

A Cross-cultural Analysis of Online Satisfaction, Service Failure and Recovery: An E-A-S-QUAL Approach

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Abstract

The purposes of the study were to identify the online service attributes that contribute to online consumer experiences of satisfaction, service failure, and service recovery and to examine whether differences exist in these attributes between U.S. and Korea. E-A-S-QUAL provided a useful framework for the study. Focus group interviews and web surveys were conducted by utilizing college students in both countries. No significant cultural differences were found in online service dimensions of service satisfaction. *Personalization* was the most frequently mentioned online service dimension of service satisfaction both in the U.S. and Korea. The findings showed significant cultural differences in terms of online service dimensions responsible for service failure and recovery. For Korean consumers, *merchandising* was one of the key online service dimensions of service failure, while *efficiency* was the important service dimension resulting in service failure for the U.S. consumers. In addition, for U.S. consumers, *efficiency* and *personalization* were the two most frequently mentioned service dimension for service recovery, while Korean consumers put more importance on the *contact* and *information* dimensions for service recovery. This study provided a comprehensive list of online service attributes important to online apparel retailing.

Key words: Online shopping, Service failure, Service recovery, Satisfaction

I. Introduction

Online retailing in both the U.S. and Korea continues to be the fastest growing retail channel. Online retail sales in 2011 compared with 2010 are expected to increase by 12% in the U.S. (Demery, 2011) and 17.5% in Korea (Yum, 2010). In the competitive online retail environment, service quality has been considered a critical factor in determining the success or failure of online retailers. High service quality can lead to successful online businesses through increasing customer satisfaction, positive word-of-mouth, future buying intentions, and customer loyalty (Janda et al., 2002).

While the importance of service quality in online retailing is well supported by scholars and practitioners,

evidence suggests that poor online service quality is prevalent. A survey conducted by FutureNow showed that many online retailers fail to meet online shoppers' service expectations in key basic areas such as making on-time deliveries and providing instock status information ("Many web retailers", 2007). Due to lack of human interactions in online retailing in addition to heightened security and privacy concerns, service attributes that influence consumer service experience may differ from those of offline service settings. Especially lack of human interactions in online shopping is expected to result in increased service failures, while making it more challenging to recover from service failures (Holloway & Beatty, 2003). Most extant online service quality research focused on identifying service factors contributing to consumer satisfaction, while little is known about online service attributes contributing on-line service failure and recovery.

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In online retailing where competitors are only a few clicks away, ramifications of service failure may be even more severe than offline retailing. When customers experience service failure in online retailing, they may or may not complain, but will stop patronizing a retailer by simply switching to competitors' websites (Holloway & Beatty, 2003). Customers' negative experiences with a retail website and negative evaluations of online retailers are likely to result in customer dissatisfaction and disloyalty. If service mistakes and failures are not rectified in a timely and reasonable manner, permanent customer loss is expected. Given the high cost of acquiring and retaining customers in online retailing, service failure is a vital problem that needs to be understood and effectively managed for successful online businesses. Although no service failure is a most ideal situation, occasional service failures are likely to occur in a real world. Strategies to minimize service failure and manage it when it occurs are of paramount interest to online retailers. Yet key online attributes that are responsible for service failure have not been investigated. Given the importance of effective service recovery management for building and maintaining customer relationships and thus increased customer satisfaction and loyalty (Anderson et al., 1994), research is warranted to identify service factors related to service failure and recovery in online retailing.

Culture has been known to influence consumers purchasing behaviors and thus marketing strategies. Previous research on cultural differences in marketing found the significant impact of culture on perceived service quality, satisfaction, perceived fairness of service recovery (Patterson et al., 2006; Ueltschy et al., 2004). Both the U.S. and Korea are leading countries of online retailing, but are culturally very different (Lee et al., 2007). Thus, it is reasonable to expect that consumers' service expectations and experiences in terms of online service failure and recovery may differ between the two cultures. However, no attempts have been made to explore cultural differences in the topic between the U.S. and Korea. Through focus group interviews and online surveys, this study focuses on fulfilling the research gaps by examining online service attributes responsible for service satisfaction, failure and recovery between U.S. and Korea.

