

# Motivation and Concerns for Online Sport Consumption

**Youngjin Hur**

Washington State University

**Yong Jae Ko**

University of Florida

**Joseph Valacich**

Washington State University

The purpose of this study was to propose and test a conceptual model of online sport consumption motivation and concerns when using the Internet for sport information and shopping. The proposed model is based on current conceptualization of motivation and concerns when using the Internet. The proposed model consists of five types of motivation (i.e., convenience, information, diversion, socialization, and economic) and four types of concern (i.e., security and privacy, delivery, product quality, and customer service). To test this model, the scale of motivation for online sport consumption was developed. A structural equation model test with a convenience sample of 222 sports participants supported the conceptualization of motivation and concerns. Motivation positively influenced sport fans' actual usage of sport-related Web sites, but no significant path coefficient was found from concerns to motivation and actual usage. Given these results, implications for future research and practice are discussed.

The Internet is a rapidly growing medium for shopping and information exchange. By mid-2006, more than 1 billion people worldwide used the Internet (Internet world stats, 2006), and the number of users is expected to continue expanding for decades (eMarketer, 2003). For instance, from 2000 to 2006, the number of users worldwide has grown more than 200%. Given this phenomenal growth in users, the Internet is becoming one of the most important marketing tools for sport managers and marketers, because it has become a primary source of information for sport consumers (Delpy & Bosetti, 1998). For instance, by 2001, 85% of 2,400 sporting goods manufacturers used the Internet to conduct business (SGMA, 2001). Today, virtually all major participants in all sport industries (e.g., teams, manufactures, etc.) use the power of the Internet as a key part of their business strategy.

---

Hur is with the Sport Management Program and Valacich is with the College of Business, Washington State University, Pullman, WA. Ko is with the Sport Management Program, University of Florida, Gainesville, FL.

Jupiter Research (2000) projected that \$3 billion would be spent online for sporting goods, apparel, footwear, and event tickets in 2003. Online ticketing for sport events is estimated to grow from \$450 million in 2002 to \$1.2 billion in 2007, and the online entertainment segment including sports is expected to reach \$15.7 billion by 2007. It is also expected that the number of global Internet sport consumers will reach 113 million by the end of 2005 and 309 million by the end of 2008 (Jupiter Research, 2003). This growth reflects the fact that the Internet is becoming one of the most important revenue sources for sport organizations. Today, most sport organizations actively use the Internet as an important marketing tool. Meanwhile, sport consumers use the Internet for various purposes. They visit sport-related Web sites not only to purchase sport products but also to obtain sport-related information and enjoyment. It is clear that, as has happened in virtually every industry, the Internet has become an important part of the sport consumer marketplace.

In considering the growth of online sport business, it is important for sport marketers to understand online sport consumption behavior (Kahle & Meeske, 1999). To date, there have been several studies focused on improving our understanding of online sport business, such as the benefits of using the Internet as a marketing tool (Brown, 2003; Caskey & Delpy, 1999; Delpy & Bosetti, 1998; Duncan & Campbell, 1999; Kahle & Meeske, 1999; Turner, 1999), gaining demographic profiles of online sport consumers (Brown, 2003; Delpy & Bosetti, 1999; Duncan & Campbell, 1999), and analyzing the contents of sport Web sites (Smith, Pent, & Pitts, 1999). Scholars' interest in the Internet as a marketing communication tool has increased, and Filo and Funk (2005) recently examined marketing mix elements that are conveyed by the Web sites of three women's soccer teams. The authors also examined which features of the product appeal most to consumers by using the Sport Interest Inventory. They found that product presentation had the greatest impact and was a major source of information for game day product-related information. Their research presents a compelling case that, indeed, the Internet creates new business opportunities (e.g., market expansion) for sport organizations, helping them stay competitive in the global sport marketplace.

Unfortunately, few studies have been conducted to understand online sport consumers' behavior (e.g., sport consumers' attitude toward the Internet, information search behavior, usage patterns, and motivation and concerns for using the Internet). To fully realize the business opportunities of the Internet, sport marketers need to develop a better understanding of online sport consumers and their behavior. In particular, sport marketers need to identify psychological needs and predict consumption decisions of online sport consumers. It is also important to take into account that there are several negative aspects of online shopping that influence consumers' purchase decision. If sport organizations want to use the Internet as an ongoing revenue source, they must gain an understanding of which risks consumers are most concerned with, as well as what specific steps can be taken to mitigate these perceptions (Brown, 2003; Garbarino & Strahilevitz, 2004).

Consequently, this study was designed to identify motivation factors of online sport consumption behavior and concerns of using the Internet when shopping for sport-related products. As of yet, there has not been substantial research on this issue in the field of sport management and marketing. Thus, understanding the motivation and concerns of online sport consumers will make both scientific

and practical contributions. In particular, this study can contribute to the body of knowledge of sport marketing by extending our understanding of online sport consumption behaviors. The specific research questions addressed in this study are (a) Why do sport consumers search for information and purchase sport-related products through the Internet? and (b) What concerns do consumers have when shopping for sport-related products through the Internet?

## Conceptual Background and Model

Currently, several researchers have attempted to identify motivational factors of online consumption motivation in the fields of business marketing and management information systems (Joines, Scherer, & Scheufele, 2003; Korgaonkar & Wolin, 1999; Lee, 2002; Parsons, 2002; Rodgers & Sheldon, 2002; Rohm & Swaminathan, 2004; Stafford & Stafford, 2001; Teo, Lim, & Lai, 1999). Likewise, several researchers have identified perceived risks and concerns of consumers when using the Internet (e.g., security and privacy or delivery problems; Citrin, Stem, Spangenberg, & Clark, 2003; Featherman & Pavlou, 2003; Forsythe & Shi, 2003; Garbarino & Strahilevitz, 2004; Korgaonkar & Wolin; Lee; Ranganathan & Ganapathy, 2002).

Although these studies have helped to establish a foundation for understanding online consumption motivation and concerns, researchers have not yet agreed on how best to conceptualize these constructs. In addition, this particular issue has not been investigated in the context of online sport consumption. Therefore, it is necessary to develop a comprehensive conceptual framework of online sport consumption motivation and concerns by integrating models available in the literature to fill this conceptual void.

For this research, a conceptual model of online consumption motivation and concerns for using the Internet has been developed. The model consists of five types of motivation (i.e., convenience, information, diversion, socialization, and economic motive) and four types of concern (i.e., security and privacy, delivery, product quality, and customer service).

