance, even though perceptions of financial risk and time/convenience risk have been reduced with the adoption of advanced Internet technology, product risk remains a key factor influencing online purchase in many product categories. Therefore, reducing perceptions of product risk may provide a good avenue for Internet retailers to enhance online sales.

Retailers may also employ the scales to assess the effects of benefit and risk perceptions on Internet shopping outcomes such as shopping satisfaction and loyalty. For example, retailers may determine whether online shoppers who are strongly motivated by utilitarian benefits are more likely to be satisfied and repatronize the online retailer than online shoppers who are strongly motivated by hedonic benefits. In conclusion, the scales developed here may provide Internet retailers with a tool that could be employed to examine the online shopping motives of their current and potential website customers, thereby providing customer information that may guide future website design and marketing strategies.

Limitations and Directions for Future Research

These scales were developed specifically for the online shopping environment; therefore one must use caution with their application to other shopping contexts. While we have provided evidence that the scales replicate relatively well across independent online shopper samples, continued vigilance is necessary, given the fast pace of Internet development. Second, there was some discrepancy in the stability of the perceived online shopping risk scale over time. Further efforts should be directed toward testing the measure of perceived shopping risks to enhance the generalizability of the measure. Third, the scale was

developed to address the broad utilitarian and hedonic reasons people shop online. We encourage others to examine more specific hedonic or utilitarian motives.

NOTE

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