The purposes of this study were to identify online service attributes that contributes to online consumer experiences of satisfaction, service failure, and service recovery and to examine whether differences exist in these attributes between U.S. and Korea. E-A-S-QUAL (Kim et al., 2006) provided a useful framework to categorize online service attributes associated with customer satisfaction, service failure and service recovery.

To address the objectives of this study, two research questions were developed:

- (1) What are the online service attributes that contribute to online shoppers' experiences of service satisfaction, failure, and recovery?
- (2) Do the identified online service attributes for service satisfaction, failure and recovery differ between U.S. and Korea?

II. Literature Review

1. Online Service Quality

Service quality refers to the difference between customer expectations for service a company offers and their perceptions of the company's actual service performance (Grönroos, 1984; Parasuraman et al., 1988). Whereas prior service quality research has been conducted primarily in service and traditional retail settings, service quality in an online retailing context has received growing attentions from both practitioners and scholars. Online retailing presents a unique and challenging environment in terms of service quality, especially because of the absence of service providers and also interactions with web interface (Kim & Stoel, 2005).

Online service quality is defined as the extent to which services based on the web technology facilitate the effective and efficient online shopping, communication, purchase and delivery of product or services (Zeithaml et al., 2002). In an online retailing setting, an understanding of how consumers interacts with web technology plays an important role in impacting consumer evaluation of online service quality (Parasuraman et al., 2005). With growing research interests in online service quality, a variety of scales have been developed to measure online service quality, such as WebQualTM (Loiacono et al., 2000), SITEQUAL (Yoo & Donthu,

2001), eTailQ (Wolfinbarger & Gilly, 2003), and e-SQ (Zeithaml et al., 2000).

Of the available online service quality scales, e-SQ (Zeithaml et al., 2000) was developed based on the traditional SERVQUAL model (Parasuraman et al., 1991). By refining e-SQ through rigorous examinations and validations, Parasuraman et al. (2005) developed E-S-QUAL scale which captures extensive online service attributes available on websites. As a comprehensive measure of online service quality, E-S-QUAL includes two categories with 7 dimensions of online service quality; E-core service quality (4 dimensions) and E-RecS-QUAL (3 dimensions). E-core service quality is related to main phases of a customer's interactions with a website and includes the *efficiency*, *ful-fulfillment*, *system availability*, and *privacy* dimensions. E-RecS-QUAL focuses on e-recovery service quality as a subscale for problem solution, and the *responsiveness*, *compensation*, and *contact* dimensions.

Applied to an online apparel retailing setting, Kim et al. (2006) modified E-S-QUAL to measure online service quality by eliminating 1 dimension (*compensation*) and adding 3 dimensions (*personalization*, *information*, and *graphic styles*) that are relevant to apparel retail websites. As a result, the E-A-S-QUAL consisted of 9 service dimensions (Kim et al., 2006). As an extensive measure of online service quality of apparel websites, E-A-S-QUAL provided a useful framework to categorize service quality attributes associated with customer satisfaction, service failure and service recovery for the current study.

The first dimension of E-A-S-QUAL, '*efficiency*', refers to the ease and the simplicity of accessing websites and searching information and the speed of checking out with minimal effort. Efficiency can be facilitated by diverse service functions, such as browsing option (e.g., view by page, previous-next view), search engine (e.g., by word & product category), shopping cart, FAQ, order instructions, alternative order method (e.g., by telephone, order from catalogue). The '*fulfillment*' dimension refers to the extent to which the website's premises about delivery of products and item availability for delivery, and is associated with the following attributes: Information about item availability, order status/tracking, payment method (e.g., credit card,

store credit card, gift certificate), and shopping method (e.g., standard, express, international shipping, alternative shopping addresses).

The '*system availability*' dimension refers to "the correct technical functioning of the site" (Parasuraman et al., 2005). Information about browser requirements (i.e., compatibility with Internet Explorer and Netscape) and dead links were the two service elements tapping *system availability*. The '*privacy*' dimension is defined as the degree to which the site protects personal information associated with risk perceptions of online shopping, and is associated with privacy and security policies, terms of use, affiliate program, security certification, recall information, investor relation, and business ethics.