We adapted the hygiene-motivator theory (Herzberg, 1968) to propose a two-factor research model that can be used to distinguish concern factors that ensure essential functionality from those that motivate their return to a sport-related Web site (e.g., Zhang & Dran, 2000). Theoretically, motivation is expected to lead sport consumers' actual usage of sport-related Web sites, whereas concerns are related to Web sites' functional environment (e.g., security and ordering system) and basic customer services. If the functional environment and basic services are not satisfactory, this creates customer dissatisfaction. Thus, motivation and concern factors are not opposite to each other but deal with different facets of consumer psychology related to Internet usage. It should be noted that although a single-measurement model was used in the current study to examine the factor structure and item reliability, motivation and concerns are two distinct constructs to predict online sport consumption behavior. In the proposed research model five factors of motivation are hypothesized to collectively predict Internet use. In addition, we examined the relationships between concerns and online sport consumption motivation and their actual usages. This research model is examined next.

## Motivation for Online Consumption

Motivation for online sport consumption can be defined as an activated state within a sport consumer that leads to using the Internet for sport-related activities (Shank, 2001). To date, several studies have been conducted to investigate motivational factors of online consumers. For example, Katz and Aspden (1997) identified that communicating by e-mail, finding information, and staying up-to-date are the most important reasons for using the Internet. Rodgers and Sheldon (2002) developed a 12-item Web Motivation Inventory that highlights four primary online consumption motivation factors: researching (e.g., getting information, finding news and facts), communicating (e.g., emailing, chatting, connecting with friends), surfing (e.g., exploring news sites, finding interesting Web pages), and shopping (e.g., making a purchase).

Meanwhile, several scholars have applied existing theories to investigate online consumption motivation. For example, Stafford and Stafford (2001) applied gratification theory to the Web and identified five motivational factors for using Web sites. The factors include search, cognitive, new and unique, social, and entertainment factors. Parsons (2002) examined how Tauber's (1972) shopping motives explain online shopping behavior, concluding that, although personal motives (i.e., diversion, self-gratification, and learning about new trends) and social motives (i.e., social experiences outside the home, communications with others having a similar interest, and peer group attraction) are equally important for online consumption behavior, other factors such as role playing, physical activity, sensory stimulation, status and authority, and pleasure of bargaining were not important motives for online consumption behavior. In addition, Joines et al. (2003) and Korgaonkar and Wolin (1999) identified economic motive as an important factor influencing online consumption behavior.

Although the motivational factors proposed by the previous research are useful, their specific items did not focus on measuring online sport consumption behavior. Therefore, based on the findings of the previous research, this study developed a five-factor structure of online sport consumption motivation that reflects the unique aspects of online consumption. These are described next.

**Convenience.** The first dimension in the proposed model, convenience, refers to sport consumers' motivation to purchase a desired product and obtain sport-related information in a convenient way, regardless of place and time (Kaufman-Scarborough & Lindquist, 2002). The Internet offers benefits of ease to purchase and service delivery to online consumers (Swinyard & Smith, 2003; Wee & Ramesh). Previous studies focusing on online consumer behavior found convenience to be an important factor influencing online shopping (Donthu & Garcia, 1999; Rohm & Swaminathan, 2004; Teo, 2002; Swinyard & Smith; Wee & Ramesh, 1999). Given its importance in other contexts, it is intuitive to believe that convenience would also be important for online sport consumption. For example, sport fans can more easily purchase tickets for a variety of events through online retailers such as Ticketmaster, without visiting traditional outlets, even though it might charge higher prices. Therefore, convenience is included as the first factor in building our model of motivation in online sport consumption. The convenience factor is therefore measured by perception of ease and convenience when shopping for sport-related products online.

**Information.** The second factor, information, refers to sport consumers' motivation to gain sport-related knowledge through the Internet. Sport consumers have a need to gain up-to-date information regarding sport teams, players, products, and current trends of sport business. For example, sport Web sites such as ESPN SportsZone, CBS SportsLine, and CNN-SI were launched to satisfy the needs of sport consumers. More sport organizations use the Internet as a promotional mechanism, and so the Internet has arguably become the most powerful tool for information search for sport consumers (Caskey & Delpy, 1999).

Recent research confirmed that one of the main uses of the Internet is to obtain valuable information (Korgaonkar & Wolin, 1999; Parsons, 2002; Rodgers & Sheldon, 2002; Sheehan, 2002; Stafford & Stafford, 2001). For example, Rodgers and Sheldon highlighted information as a main motivation factor in their Web Motivation Inventory scale. Moreover, consumers' motivation to obtain relevant information is equally important to those consumers who purchase products through the Internet. For example, Parsons found that learning about new trends through the Internet is one of the most important factors of online shopping motivation. Therefore, it is concluded that there is a positive relationship between information motivation and online consumption behavior. The information factor is therefore measured by perceptions of usefulness and quantity of sport-related information.

**Diversion.** The third motivational factor, diversion, refers to sport consumers' desire to escape day-to-day boredom and stress, thus seeking pleasure, fun, or enjoyment via the Internet (Korgaonkar & Wolin, 1999). Online shopping provides consumers with a diversion and an escape from everyday life (Parsons, 2002; Teo et al., 1999). In particular, online consumers are likely to use the Internet for seeking fun, games, chatting online, and other forms of entertainment (Stafford & Stafford, 2001; Swinyard & Smith, 2003). It is interesting that, in comparison with older users, younger online users primarily seek fun and entertainment value through the Internet, rather than making actual purchases (Donthu & Garcia, 1999). In essence, young users are "fun seekers" who use the Internet primarily for its entertainment value (Swinyard & Smith). Hence, there is strong support that diversion is another important motivational factor for online sport consumers. Consequently, diversion is measured by capturing perceptions of pleasure, willing to escape from daily work, and enjoyment when using sport-related Web sites.

**Socialization.** The fourth motivational factor, socialization, refers to sport consumers' desire to develop and maintain human relationships through the Internet by sharing experience and knowledge with others who have similar interests (Korgaonkar & Wolin, 1999). Online consumers use the Internet to develop social relationships because it provides consumers with various communication tools (Parsons, 2002; Rodgers & Sheldon, 2002; Stafford & Stafford, 2001). When using the Internet for socialization, online consumers gain a sense of a pseudocommunity in which they can exchange feedback on products or enjoy social interaction with other users (Joines et al., 2003). For example, avid sport fans enjoy sharing their opinions regarding team performance and recruiting players with others in a fan site offered by the NFL. Consequently, socialization is another important motivational factor for online sport consumers and is measured by perceptions regarding sport-related social exchanges via the Internet.

