Global online marketplace: a cross-cultural comparison of website quality

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Abstract

This study used Loiacono's WebQual™ scale to compare 278 US and 347 Korean Internet users in terms of their perceptions of retail website quality. The results of the study suggested that the dimensionality of website quality was not consistent across the two samples. This study also examined which dimensions of website quality influenced shoppers' satisfaction with the site and purchase intention. The findings indicated that the relationship between website quality dimensions and the two dependent variables varied between the two groups.

Keywords Purchase intention, retail website quality, satisfaction, Korea, US.

Introduction

The ubiquitous use of the word globalization seems to substantiate the notion that today's consumers, regardless of their nationalities and geographic locations, exhibit homogenized tastes, preferences and attitudes (Schaefer *et al.*, 2004). Accordingly, many global retailers believe that international growth is simply an extension of successful domestic marketing strategies. Using this mistaken assumption, retailers far too frequently launch websites in foreign markets that exactly parallel their domestic websites in all features and elements. What they ignore, however, is that due to cultural and environmental differences consumers in different countries may have different shopping preferences and expe-

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riences even within the same type of stores (Chen-Yu *et al.*, 2001). In most cases, whether online or offline, consumers respond favourably to a marketing strategy accommodating local preferences, such as language, colour, image and pricing (Mitchell, 2000). Recognizing key differences in customer perceptions of website quality across countries therefore is critical for a company wishing to satisfy its customers in disparate markets.

This study was designed to promote an understanding between retailers and consumers by examining how shoppers in two different countries perceive the quality of parallel retail websites (websites developed for the same retailer in two different languages). In this attempt to illustrate possible cultural variances in perceived website quality, we chose to compare US and Korean consumers in their perceptions of the website of a global retail store, JCPenney. In Korea, which currently reports the highest number of Internet users in the Asia-Pacific region (31 million in 2004) over 47% of Internet users shop online; their online expenditure is estimated to reach 11 trillion won (US$8.0 billion) in 2005 (Korea National Statistical Office, 2004; Korean National Information Center, 2004). In this study, we have compared US and Korean consumers by examining which attributes of the website are most influential in predicting their satisfaction with the site and purchase intention.

WebQual: consumer perceptions of website quality

WebQual is an instrument for assessing the quality of websites from the perspective of the customer (Loiacono, 2000; Barnes and Vidgen, 2001, 2002). To be successful in the e-commerce marketplace, retailers will need to provide high quality websites that attract and retain shoppers (Loiacono, 2000; Ranganathan and

Ganapathy, 2002). Barnes and Vidgen conducted a series of studies to develop an effective instrument to measure the quality of various websites (Barnes and Vidgen, 2000, 2001, 2002; Barnes *et al.*, 2001). Their instrument was originally developed based on user evaluations of four university websites rather than retail sites. It was later tested and revised for online auction sites, wireless news sites and bookstores. When applied to three online auction sites, the instrument incorporated three quality dimensions: information quality, interaction quality and site-design quality (Barnes and Vidgen, 2001). In testing the instrument for online bookstores (Barnes and Vidgen, 2002), the researchers replaced site-design quality with usability because the latter kept 'the emphasis on the user and their perceptions rather than on the designer and the site as simply a context-free software artifact' (p. 11). Usability was defined as a measure of how a user perceives and interacts with a website.

Using a convenience sample of 214 online shoppers, Ranganathan and Ganapathy (2002) identified four dimensions of websites similar to those of Barnes and Vidgen (2001): information content, design, security and privacy. The last two dimensions, security and privacy, seem to correspond to the interaction quality described by Barnes and Vidgen's scale. Unlike Barnes and Vidgen, Ranganathan and Ganapthy did not specify a website for evaluation. Rather they asked the respondents to indicate their overall experiences with B2C websites. It should be noted that several other researchers have suggested that dimensions of website quality may differ by type of product or retailer (Peterson *et al.*, 1997; McGoldrick *et al.*, 1999).