The '*responsiveness*' dimension is defined as the degree to which the site helps customers and provides immediate service when problems and questions emerge, and two responsiveness service attributes (satisfaction guarantee and return/exchange policy) were found. The '*contact*' dimension refers to the availability of help through telephone, email, or online representatives, and included interactive shopping aid (e.g., live help, instant help library) and company contacts (e.g., email, telephone, fax, mail).

The '*personalization*' dimension is considered as empathy dimension of traditional SERVQUAL (Zeithaml et al., 2002) and refers to understanding individual customers' specific needs and providing them personal attention and special services. Personalization is associated with the following service attributes: deferred billing service, gift wrapping service, gift card, e-gift card, online store credit card, free shipping, suggestions for items, promotions, with list, e-mail service, catalog request, account management, links to alternative sites, and personal shopper.

The '*information*' dimension included company history, general company information, store information, shipping cost, sales tax, size chart, product descriptions (e.g., fabric/fiber, care instructions, country of origin, style, construction details). The '*graphic style*' dimension included visual presentation of products (e.g., back view, side view, larger view), technologies of product presentations (e.g., 3-d rotation, closeups, zoom function, virtual model, video presentation), alternative images,

and product presentation manners (e.g., presented on mannequin, model, hanger, flat), fabric swatches, close-ups of fabric swatches, alternative color views, picture size, and consistency of image size.

Most previous research has examined the effect of online service quality attributes on satisfaction in online shopping experience in relation to customer retention and loyalty and has focused on the interaction of consumers and websites (Loiacono et al., 2000; Wolfinger & Gilly, 2003; Yoo & Donthu, 2001). Collier and Bienstock (2006) criticized that although previous measures provided a framework for measuring website interactivity, they failed to capture customers' perceptions of service outcome, such as perceptions of service failure and recovery. They maintained that service quality needed to be measured by including process and outcome of service. Therefore, this study utilizes a comprehensive measure of online service quality, E-A-S-QUAL, to examine service quality attributes associated with customer satisfaction, service failure and service recovery.

2. Service Failure and Recovery

Service failure occurs when customers' perceptions of service delivery fall short of their expectations or zone of tolerance (Zeithaml et al., 1993). Service failure has negative financial impact due to negative word of mouth, dissatisfaction, lost customers, and defection (Holloway & Beatty, 2003). Previous studies on service failure primarily focused on service industries, such as bank, flight, hotel, restaurant (Boshoff & Leong, 1998; Patterson et al., 2006). Reasons for service failure were diverse, such as unavailability of customer-requested service, slow service delivery, and a trivial mistake in service (Spreng et al., 1995). Because of the intangibility of service, service failure is difficult to be resolved when it occurs. In an online retailing environment, the problem associated with the intangibility of services is magnified because consumers can neither directly interact with service personnel nor physically examine products. Instead, consumers have to interact with web interfaces, which requires competency with the technology. Thus, diverse types of online service failures are likely to occur. Holloway

and Beatty (2003) identified 6 dimensions of online service failures: delivery problems, website design problems, customer service problems, payment problems, security problems, and miscellaneous failures. Yet little has been learned about online service failure and recovery and thus more research is warranted to determine factors impacting online service failure and recovery.

Service recovery refers to activities in which a service provider engages to handle customer complaints associated with perceived service failures and to return customers who have experienced service failure to a state of satisfaction (Holloway & Beatty, 2003). In a real world where occasional service failure is likely, effective service recovery is critical to minimize negative impact of failed service. When service failure occurs, customers have expectations for effective service recoveries. The ways customer complaints are handled have potentials to recover customer satisfaction and enhance loyalty or to aggravate the situation and drive the customer to switch to competitors (Patterson et al., 2006).