**Economic Motive.** The fifth motivational factor, economic motive, refers to sport consumers' desire to save or make money, bargain efficiently, and obtain free products via the Internet (Joines et al., 2003). Joines et al. identified a positive relationship between economic motive and online shopping. One of the critical reasons for shopping online is the price of products or services offered by online retailers (Chiger, 2001; Teo, 2002). For example, online consumers can compare and purchase the least expensive sporting event tickets or sport-related equipment. In addition, online consumers are motivated by free products or samples offered by online retailers (Korgaonkar & Wolin, 1999). Therefore, it is likely that economic motive is another important reason why sport consumers use the Internet. Consequently, economic motive was captured through perceptions related to financial gains and bargaining effectiveness when using the Internet for online sport consumption.

## Concerns for Online Sport Consumption

Concerns for online sport consumption refer to various forms of apprehension to use the Internet for sport-related products and services. For example, in order to purchase sport-related products or services, online shoppers might use credit cards and provide private information (e.g., e-mail and phone number) to online retailers. Security concerns are therefore a significant issue for online sport consumers. Thus, sport marketers need to carefully examine this and other possible concerns in order to take proactive action to mitigate any deleterious effects (Caskey & Delpy, 1999).

The importance of examining consumers' concerns when using the Internet has been highlighted in several studies. For example, O'Neil (2001) found that securing privacy is more important to consumers than convenience; 53.7% of participants indicated that they were "very concerned" and 27.1% said they were "somewhat concerned" about privacy issues. In addition, Ranganathan and Ganapathy (2002) supported O'Neil's findings that effectively overcoming security concerns was paramount for gaining online shoppers. Teo (2002) also found that approximately 90% of the respondents in a study of online consumers were extremely concerned about security when shopping online. In sum, this body of work has found that consumers are extremely reluctant to offer their personal information over the Web and engage in transactions if there are significant concerns. It is clear that information security is a significant concern for most online shoppers.

Beyond issues related to security, other researchers have examined various other concerns. For example, Garbarino and Strahilevitz (2004) identified five major perceived risks: loss of privacy, credit card misuse, fraudulent site, faulty products, and delivery problems. Similarly, Forsythe and Shi (2002) identified four types of perceived online shopping risks, which included product performance risk, financial risk, psychological risk, and time or convenience risk. Lee (2002) also found that key concerns in using the Internet and in shopping online are the risk of dealing with a fake company, the risk of stolen credit cards, the risk of inaccurate billings, and the risk of receiving wrong items. Swinyard and Smith (2003) identified further concerns of online shoppers, including returning products bought online, shipping charges, and hard-to-understand ordering processes and use. Based on the previous studies, four primary concerns related to using the Internet for sport-related

products and services have been identified. Specifically, these concerns are security and privacy, delivery, product quality, and customer services. Next, we examine each of these concerns more thoroughly.

**Security and Privacy.** Security and privacy is defined as sport consumers' perceived risks of personal and financial information being abused in online consumption. Several studies of online consumer behavior have found that perceived risk of security and privacy is a critical issue in online business (Featherman & Pavlou, 2003; Joines et al., 2003; Lee, 2002; O'Neil, 2001; Ranganathan & Ganapathy, 2002; Swinyard & Smith, 2003; Wee & Ramesh, 1999). According to Lee, security and privacy is a key concern in using the Internet for online shopping by consumers. Joines et al. also found that the transaction-based security concerns negatively affected the likelihood of online shopping. Recent investigation of security and privacy reveals that, from the customers' perspective, securing personal information and reliability of Internet vendors are more critical issues than obtaining convenience (e.g., ease of placing or canceling orders and easy payment process; Bhatnagar & Ghose, 2004; O'Neil). Consequently, consumers' unwillingness to provide credit card and personal information through the Internet is a major potential barrier for online shopping (Forsythe & Shi, 2003; Ranganathan & Ganapathy; Wee & Ramesh). In this study, we measured security and privacy concerns by examining perceptions of the potential loss of personal or financial information (e.g., credit card number).

**Delivery.** Delivery is defined as sport consumers' concerns that occur when ordering merchandise through the Internet. Chiger (2001) found that most online consumers are concerned about processing an online order, which is one of the main obstacles of online shopping. More specifically, the risks of inaccurate billings and receiving wrong items are key concerns to online shoppers (Lee, 2002; Wee & Ramesh). In addition, people who do not shop online are concerned about shipping charges, waiting time, and delivery problems (Lee; Swinyard & Smith, 2003). Because a poor delivery system will negatively influence customers' perceptions of quality and purchase decisions, delivery is an important concern to measure. Thus, delivery concerns can be measured by perceptions of delivery time and ability to track the product.

**Product Quality.** Product quality refers to sport consumers' concerns about the difficulty in identifying product quality before purchasing sport-related products online (Citrin et al., 2003). A major factor that influences online shopping relates to the inability to closely examine a product before purchasing (Swinyard & Smith, 2003; Teo, 2002; Wee & Ramesh, 1999). Citrin et al., for example, argued that the need for tactile input is an important factor for consumers in choosing whether they use the Internet as a shopping medium. In essence, consumers are concerned that a product purchased online might not perform properly (Featherman & Pavlou, 2003; Teo). Swinyard and Smith further support that an opportunity to evaluate product quality before purchasing is important for both online shoppers and nonshoppers. Thus, product quality concerns are measured by the perceptions related to the difficulty in assessing product quality and performance before purchasing.

**Customer Service.** Customer service is defined as consumers' concerns about services provided by online retailers before, during, or after purchases (e.g., money

back warranties, contacting a representative, or getting a response from the online retailers). Lee (2002) argued that concerns regarding after-the-sale service are very important psychological factors for online shoppers. For instance, online consumers have significant concerns related to product returns and reimbursement when returning a malfunctioning product (Featherman & Pavlou, 2003). Consequently, most consumers insist on a clear refund policy and efficient technical support from online retailers (Lee; Wee & Ramesh, 1999). It therefore follows that customer service should directly influence a variety of risk perceptions and that these perceptions could be captured through perceptions of after-the-sale service, warranties, or customer service mechanisms.

## Method

### Sample

A convenience sampling method was employed, administering the instrument to sport participants in the Department of Recreational Sports at a large university located in the northwest region in the United States. Among the 233 returned questionnaires, 222 were successfully completed and therefore included in the data analysis. Of the 222 respondents, 59% ( $n = 131$ ) were males and 41% ( $n = 91$ ) were females. Respondents were university students between the ages of 18 and 21 (79.3%) and 22 and 33 (20.7%).