In 2000 another researcher designed a survey instrument specifically for evaluation of retail websites. Developed on the basis of extensive literature reviews as well as interviews with web designers and web visitors, Loiacono's WebQual™ scale (Loiacono, 2000) included 36 items measuring 12 dimensions of website quality. The dimensions are as follow:

1 Informational fit-to-task: a website's ability to provide information that enhances and supports the user's task.
2 Interactivity: the ability to allow the user and the company to communicate directly with each other without concern for distance or time.
3 Trust: the trustworthy and secure nature of transactions over a website.
4 Response time: the time it takes to download a webpage.
5 Design appeal: the graphical and textual features that affect the user's sense of ease or comfort with the website.
6 Intuitiveness: the extent to which website navigation feels easy to learn for the user.
7 Visual appeal: the aesthetics of a website.
8 Innovativeness: the uniqueness and creativity exhibited by a website.
9 Flow-emotional appeal: the extent to which a website makes the user feel so intensely involved in an activity that the experience becomes intrinsically enjoyable.
10 Integrated communications: communications coordinated so as to offer a consistency of experience both off and on line.
11 Business process: the systems used to support the company's business functions.
12 Viable substitute: the ability to serve as an alternative means for customers to interact with the business.

When tested with over 800 college students on websites selling books, music, airline tickets and hotel reservations, WebQual™ was found to be strongly reliable and its 12 dimensions were deemed distinct constructs. Although Zeithaml *et al.* complained that Loiacono's WebQual™ does not adequately capture service quality (Zeithaml *et al.*, 2002), we nonetheless chose this scale as a measurement tool because of its comprehensiveness and applicability to retail websites.

Cultural factors and website quality

Little empirical research exists that examines how similar websites are perceived by individuals from diverse national and cultural backgrounds. Zahedi *et al.* (2001) developed a conceptual framework that presented specific propositions on how various cultural factors may impact the effectiveness of web design. The researchers identified six cultural factors that may influence the user's perceptions of a website, including Hofstede's five cultural dimensions (i.e. power distance,

collectivism vs. individualism, femininity vs. masculinity, uncertainty avoidance and long-term vs. short-term orientation) (Hofstede, 1997) and Hall's (1983) polychronic vs. monochronic time orientation. Although our study was not specifically designed to test Zahedi *et al.*'s proposed hypotheses, some of their arguments lend support to our expectation for significant differences in perceived website quality between the US and Korean consumers. Using the cultural dimensions identified by Hofstede, the US and Korea clearly represent two different cultures: the US is characterized by a high degree of individualism, small power distance and weak uncertainty avoidance, while Korea represents a typical collectivist culture with a large power distance and strong uncertainty avoidance (Cho *et al.*, 1999). Given the importance of cultural factors in communication, it is reasonable to expect that cultural differences may exist between the two groups of consumers in how they perceive the quality of a similar website. Additionally, Zahedi *et al.*'s argued that a website differently perceived due to its users' differing cultural backgrounds would render different levels of satisfaction to its users. This lends further support to our investigation of the impact of perceived website quality on user satisfaction and purchase intention. For example, in a country with strong uncertainty avoidance, such as Korea, the trustworthiness of a website as well as the amount of information offered to assist the user with his/her purchase decision may have a significant impact on the user's satisfaction and purchase intention.

Cross-national applicability of WebQual™ scale

WebQual™ has begun to attract some attention from online retailers (Bodor, 2000) but no research papers have been published so far that used the scale in a cross-cultural setting. The importance of cross-cultural validation of a theory, model, construct, or scale has been emphasized by numerous marketing scholars. Durvasula *et al.* (1993, p. 626) stated, 'There is a need for testing models cross-nationally because all too often researchers have assumed that US-based concepts and models are relevant to other countries without actual validation of model constructs or linkages. This assumption can lead to invalid cross-national inferences.' Therefore, although limited in the number of countries

compared, our study has made the first attempt to explore the reliability and validity of WebQual™ by testing the scale with both US and Korean consumers using parallel retail websites.