Effective and appropriate service recovery can convert a problematic situation into a favorable service encounter. Boshoff and Leong (1998) suggested that satisfaction with complaint handling can change dissatisfied and disappointed customers to be loyal. Successful service recovery improves consumer evaluation of service experiences, increases trust, and ultimately increases customer retention. Service providers utilize diverse service recovery strategies, such as providing a prompt correction of the problem, an explanation for the service failure, or an apology, offering customers monetary compensation (e.g., price discounts) or other rewards (e.g., upgrade services, free products or services), and listening courteously and respectfully to their complaints during the recovery process (Patterson et al., 2006). However, in online retailing where service providers are physically absent and thus human interactions are minimal, service recovery is more challenging. Evidence shows that many online service failures occurred from the lack of human interactions. The majority of online customers were dissatisfied with the recovery efforts they experienced and feel they deserve more in the recovery. Favorable interactions with service personnel were found to lead to successful service reco-

very (Holloway & Beatty, 2003).

In summary, online retailing environments provide service environments where service failure is more likely to occur, while service recovery is more challenging due to lack of human interactions. Thus, the current study focused on online service attributes related to service failure and recovery in addition to the attributes leading to satisfactory service experiences.

3. Cultural Differences

Culture is defined as “the training or refining of one’s mind from social environments in which one grew up” (Hofstede, 1991). Culture reflects language, education, ecology along with social, economic, political, religious and technological systems (McCort & Malhotra, 1993) and plays important roles in forming one’s attitudes, values, beliefs, norms and preferences. When consumers purchase a product or service, they interact with service providers. When social interactions occur, the importance of cultural background is noticeable (Patterson et al., 2006). Cultural norms and values influence service encounter evaluations, service quality expectations, customer relationships, and evaluations of service recovery (Donthu & Yoo, 1998; Patterson et al., 2006).

Recent research in marketing focused on differences between Western and Eastern cultures in terms of individualism/collectivism. While individualists consider themselves as independent and place importance on personal goals, collectivists see themselves as interdependent and consider group goals and communal relationships (Mills & Clark, 1982). Since collectivist cultures place emphasis on harmony in a society, they are not likely to directly complain and express dissatisfaction but want a service provider to recognize that a service failure has occurred and to voluntarily initiate recovery effort (Patterson et al., 2006). By categorizing undergraduate students in Thailand as collectivists and students in Australia as individualists, Patterson et al. investigated how customer evaluations of recovery efforts are influenced by interplay of consumers’ cultural value orientation, and found that collectivists perceived more interactional justice when there is firm-initiated recovery than individualists.

Previous research studied cultural differences between the U.S. and Korea. Since American culture reflects individualism, they are likely to place importance on competition, self-reliance, emotional distance from ingroups and hedonism. On the other hand, Korean culture that exhibits collectivism is likely to exhibit high family integrity, small distance from ingroups, and high sociability and interdependence (Lee et al., 2007). According to Choi and Geistfeld (2004), Koreans tend to be more affected by subjective norms, such as reference groups, as compared to Americans.

Kim et al. (2011) investigated cultural differences on consumers’ justice perceptions from service recovery of firms. They found that American consumers with a more individualistic orientation focused more on monetary value of time and quick responses of firms and valued efficient handling of service recovery than Korean consumers with a high collectivistic orientation. On the other hand, Kim et al. found that Korean consumers valued flexibility and an ability to control over a recovery process than American consumers. Since Koreans as well as other Asians tend to avoid conflict with other people and tend to not complain to firms about their dissatisfactory experiences, controlled and well-designed service recovery processes are helpful for them to resolve their dissatisfaction with service failure (Ho, 1997; Hui & Au, 2001; as cited in Kim et al., 2011). According to Moon et al. (2008), individualists tend to have personalized products whereas collectivists tend to prefer similar products to other consumers. Thus, individualists are likely to strive for personalized service recovery. Kim et al. (2011) found that Americans tend to expect employees’ more detailed explanation than Koreans in terms of service failure and recovery.

Lee et al. (2007) examined whether cultural differences explain differences between Korean and American apparel websites. They found that Korean websites focus on providing group-oriented contents, such as bulletin board, loyalty program, fashion information and product reviews, and fun and entertainment flavors which involve multimedia, such as screen savers, wall paper, e-cards, calendar, and mp3 music files. The findings suggested that Korean websites tend to promote information sharing and communication with reference

groups through a bulletin board and product reviews. On the other hand, American websites tend to focus on addressing individual needs through enhancing efficiency (e.g., search engine), personalization (e.g., gift wrapping), and privacy (e.g., privacy policy) compared to Korean websites.