### Item Generation and Scale Development

For the purpose of this study, we developed the Scale of Motivation for Online Sport Consumption (SMOS). The development of the SMOS followed the standard psychometric procedures as suggested by Nunnally & Bernstein (1994). The first step in the scale-development process was the generation of a list of items for each component of the online motivation and concern framework. Multiple measures for each of the motivation factors and concerns were developed and modified from the items of existing scales (Anderson & Srinivasan, 2003; Kau, Tang, & Ghose, 2003; Korgaonkar & Wolin, 1999; O'Cass & Fenech, 2003; Rodgers & Sheldon, 2002; Swinyard & Smith, 2003; Teo, 2002; Teo et al., 1999). On the basis of the review and synthesis of relevant literature, we generated an initial pool of 44 items for five motivational factors and 27 items for four concern factors in this study. The format for the instrument was a seven-point Likert scale ranging from (1) *strongly disagree* to (7) *strongly agree*.

For the purification of the instrument, the researchers began with an assessment of content and face validity through a panel of experts and a field test. The instrument was revised based on the feedback from the five panel members and a field test using 10 college students. Panel members were faculty members and graduate students in the sport management program at the primary researcher's university. After the revisions were made, a pilot study was conducted by administering the instrument to 103 students who were enrolled in sport management courses at the same university.

The internal consistency of motivation factors revealed a stable structure of scale items, ranging from .90 to .92. For concern factors, Cronbach's alpha ranged



from .69 (customer service) to .89. Based on the results of the pilot test, scale items for each construct were considered reliable for the intended population (Nunnally & Bernstein, 1994). Through this process, a total of 40 items were dropped from the initial item pool based on the assessments of those items for internal consistency (i.e., Cronbach's alpha and item-to-total correlations) and factor loadings (Netemeyer, Bearden, & Sharma, 2003). The final instrument had a total of 31 items: 17 items for motivation and 14 items for concerns (see Table 1).

## Data Analysis

The efficacy of the proposed model and psychometric properties of the scale were analyzed using SPSS 12.0 and EQS 6.1 (Bentler & Wu, 2002). By using EQS with the robust maximum likelihood method, we tested the constructs and the factor structures of the measurement models for goodness of fit. The combined data for skewness and kurtosis were checked based on Mardia's coefficient of multivariate kurtosis (Mardia, 1970). Examination of multivariate kurtosis for motivation and concern variables (Mardia's coefficient = 161.78 and normalized estimate = 26.65) indicated that chi-square might be overestimated and fit indices and standard error of parameter estimates might be underestimated (Bigné, Andreu, & Gnoth, 2005; Dubé, Cervellon, & Jingyuan, 2003; Hoyle, 1995). Thus, the Satorra-Bentler scaled chi-square (S-B  $\chi^2$ ), robust comparative fit index (Robust CFI), and other fit indices were used for correction.

The first step in assessing the conceptual model was to test a measurement model of motivation and concerns. A confirmatory factor analysis of the measurement model specifying the relationships of the observed indicators to the latent constructs was tested. The measurement model examined the relationships between 31 variables and 9 latent constructs (convenience, information, diversion, socialization, economic motive, security and privacy, delivery, product quality, and customer service; see Figure 1). Second, a structural model was conducted to test whether motivation and concern constructs affect respondents' actual usage of sport-related Web sites (i.e., frequency and time spent in use) to establish predictive validity (see Figure 2).

## Results

### Descriptive Statistics

The summated means of motivational factors were 5.12 (information), 4.59 (convenience), 3.87 (economic motive), 3.71 (diversion), and 2.88 (socialization), and the standard deviations ranged from 1.40 to 1.85. For the concern factors, the mean scores were 4.72 (product quality), 4.46 (security and privacy), 4.20 (customer service), and 3.80 (delivery), and the standard deviations ranged from 1.35 to 1.76 (see Table 1).

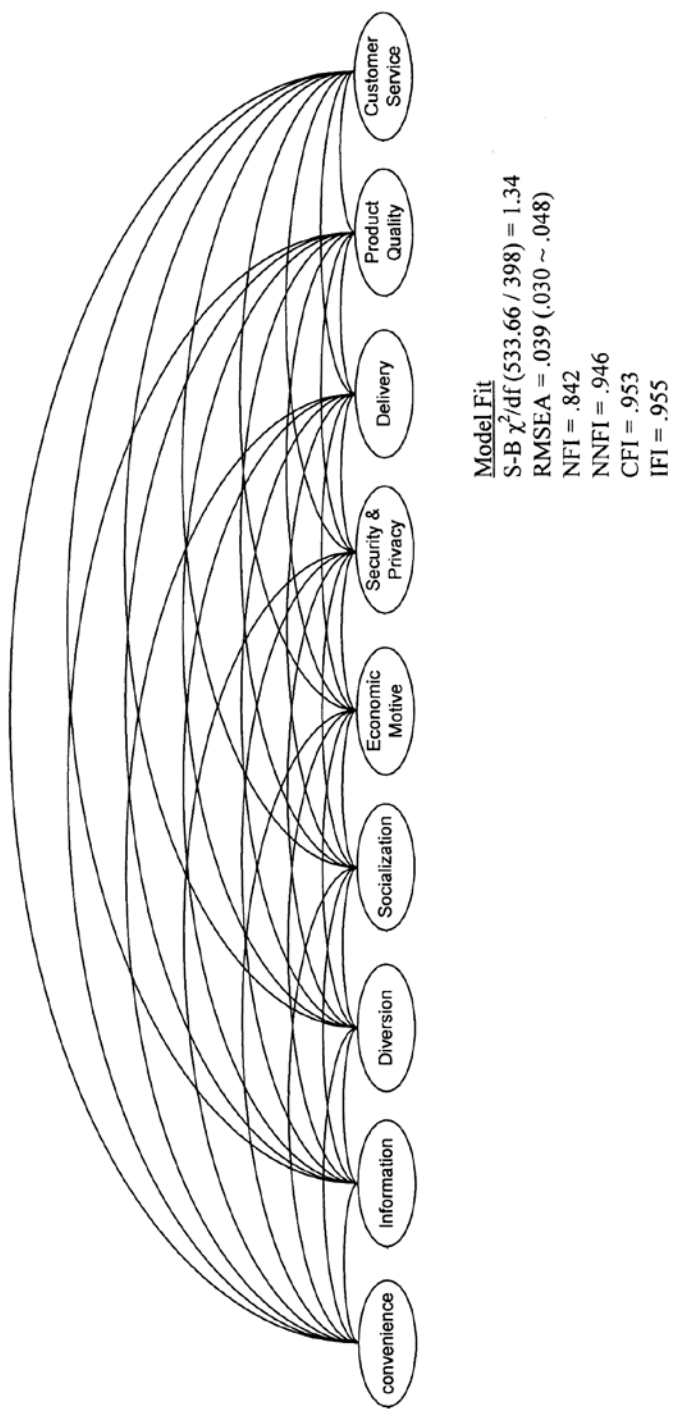
### Measurement Model of Online Motivation and Concerns