In summary, this study addresses the following two research questions.

1   Will the instrument capture both US and Korean customer perceptions of website quality? It is possible that the multifactorial structure of the instrument identified by Loiacono may not be present among Korean online shoppers. In other words, given the differences in the cultural background and the retail environment, US and Korean consumers may not view website quality in a similar manner. Consumer researchers have recognized that understanding of the dimensionality of a concept is critical not only for measurement purposes but also for providing greater insights into consumers' perceptions and behaviours.

2   Which of the aforementioned dimensions of website quality are influential in predicting shoppers' satisfaction with the site and intention to purchase from the site? In an attempt to answer this question, we also examined whether or not the same website quality dimensions would influence the two predicted variables.

Methodology

Data collection

The data for the study were collected from 278 Internet users in the US and 347 Internet users in Korea over a 3-month period. In both places, student volunteers were instructed to obtain surveys from individuals in various age categories to allow greater generalizability of the findings. They were asked to make sure that the respondents had access to the Internet. The volunteers were also instructed to explain the research and the nature of participation to the respondents. This technique was chosen not only to increase response rates and minimize wasted questionnaires but also because researchers in Korea had found that the mail survey method was highly ineffective, frequently resulting in a very low response rate and/or a high rate of unusable responses

(Shim and Cho, 2000). In order to increase the person's desire to participate in the study, a small gift was presented to all respondents.

The respondents were asked to visit the JCPenney website in their respective countries (jcpenney.com for the US and jcpenneykorea.com for Korea). They were then asked to browse the site for 15–20 min, scrolling up and down the pages, clicking on links and using any features that interested them on the site. After reviewing the site, the participants were asked to fill out the questionnaire. JCPenney was chosen because it was one of a few International companies operating retail websites in both countries that were ideally parallel in format, design, amount and type of information provided, product categories offered and types of consumer services provided.[1] Jcpenneykorea.com was launched in May 2001 by JCPenney International Catalog Korea, the US chain's exclusive marketing representative for Korea. The company also operates a mail-order catalogue business and an exhibition centre in Korea. The catalogues have been distributed to approximately 300 000 customers, out of whom an estimated 100 000 have made purchases from the catalogues (The Korea Economic Daily, 2001, p. 21).

The self-administered questionnaire consisted of three sections. The first section contained 36 questions from WebQual™ tapping 12 different dimensions of website quality. The second section included questions assessing the respondents' satisfaction with the site and their behavioural intention to purchase from the site. The final section consisted of questions about the respondents' demographic characteristics (i.e. age, education, gender, income and marital status). Additionally, they were asked how many years they had been using the Internet, how many times they had purchased from an online retailer in the past year, and whether or not they had previously purchased from the JCPenney website. For the US sample, respondents were also asked whether or not they had purchased from JCPenney catalogues and how often they had shopped at the company's conventional stores.

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[1]As an interesting note, JCPenney International Catalog Korea Inc. has since then discontinued its retail website. In early 2005 the authors were informed that the company was planning to rebuild its website.

In order to preserve equivalence in cross-cultural adaptation of WebQual™ scale, the questionnaire, originally written in English, was translated into Korean by both researchers. It was then translated back into English by two bilingual Koreans. One of the researchers reviewed the back-translation and compared it to the original English version. As a result, modification was made in the wording of some of the questions in the Korean version of the questionnaire. Prior to the main survey, the questionnaire was also pre-tested in each country, using a small convenience sample, to ensure readability.