In the current study, cultural differences between U.S. and Korea in terms of online service attributes that influence consumers' service experiences of satisfaction, service failure and service recovery are explored. American and Korean consumers were selected as comparative study groups for the following reasons. First, American culture is one of representatives that follow individualistic culture. Although Koreans are westernized, they still follow collectivistic values in terms of their consumption behaviors (Kim et al., 2011). Second, information and communication technology infrastructures and e-commerce were highly developed in both U.S. and Korea (Gareis, 2010). Third, according to a global Nielsen consumer report (Nielsen.com, 2008), both U.S. consumers and Korean consumers are heavy online fashion shoppers and thus good representative groups to compare online service experiences in an online apparel shopping context.

III. Methods

1. Procedure

This study consisted of two phases. In phase 1, focus group interviews (FGIs) were conducted to determine what online service attributes influence online shoppers' service experiences. While there has been online shopping research that identified available online service attributes (Kim et al., 2006), little is known about which online service attributes are responsible for satisfactory and more importantly dissatisfactory experiences due to service failure. Thus, FGIs helped generate useful information to identify potential online service attributes that are important to online shoppers' service experiences. All FGIs were recorded and transcribed to verbatim later. The findings from FGIs were used to develop a coding guide for a content analysis in phase 2.

In phase 2, a web survey was conducted to establish

a content validity of online service attributes identified using the FGIs. A web survey was comprised of open-ended questions about online services experiences in terms of service satisfaction, failure, and recovery. The collected survey responses were content analyzed using a coding guide developed from FGIs.

2. Sample Selection

For both FGIs and a web survey, a convenience sampling technique was used. College students deemed to be a good representative sample of online shopping both in the U.S. and Korea (Internet Retailer, 2004; Lee & Lee, 2009). College students who had experienced service failure and recovery were recruited from a large university in the U.S. and Korea for both FGIs and a web survey. Since universities are located in large urban areas in both countries, they were selected for the sampling of the study. Invitation letters were sent to students who enrolled in several fashion-related classes in both countries. Participants did not overlap between the two phases of data collection.

IV. Results and Discussion

To address Research Question 1, a total of 9 FGIs (5 in U.S. and 4 in Korea) were conducted with 17 American and 15 Korean college students who have online shopping and purchasing experiences in phase 1. Each FGI session using semistructured questions lasted approximately 30 minutes, and the size of FGI ranged from 2 to 6 per session.

All participants for both the U.S. and Korea were majoring in Textiles and Clothing programs. Average age for the American sample was 22.7 and 22.2 for the Korean sample. A majority of the U.S. samples were juniors and seniors (88.2%) as compared to 73.3% of Korean samples. In terms of online behaviors, the participants from both countries were frequent online shoppers and had previous online purchase experiences. Demographic characteristics between the two samples were overall similar and thus deemed relevant to make comparisons in terms of online service experiences.

To interpret FGIs, each transcript was read multiple times to gain a coherent, comprehensive interpretation

and develop meaning categories from verbatim. Then, transcripts were read again multiple times to develop thematic categories with guidance with E-A-S-QUAL with its dimensions and service attributes tapping each dimension. As a result, a comprehensive list of online attributes that impacts online service experiences was developed. In addition to the 9 online service dimensions included in E-A-S-QUAL, a new dimension called 'merchandising' was added to the coding guide based on the analysis of FGIs. To build trustworthiness of the interpretation and representation of the meanings described by the FGIs, a coding guide containing online service attributes was thoroughly reviewed by two marketing experts and deemed relevant.

As shown on <Table 1>, 49 online service attributes tapping 9 online service dimensions were identified as attributes impacting consumer satisfaction. For service failure, 50 service attributes tapping 10 service dimensions were identified. For service recovery, 17 service attributes tapping 5 dimensions were identified in addition to lost customers (i.e., recovery failed).

To address Research Question 2, a web survey was conducted. In phase 2, a total of 69 American and 56 Korean college students participated in the web survey containing opened questions about online service experiences. Average age for the American sample was 22.2 and 22.6 for the Korean sample. A majority of the U.S. samples were juniors and seniors (82.7%) as compared to 84.6% of Korean samples. Similar to focus group participants, the web survey participants from both countries were frequent online shoppers and had previous online purchase experiences. Thus, it deemed relevant to compare service experiences of the participants from both countries.