Goodness-of-fit information for the motivation and concern model is summarized in Figure 1. The overall fit of the measurement model was found to be good. The S-B  $\chi^2/df$  ratio (i.e., 533.66/398 = 1.34) was lower than the suggested threshold (i.e.,

**Table 1 Cronbach's alpha, Indicator Loadings, Construct Reliability, Average Variance Extracted, and Means**

Factor (Cronbach's $\alpha$ )	Items	Indicator loadings	Construct reliability	Variance extracted	Means
Convenience ( $\alpha = .86$ )	<i>CON 1.</i> I enjoy the flexibility of shopping for sport-related products online.	.66	.86	.62	4.87
	<i>CON 2.</i> The Internet makes it easier to do my purchase at my own pace while shopping for sport-related products.	.83			4.45
	<i>CON 3.</i> It is convenient to buy sport-related products online.	.81			4.72
	<i>CON 4.</i> Using the Internet makes it easier to shop for sport-related products.	.84			4.32
Information ( $\alpha = .81$ )	<i>INF 1.</i> I learn about things happening in the sport industry using the Internet.	.85	.81	.69	4.79
	<i>INF 2.</i> The sport-related information obtained from the Internet is useful.	.81			4.97
	<i>INF 3.</i> I can get information about various sports such as team performance, player profiles, and game schedule through the Internet.	.62			5.60
Diversion ( $\alpha = .85$ )	<i>DIV 1.</i> Using sport-related Web sites excites me.	.88	.85	.73	4.14
	<i>DIV 2.</i> Using sport related Web sites arouses my emotions and feelings.	.71			3.37
	<i>DIV 3.</i> Using sport-related Web sites provides an outlet for me to escape my daily routine.	.82			3.62
Socialization ( $\alpha = .85$ )	<i>SOC 1.</i> I like to chat with people about sports through the Internet.	.72	.85	.71	2.56
	<i>SOC 2.</i> I like to share my opinions about sport teams and players through the Internet.	.90			3.07
	<i>SOC 3.</i> I enjoy debating sport-related issues on the Internet.	.81			3.02

Economic motive ( $\alpha = .90$ )	<i>ECO 1.</i> Buying sport-related products or services online saves me money. <i>ECO 2.</i> Considering everything, I think purchasing sport-related products through the Internet is an excellent bargain. <i>ECO 3.</i> Purchasing sport-related products through the Internet is definitely worth the money. <i>ECO 4.</i> The prices of sport-related products or services on the Internet are great.	.80 .84 .86 .81	.90 .66	3.81 3.88 3.91 3.87
Security & privacy ( $\alpha = .85$ )	<i>SP 1.</i> I don't feel secure sending my information across the Internet. <i>SP 2.</i> I am concerned that my personal/financial information might be shared with others without my consent. <i>SP 3.</i> I am uncomfortable giving my credit card number on the Internet. <i>SP 4.</i> I am concerned about the security of personal information on the Internet.	.69 .80 .73 .84	.85 .59	4.13 4.81 4.46 4.42
Delivery ( $\alpha = .68$ )	<i>DL 1.</i> Internet buying has delivery problems. <i>DL 2.</i> I cannot measure the delivery time or date. <i>DL 3.</i> I cannot track the whereabouts of the product that I bought.	.57 .70 .69	.69 .43	3.81 3.92 3.68
Product quality ( $\alpha = .72$ )	<i>PQ 1.</i> I dislike the fact that buying online does not allow me to touch and feel the products before purchase. <i>PQ 2.</i> It's hard to judge merchandise quality on the Internet. <i>PQ 3.</i> I am concerned about whether the product that I bought online works. <i>PQ 4.</i> I am concerned about whether the product that I bought online is a fake.	.60 .57 .76 .59	.73 .40	5.18 5.32 4.47 3.90
Customer service ( $\alpha = .73$ )	<i>CS 1.</i> I am worried about after-sales service of online retailers. <i>CS 2.</i> It takes too much time to get a response from online retailers. <i>CS 3.</i> I don't know who I have to contact when a problem arises.	.63 .76 .71	.74 .48	4.40 3.86 4.32



**Figure 1** — Measurement model of motivation and concerns.

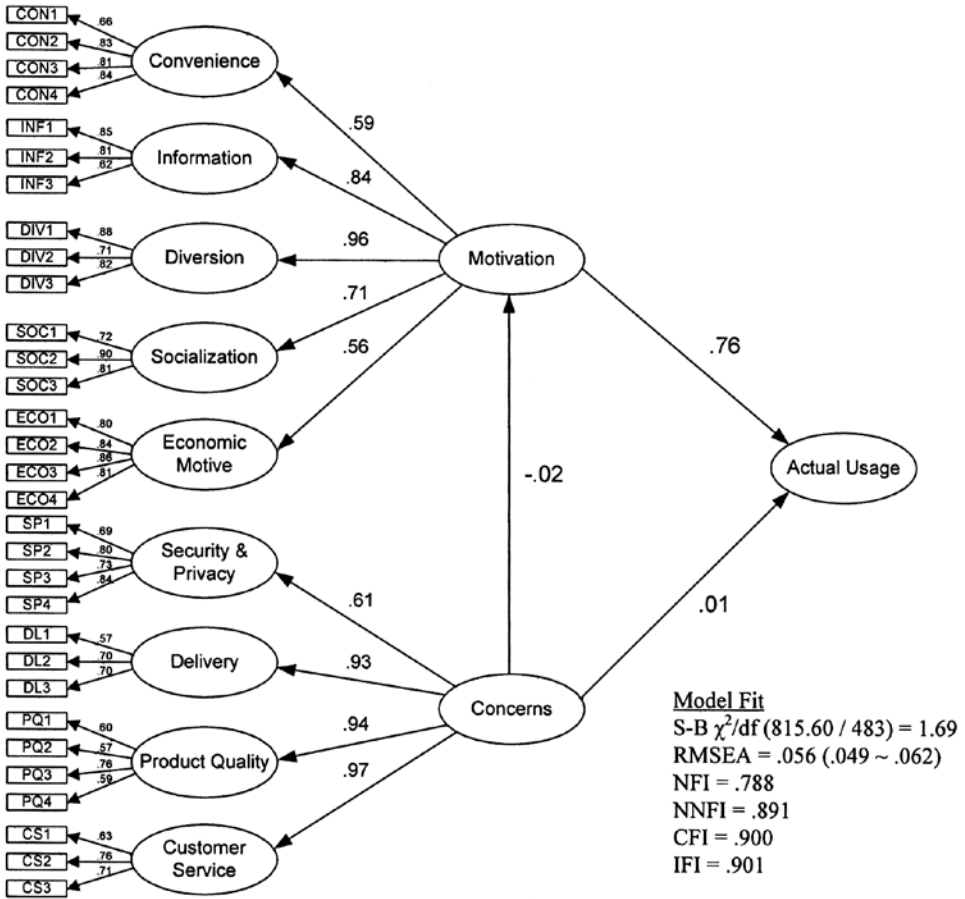


Figure 2 — Structural model of motivation, concerns, and actual usage.