For a content analysis of participants' responses to opened questions, the unit of analysis, a mention, was coded using a coding guide developed from FGIs in phase 1. A mention is a word or meaningful phrase used in participants' answers to the questions about service experiences. Some information was presented in words or phrases, and other information was presented in sentences. Therefore, sentences were summarized as phrases or words, and then all phrases or words were listed. If listed phrases were synonymous or had close meanings, they were combined into cat-

egories. Four coders (2 coders for each country) participated in coding contents. The high levels of inter-coder reliabilities were achieved since all the values were higher than .90 (U.S.=.92, Korea=.96).

Frequencies of online service attributes tapping online service dimensions were counted and compared across U.S. and Korean consumers. For satisfaction, the top key dimensions were fairly similar. For both U.S. and Korean consumers, *personalization* was the most significant dimension impacting online service satisfaction (41.5% and 28% respectively). *Efficiency*, *responsiveness*, and *merchandising* were also important service dimensions for consumers from both U.S. and Korea. A chi goodness-of-fit test was performed to test whether there was a significant difference in the distribution of online service dimensions between U.S. and Korean consumers. A chisquare test revealed that the number of online service attributes responsible for online service satisfaction did not differ between the two countries, $\chi^2(4)=3.65, p=.46$ (Table 2).

As for online service attributes responsible for service failure, a chisquare test revealed that the number of online service attributes responsible for online service failure differed between the two countries, $\chi^2(3)=10.88, p<.05$. The three online service dimensions including *graphic styles*, *fulfillment*, and *merchandising* were frequently mentioned as attributes responsible for service failure in both countries. For *graphic styles*, inconsistent sizing was the most frequent service failure issue among U.S. consumers, while inaccurate information about a product was a common service failure for Korean consumers. For *fulfillment*, late delivery was the most common service failure in both countries. The notable differences between the two countries existed on the *efficiency* and *merchandising* dimensions. Whereas *efficiency* was one of the important service failure issues in the U.S., *merchandising* was more frequently mentioned as a service failure issue in Korea. For the *efficiency* issue in the U.S., difficult navigation ($f=9$), delayed gratification ($f=7$), and checkout process ($f=6$) were frequently mentioned. For the *merchandising* issue in Korea, poor product quality was most frequently mentioned as a reason for service failure experienced.

Lastly for online service attributes contributing to service recovery, a chisquare test revealed that the

Table 1. Online service attributes for satisfaction, service failure and service recovery

Service Dimensions	Satisfaction	Service Failure	Service Recovery
<i>Contact</i>	-online chat/live help -helpful call center -availability of contact info	-communication difficulty due to outsourced call center -lack of personal customer service -disliking of phone call	-personalized communication
<i>Efficiency</i>	-FAQ -convenience -quick checkout process -comparison shopping -easy navigation -local retail options -no hassle from salespeople -good social interaction -instant gratification	-difficult checkout process -difficult navigation (e.g., no search engine) -efficiency -uncertainty of shopping outcomes -delayed gratification -inconsistent merchandise between channels -inconsistent service levels between channels -inconsistent pricing between channels -seamless integration among channels	-multichannel integration
<i>Fulfillment</i>	-fast delivery -availability of merchandise -order confirmation -shipping notification	-shipping cost -inability to cancel order -backorder or cancellation -unavailability of promotion items -late delivery -order status track -lower service expectation -poor packaging -shipping cost at the end of checkout	-better packaging
<i>Graphic styles</i>	-virtual model -more pictures (back views, etc.) -products presented on a model -organized website	-flash video -no or small fabric/color swatch -website design -small product picture -inability to try on -sizing inconsistency -inaccurate info (color, fabric, styles)	
<i>Information</i>	-consumer reviews and ratings -clear return policy -reliable product info -size convert function	-unavailability of in-stock status info -no timely updates -inaccurate/incomplete product info -trustworthiness of consumer reviews	-order status update -early notification of in-stock status -detailed product information -consumer reviews and ratings
<i>Merchandising</i>	-more color -unique merchandise -a variety of merchandise -low prices	-too many choices -difficulty with outfit coordination -fit and sizing problem -cancellation fee -poor product quality	
<i>Personalization</i>	-free shipping -gift items -better deal -suggestions and recommendation -wish list -free samples -email preferred -personalized contents -word-of-mouth about company reputation -international purchase -virtual community -ebay or online auction -membership reward -gift card -shopping cart	-lack of personalization -too much promotion -limited promotional items -irrelevant recommendation	-discounts -rewards (points, gift card, free samples) -consumer events -ability to cancel order -no or less promotional emails