less than 3.0; Kline, 2005). The root mean square error of approximation (RMSEA) value (.039) was lower than the suggested threshold (i.e.,  $\leq .08$ ; Browne & Cudeck, 1993; Hu & Bentler, 1999) and indicated close approximate fit. NFI (normed fit index) and NNFI (non-normed fit index) were .842 and .946, respectively, and CFI (comparative fit index; .953) and IFI (incremental fit index; .955) were greater than recommended .90 threshold (Hair, Anderson, Tatham, & Black, 1998).

### Scale Reliability and Validity

**Reliability.** The reliability estimates were investigated using Cronbach’s alpha, construct reliabilities, and average variance extracted (AVE) for each factor (see Table 1). Cronbach’s alpha values for the scale were acceptable (i.e., greater than .70; Nunnally & Bernstein, 1994, p. 265), ranging from .81 (information) to .90

(economic motive) for motivation and from .68 (delivery) to .85 (security and privacy) for concern factors, respectively. The construct reliability coefficients were also calculated. The coefficients ranged from .81 to .90 for motivation and from .69 to .85 for concern. These numbers are higher than the recommended value of .60 (Bagozzi & Yi, 1988; see Table 1).

The AVE measures indicate the overall amount of variance in the indicators accounted for by the latent construct (Hair, Anderson, Tatham, & Black 1998). All AVE measures for motivation were greater than the .50 standard (Bagozzi & Yi, 1988; Hair et al., p.612; see Table 1). AVE coefficients of concern factors, except for one construct (i.e., .59 for security and privacy), however, were below the acceptance criterion (.43 for delivery, .40 for product quality, and .48 for customer service).

**Convergent Validity.** Convergent validity is established when each item has a significant factor loading on each construct (Anderson & Gerbing, 1988; Netemeyer, Johnson, & Burton, 1990). All factor loadings were significant with critical ratios ranging from 6.22 to 18.19 at  $p < .05$  level, supporting convergent validity (Rahim & Magner, 1996). In addition, significant relationships between the nine factors and two constructs (i.e., motivation and concerns) further support convergent validity of the scale (Anderson & Gerbing). Loadings ranged from .56 (economic value to motivation) to .97 (customer service to concern; Figure 2). They were all statistically significant at  $p < .05$  level. Therefore, it was concluded that the factors converge on their common factor.

**Discriminant Validity.** Discriminant validity is established when the estimated correlations between the factors or dimensions are not excessively high (e.g.,  $< .85$ ; Kline, 2005, p. 73). Measurement model test revealed three high factor correlations (i.e., .85 between convenience and economic motive in motivation, .96 between delivery and customer service, and .96 between product quality and customer service in concerns; see Table 2). In addition, discriminant validity is evident when the squared correlations between one construct and any others are lower than the AVE for each construct (Fornell & Larcker, 1981). The check for

**Table 2 Factor Correlations Among Motivation and Concern Constructs**

	CON	INF	DIV	SOC	ECO	SP	DL	PQ	CS
Convenience	–								
Information	.63	–							
Diversion	.47	.81	–						
Socialization	.30	.47	.78	–					
Economic motive	.85	.55	.45	.42	–				
Security and privacy	–.17	–.19	–.05	–.04	–.24	–			
Delivery	–.26	–.01	.08	.13	–.35	.61	–		
Product quality	–.21	–.01	.01	–.02	–.25	.63	.82	–	
Customer service	–.17	–.00	.09	.14	–.28	.56	.96	.96	–

*Note.* CON = convenience; INF = information; DIV = diversion; SOC = socialization; ECO = economic motive; SP = security and privacy; DL = delivery; PQ = product quality; CS = customer service.

discriminant validity based on Fornell and Larcker's method revealed that there were four high correlations (i.e., correlations between convenience and economic motive, delivery and customer service, product quality and customer service, and delivery and product quality).

Table 2 also shows correlation among factors of motivation and concern. Statistically significant positive correlations were found within factors, whereas negative correlations were found in correlations between factors (i.e., between factors of motivation and concerns). This supports our premise that motivation and concerns are distinct constructs measuring two different aspects of online sport consumption behavior.

**Test of the Model.** A structural equation model was conducted to test the effects of motivation and concern constructs on actual usage (i.e., frequency and time spent in using sport-related Web sites). Model fit of the structural equation modeling analysis was found to be good (i.e., S-B  $\chi^2/df = 1.69$ , RMSEA = .056, NFI = .788, NNFI = .891, CFI = .900, and IFI = .901; see Figure 2). The path coefficient of motivation to actual usage was .76 with critical ratio of 6.69 at  $p < .05$  level, which means that the motivation construct was found to be a significant predictor of actual usage. No significant path coefficient (i.e., .01 and critical ratio of .16 at  $p < .05$  level) was found, however, from concerns to actual usage (see Figure 2). The path coefficient (i.e., -.02 and critical ratio of .22 at  $p < .05$  level) from concern to motivation was not significant either.

## Discussion

Factors of motivation and concerns in the proposed model support the findings of previous online motivation and concern research. The current study shows support for motivational factors (i.e., convenience, information, diversion, socialization, and economic motive) that have been identified as important factors of motivation in previous online motivation studies in different contexts (Joines et al., 2003; Korgaonkar & Wolin, 1999; Parsons, 2002; Rodgers & Sheldon, 2002; Rohm & Swaminathan, 2002; Stafford & Stafford, 2001; Teo, 2002; Teo et al., 1999). Concern factors in the current study also generally supported findings of previous research (Bhatnagar & Ghose, 2004; Featherman & Pavlou, 2003; Forsythe & Shi, 2003; Joines et al.; Korgaonkar & Wolin; Lee, 2002; O'Neil, 2001; Ranganathan & Ganapathy, 2002; Swinyard & Smith, 2003; Wee & Ramesh, 1999).

The framework we used in this study can be differentiated from previous work through the consolidation of various motivation and concern conceptualizations into a single, comprehensive framework. Therefore, the proposed model extends previous work by providing an integrated view of these complementary factors that influence the motivation and concerns of online consumers of sport-related products.

The further improvement of the SMOS instrument can also provide practitioners with a reliable and valid analytical tool for the measurement of online sport consumers' motivation and concerns. The discriminant validity of two factors (i.e., convenience and economic motive) of motivation and three factors (i.e., delivery, customer service, and product quality) of concerns need to be reexamined in future study. In particular, seven items in the concern factors had relatively low factor

loadings that resulted in low AVE scores. Clearly, future research is needed to reexamine the reliability and discriminant validity for these measures using potentially revised items and different samples. In addition, high correlations among factors suggest that it might be appropriate to combine these highly correlated factors (e.g., delivery and customer service) into a single dimension.

After the scale is further refined, it can be used to more decisively predict online sport consumption decisions. The scale can also be used as a diagnostic tool that allows various sport organizations to identify and solve potential e-business problems. For example, different Web site designs could be contrasted and evaluated by potential consumers using the SMOS scale to better understand how to maximize consumer acceptance.

Likewise, for sport marketers and managers, these results have several related implications. The results of this study show that online sport consumers have motivation to seek convenience, up-to-date information, diversion, socialization, and economic benefits. This framework can help sport managers effectively segment and target the most viable online sport consumers and position sport products by developing appropriate Web site functions and contents to satisfy the specific needs of online sport consumers. For example, just as online motivation dimensions in this study were confirmed to predict sport fans' actual usage of sport-related Web sites, sport marketers can use this framework to test which parts of the Web sites they need to focus on or enhance quality in order to meet sport fans' needs.

On the other hand, our results confirm previous research that has found that online sport consumers have concerns about security and privacy, delivery, product quality, and customer services when they purchase sport-related products online. To minimize sport consumers' perceived risks and concern, sport marketers might adapt several strategies. First, in order to reduce consumers' perceived risk about security and privacy, sport managers could provide the consumers with check payment or buy-first-pay-later plans (Teo, 2002). Such optional payment methods might also attract younger consumers who might not have credit cards. Second, online shoppers are likely to purchase well-known brands or products offered by reliable Web sites (Donthu & Garcia, 1999; Kau et al., 2003). Therefore, detailed descriptions of sport products and improving Web site image can assure online sport consumers. Web site image can be enhanced in several ways: (a) developing an easy ordering and effective delivery systems, (b) offering quality product, (c) using encryption for security and privacy, (d) fast response to consumers' request, (e) providing reasonable refund policy, and (f) offering visible information sources for products (Teo, 2002).

As in other studies, this study has several limitations. First, concerns were limited to the one-time e-commerce-based purchase instead of focusing on a sport-related information search and long-term relationships between consumers and e-service providers (e.g., subscription). Second, because the measures used in the study were examined with a limited sample (e.g., university recreational sport users), further analysis of the items using actual samples (e.g., members of sport-related Web sites) is necessary to establish reliability and validity of the scale. Finally, this study focused on overall motivation and concerns when sport consumers use the Internet for both obtaining sport-related information and shopping for sport-related products. Thus, it is suggested that further studies are necessary to examine whether the proposed conceptual framework is applicable



for various online sport consumption situations such as spectator sport segment and sport retailing. For example, future studies might need to focus on a specific target Web sites such as a sport Web portal (e.g., ESPN), a sport team's Web site (e.g., Seattle Mariners' Web site), or an online retailer (e.g., The Golf Warehouse). Beyond this motivation and concern study, more research on sport fans' attitude and perceptions toward sport-related Web sites could further enhance our understanding of online sport consumption behavior.

## References

- Anderson, J.C., & Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*, 411-423.
- Anderson, R.E., & Srinivasan, S.S. (2003). E-satisfaction and e-loyalty: A contingency framework. *Psychology & Marketing*, *20*, 123-138.
- Bagozzi, R.P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, *16*(1), 74-94.
- Bentler, P.M., & Wu, E.J.C. (2002). *EQS 6 for Windows: User's guide*. Encino, CA: Multivariate Software, Inc.
- Bhatnagar, A., & Ghose, S. (2004). A latent class segmentation analysis of e-shoppers. *Journal of Business Research*, *57*, 758-767.
- Bigné, J.E., Andreu, L., & Gnoth, J. (2005). The theme park experience: An analysis of pleasure, arousal and satisfaction. *Tourism Management*, *26*, 833-844.
- Brown, M.T. (2003). An analysis of online marketing in the sport industry: User activity, communication objectives, and perceived benefits. *Sport Marketing Quarterly*, *12*, 48-55.
- Browne, M.W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K.A. Bollen & J.S. Long (Eds.), *Testing structural equation models* (pp.136-162). Newbury Park, CA: Sage.
- Caskey, R.J., & Delpy, L.A. (1999). An examination of sport Web sites and the opinion of Web employees toward the use and viability of the World Wide Web as a profitable sports marketing tool. *Sport Marketing Quarterly*, *8*(2), 13-24.
- Chiger, S. (2001, November). Consumer shopping survey. *Catalog Age*, Retrieved May 28, 2003, from [www.industryclick.com](http://www.industryclick.com).
- Citrin, A.V., Stem, D.E., Spangenberg, E.R., & Clark, M.J. (2003). Consumer need for tactile input an Internet retailing challenge. *Journal of Business Research*, *56*, 915-922.
- Delpy, L., & Bosetti, H.A. (1998). Sport management and marketing via the World Wide Web. *Sport Marketing Quarterly*, *7*(1), 21-27.
- Donthu, N., & Garcia, A. (1999). The Internet shopper. *Journal of Advertising Research*, *39*(3), 52-58.
- Dubé, L., Cervellon, M.C., & Jingyuan, H. (2003). Should consumer attitudes be reduced to their affective and cognitive bases? Validation of a hierarchical model. *International Journal of Research in Marketing*, *20*, 259-272.
- Duncan, M., & Campbell, R.M. (1999). Internet users: How to reach them and how to integrate the Internet into the marketing strategy of sport businesses. *Sport Marketing Quarterly*, *8*(2), 35-41.
- eMarketer. (2003). *Population explosions!* Retrieved November 15, 2003, from [http://cyber-atlas.internet.com/big\\_picture/geographics/article/0,1323,5911\\_151151,00.html](http://cyber-atlas.internet.com/big_picture/geographics/article/0,1323,5911_151151,00.html)
- Featherman, M.S., & Pavlou, P.A. (2003). Predicting e-services adoption: A perceived risk facets perspective. *International Journal of Human-Computer Studies*, *59*, 451-474.
- Filo, K., & Funk, D.C. (2005). Congruence between attractive product features and virtual content delivery for Internet marketing communication. *Sport Marketing Quarterly*, *14*, 112-122.

- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Forsythe, S.M., & Shi, B. (2003). Consumer patronage and risk perceptions in Internet shopping. *Journal of Business Research*, 56, 867-875.
- Garbarino, E., & Strahilevitz, M. (2004). Gender differences in the perceived risk of buying online and the effects of receiving a site recommendation. *Journal of Business Research*, 57, 768-775.
- Hair, J.F., Anderson, R.E., Tatham, R.L., & Black, W.C. (1998). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- Herzberg, F. (1968). One more time: How do you motivate employees? *Harvard Business Review*, 46(1), 53-62.
- Hoyle, R.H. (1995). *Structural equation modeling: Concepts, issues, and applications*. London: Sage.
- Hu, L.T., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6, 1-55.
- Internet world stat. (2006). *Usage and population statistics*. Retrieved September 20, from [www.internetworldstats.com/stats.htm](http://www.internetworldstats.com/stats.htm)
- Joines, J.L., Scherer, C.W., & Scheufeel, D.A. (2003). Exploring motivations for consumer Web use and their implications for e-commerce. *Journal of Consumer Marketing*, 20(2), 90-108.
- Jupiter Research. (2000). *Internet, sport team up for \$3 billion market*. Retrieved October 20, 2003, from [http://cyberatlas.Internet.com/markets/professional/article/0,,5971\\_313711,00.html](http://cyberatlas.Internet.com/markets/professional/article/0,,5971_313711,00.html)
- Jupiter Research. (2003). *Sports content revenue soars, scores*. Retrieved October 20, 2003, from [http://cyberatlas.Internet.com/markets/broadband/article/0,,10099\\_2194511,00.html#table](http://cyberatlas.Internet.com/markets/broadband/article/0,,10099_2194511,00.html#table)
- Kahle, L.R., & Meeske, C. (1999). Sports marketing and the Internet: It's a whole new ball game. *Sport Marketing Quarterly*, 8(2), 9-12.
- Katz, J., & Aspden, P. (1997). Motivations for and barriers to Internet usage: Results of a national public opinion survey. *Internet Research: Electronic Networking Applications and Policy*, 7, 170-188.
- Kau, A.K., Tang, Y.E., & Ghose, S. (2003). Typology of online shoppers. *Journal of Consumer Marketing*, 20, 139-156.
- Kaufman-Scarborough, C., & Lindquist, J.D. (2002). E-shopping in a multiple channel environment. *Journal of Consumer Marketing*, 19, 333-350.
- Kline, R.B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford Press.
- Korgaonkar, P.K., & Wolin, L.D. (1999). A multivariate analysis of Web usage. *Journal of Advertising Research*, 39(2), 53-68.
- Lee, P. (2002). Behavioral model of online purchasers in e-commerce environment. *Electronic Commerce Research*, 2, 75-85.
- Mardia, K.V. (1970). Measures of multivariate skewness and kurtosis with applications. *Biometrika*, 57, 519-530.
- Netemeyer, R.G., Bearden, W.O., & Sharma, S. (2003). *Scaling procedures: Issues and Applications*. Thousand Oaks, CA: Sage.
- Netemeyer, R.G., Johnston, M.W., & Burton, S. (1990). Analysis of role conflict and role ambiguity in a structural equations framework. *Journal of Applied Psychology*, 75, 148-157.
- Nunnally, J.C., & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- O'Cass, A., & Fenech, T. (2003) Web retailing adoption: Exploring the nature of Internet users Web retailing behavior. *Journal of Retailing and Consumer Services*, 10, 81-94.

- O'Neil, D. (2001). Analysis of Internet users' level of online privacy concerns. *Social Science Computer Review*, 19(1), 17-31.
- Parsons, A.G. (2002). Non-functional motives for online shoppers: Why we click. *Journal of Consumer Marketing*, 19, 380-392.
- Rahim, M.A., & Magner, N.R. (1996). Confirmatory factor analysis of the bases of leader power: First-order factor model and its invariance across groups. *Multivariate Behavioral Research*, 31, 495-516.
- Ranganathan, C., & Ganapathy, S. (2002). Key dimensions of business-to-consumer Web sites. *Information & Management*, 39, 457-465.
- Rodgers, S., & Sheldon, K.M. (2002). An improved way to characterize Internet users. *Journal of Advertising Research*, 42(5), 85-94.
- Rohm, A.J., & Swaminathan, V. (2004). A typology of online shoppers based on shopping motivations. *Journal of Business Research*, 57, 748-757.
- SGMA (2001). *Internet/Website usage survey results*. Retrieved April 5, 2003, from [www.sgma.com/esurveys/results\\_mfr\\_Internet.html](http://www.sgma.com/esurveys/results_mfr_Internet.html)
- Shank, M.D. (2001). *Sport marketing: A strategic perspective* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.
- Sheehan, K.B. (2002). Of surfing, searching, and newshounds: A typology of Internet users' online sessions. *Journal of Advertising Research*, 42(5), 62-71.
- Smith, R.L., Pent, A.K., and Pitts, B.G. (1999). The World Wide Web as an advertising medium for sports facilities: An analysis of current use. *Sport Marketing Quarterly*, 8(1), 31-34.
- Stafford, T., & Stafford, M.R. (2001). Identifying motivations for the use of commercial Web sites. *Information Resources Management Journal*, 14(1), 22-30.
- Swinyard, W.R., & Smith, S.M. (2003). Why people (don't) shop online: A lifestyle study of the Internet consumer. *Psychology & Marketing*, 20, 567-597.
- Tauber, E.M. (1972). Why do people shop? *Journal of Marketing*, 36, 46-59.
- Teo, T.S.H. (2002). Attitudes toward online shopping and the Internet. *Behavior & Information Technology*, 21, 259-271.
- Teo, T.S.H., Lim, V.K.G., & Lai, R.Y.C. (1999). Intrinsic and extrinsic motivation in Internet usage. *The International Journal of Management Science*, 27, 25-37.
- Turner, P. (1999). Television and Internet convergence: Implications for sport broadcasting. *Sport Marketing Quarterly*, 8(2), 43-49.
- Wee, K.N., & Ramesh, R. (1999, December). *Cyberbuying in China, Hong Kong and Singapore: Tracking the profile of online buyers*. Paper presented at the Conference on the Measurement of Electronic Commerce, Singapore. Retrieved October 10, 2003, from [www.singstat.gov.sg](http://www.singstat.gov.sg)
- Zhang, P., & Dran, G.M. (2000). Satisfiers and dissatisfiers: A two-factor model for Website design and evaluation. *Journal of the American Society for Information Science*, 51, 1253-1268.