Table 1. Continued

Service Dimensions	Satisfaction	Service Failure	Service Recovery
<i>Privacy/security</i>	-site privacy and security	-privacy with information sharing -online fraud risk	
<i>Responsiveness</i>	-option to return to a store -timely email responses (within same day) -easy return -quick service recovery apology, fix it right away -free return	-return hassles -return fees -delayed email response -poor customer service with return	-free return -easy return -updated shipping -friendly customer service -showing warning message before website turning down
<i>System availability</i>		-the site doesn't work -late notification about the site being down	
Lost customers			

Table 2. Chi-square statistics for online service attribute differences between U.S. and Korean consumers

Online Service Dimensions	Satisfaction				Service Failure				Service Recovery			
	US		Korea		US		Korea		US		Korea	
	f	%	f	%	f	%	f	%	f	%	f	%
Efficiency	7	13.2	10	23.0	36	20.6	4	2.6				
Fulfillment	5	9.4	6	14.0	37	21.1	19	12.3	1	2.0	1	2.0
System availability					2	1.1	0	0.0				
Privacy/security					9	5.1	2	1.3				
Responsiveness	12	22.6	7	16.0	33	18.9	47	30.5	18	36.0	10	15.2
Contact	2	3.8	0.0	0.0	2	1.1	0	0.0	7	14.0	14	21.0
Personalization	22	41.5	12	28.0	5	2.9	0	0.0	10	20.0	7	11.0
Information	3	5.7	2	5.0	8	4.6	16	10.4	0	0.0	13	20.0
Graphic styles	4	7.5	0	0.0	41	23.4	46	29.9				
Merchandising	10	18.9	6	14.0	2	1.1	20	13.0				
(Lost customers)									14	28.0	21	32.0
Total	53	100	43	100	175	100	154	100	50	100	66	100
	$\chi^2(4)=3.65, p=.46$				$\chi^2(3)=10.88, p=.01$				$\chi^2(3)=6.47, p=.09$			

Gray areas indicate service dimensions that were not relevant to service satisfaction, failure, or recovery respectively.

'Lost customers' is not an online service dimension.

Chi-square tests were conducted using the cells that have at least 5 observations per cell.

number of online service attributes responsible for online service recovery did not differ between the two countries, $\chi^2(3)=6.47, p=.09$. For both countries, nearly 3 out of 10 customers were lost after service failure. For the U.S. consumers, *responsiveness* was important followed by *personalization*. Friendly customer service as a responsive service and personalized rewards such as points, gift card, or free samples were mentioned as service attributes successfully used for service recovery in the U.S. For Korean consumers, *contact* and *information* were the two key dimensions of service recovery. For *contact*, personalized communication was

most important for service recovery among Korean consumers. For *information*, consistent with high service failure rates due to poor product quality, more detailed product information was a key to service recovery.

V. Conclusions and Implications

This study identified key online service dimensions responsible for online service satisfaction and service failure. For service satisfaction, *efficiency*, *fulfillment*, *responsiveness*, *personalization*, and *merchandising* were frequently mentioned as service dimensions im-

pecting service satisfaction by research participants. Among those dimensions, *personalization* was the most frequently mentioned online service dimension influencing online service satisfaction both in the U.S. and Korea. No significant cultural differences were found in terms of online service dimensions of service satisfaction.

For service failure, *efficiency*, *fulfillment*, *responsiveness*, *graphic styles*, and *merchandising* were primary dimensions responsible for service failures. The notable finding was with the *graphic styles* dimension. While *graphic styles* were not one of the primary dimensions mentioned for service satisfaction, it was the most frequently mentioned service dimension responsible for online service failure. From sizing inconsistency to small product image, a variety of online service attributes comprising of the *graphic styles* dimension were related to online service failure. Considering the importance of online product presentation in online retailing where physical product examination is not viable (Kim & Lennon, 2008), online retailers need to pay more attention to effective online product presentation by providing large product views, consistent sizing information, and other visualization technologies. Another interesting finding was related to the *personalization* dimension. While *personalization* was the most frequently dimension contributing to online service satisfaction, it was not frequently mentioned for service failure. Perhaps as added service features, *personalization* can lead to higher service satisfaction, while lack of *personalization* service attributes may not directly lead to service failure. This information is useful for online retailers who try to gain competitive advantage over their competitors. Simply minimizing service failure is not sufficient to stay competitive in an increasing competitive online retail environment.

The findings showed significant cultural differences in terms of online service dimensions responsible for service failure. For Korean consumers, *merchandising* was one of the key online service dimensions, while it was the least frequently mentioned service dimension for US consumers. Perhaps the structural differences of the retail industry can explain such a difference. The U.S. retail industry has a small number of large retailers as compared to the Korea retail industry

with a large number of small retailers (Levy & Weitz, 2008). Many US consumers tend to shop large, well-known online retailers who offer a wide variety of merchandise, whereas many Korean consumers tend to shop small online retailers whose selections are limited and relatively unknown, thus leading to more frequent service failure related to *merchandising*. Consistent with Kim et al. (2011) and Lee et al. (2007), *efficiency* was the important service dimension resulting in service failure for US consumers who value individual needs, while it was an infrequently mentioned service dimension for Korean consumers. American consumers who have more individualistic orientation tended to consider efficient issues of service failure as more critical problems, such as difficult checkout process, difficult navigation, uncertainty of shopping outcomes, delayed gratification, and inconsistent merchandise/service levels/pricing between channels. Also consistent with Lee et al. (2007) *information* was more important to Korean consumers than US consumers.

For service recovery, the findings of study provide useful information for online retailers in terms of where to focus on their efforts when service fails. For US consumers, consistent with the individualism perspective, *responsiveness* and *personalization* were the two most frequently mentioned service dimension for service recovery. Friendly and quick service recovery as a responsive service and personalized service recovery addressing individual needs was important for US consumers. It was important for individualistic American consumers to provide free and easy return services and personalized monetary rewards such as reward points, discounts, and gift cards. These findings were also consistent with the findings from Kim et al. (2011) and Lee et al. (2007). On the other hand, following their collectivism culture, Korean consumers put more importance on the *contact* and *information* dimensions for service recovery. The results were consistent with Lee et al. (2007) but somewhat inconsistent with Kim et al. (2011). According to Kim et al. (2011), American consumers focus on receiving more detailed and personalized explanation of service failure and recovery, whereas Korean consumers prefer well-de-signed service recovery systems since they tend to avoid contacting firms to complain about their dissatisfactory experiences.

However, this study found that Korean consumers wanted personalized communication with firms to receive detailed explanation of service failure and recovery. This finding may reflect the changing cultural values among Korea consumers with the increasing westernization. While Korean consumers are generally more influenced by collectivistic culture, perhaps they may also experience growing needs for personalized services.

Another important finding is about lost customers. About 3 out of 10 customers mentioned that service failure led to lost sales without being recovered. This attests the importance of service management to minimize service failure. Especially in online retailing where human interactions are limited, services are a lot harder to recover. Thus, online retailers need to take more proactive approach to avoid service failure.

As an exploratory research, this study identified key online service attributes impacting consumer service experiences of satisfaction, service failure, and service recovery. By utilizing information obtained from focus group interviews and web surveys with open-ended questions, this study provided a comprehensive list of online service attributes important to online apparel retailing. Future research needs to extend the findings from this study and statistically confirm key online service dimensions responsible for service failure and also examine the effectiveness of various service recovery strategies. Future research also needs to include other consumer groups with more diverse demographic characteristics to extend the findings from the current study.

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