Sample characteristics

The age of the US sample ranged from 18 to 67 with an average age of 32 years, whereas the age of the Korean sample ranged from 20 to 48 with an average of 32 years. About 46% of the US respondents were older than 30 years, whereas 53% of the Koreans were above 30. Females represented 58% of the US sample ($n = 162$) and 48% of the Korean sample ($n = 167$). Fifty-nine per cent of the US sample and 50% of the Korean sample were single. Only 54% of the US respondents were employed whereas the majority of the Korean respondents (77%) were employed. Nearly half of the US sample reported an annual household income for 2001 of $50 000 or more. By contrast, only 4% of the Korean sample reported a similar household income. However, it is important to note that the average income of the Korean population in 2001 was $24 231 (Korea International Labor Foundation, 2005) compared with $42 228 for the US population (US Census Bureau, 2002). Thirty per cent of the Korean sample reported an income above the average income of the Korean population. With respect to education, however, 83% of the US sample and 84% of the Korean sample had a college degree. Although these percentages seem to suggest that our samples were skewed in a parallel pattern in terms of educational level, it should be noted that previous studies have shown that Internet users tend to be highly educated (Goldsmith and McGregor, 2000).

The US respondents had been using the Internet for an average of 6 years; the Korean respondents averaged 4 years of Internet usage. Seventy-seven per cent of the US sample had purchased from an e-retailer at least

once in the past year with an average of six purchases. Surprisingly, an overwhelming majority of the Korean sample (92%) had purchased from an e-retailer at least once and averaged no less than 13 purchases. Only a small percentage of either sample had purchased from JCPenney's website (9% for the US and 2% for the Korean). While JCPenney in Korea has just initiated its catalogue offering, it may be significant that in the US 40% of our sample had previously purchased from JCPenney catalogues. Furthermore, 26% of the US sample had shopped at JCPenney's conventional stores once every few months or more often while 74% had either rarely or never shopped at JCPenney stores.

Data analysis

The data were analysed in three phases. First, the dimensionality of each of the measures in each sample was examined by confirmatory factor analysis utilizing LISREL VIII (Jöreskog and Sörbom, 1996). Alpha coefficients were calculated for each of the factors found in order to assess each factor's internal consistency. Then, regression analyses were used to assess the influences of shoppers' background information and perceptions of website quality dimensions on their satisfaction and purchase intention.

Results

Confirmatory factor analyses

For each sample, Loiacono's proposed model of 12 factors was assessed using the guidelines recommended by Anderson and Gerbing (Anderson and Gerbing, 1988). First, confirmatory factor analysis was carried out separately for each of the 12 dimensions of website quality and then simultaneously for all the dimensions. Three items with low factor loadings on their expected factors and six items with large standardized residuals (above 0.4) for either or both of the samples were deleted. This initial test of the measurement models resulted in the retention of 27 items, exhibiting two or three items per factor for both samples (see Table 1).

Discriminant validity among the dimensions was then tested using the following procedure. As for the US sample, as suggested by the chi-square difference between the two models, a two-factor model produced a significantly better fit than a single-factor model for all 66 possible pairs of factors, providing evidence of discrimination among all 12 factors. The internal consistency of each of the dimensions was assessed using alpha coefficients. Alpha coefficients ranged from 0.71 to 0.90, indicating that good internal reliability existed in all factors. As for the Korean sample, a two-factor model indicated a significantly better fit than a one-factor model for all possible pairs except two: (1) design appeal and intuitiveness; and (2) business process and viable substitute. Therefore, the design appeal dimension and the intuitiveness dimension were combined to form a single dimension named readability and usability. The business process dimension and the viable substitute dimension were also combined and this new combined dimension was named transaction. Alpha coefficients ranged from 0.66 to 0.83 (see Table 1). Accordingly, the existence of 10 website quality dimensions instead of 12 was supported for the Korean sample whereas all 12 unique dimensions were supported for the US sample.

The fit of the measurement model for each sample was evaluated on the basis of the chi-square value, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI) and standardized root mean residual (RMR). The chi-square value for the 12-factor model for the US sample was calculated to be 563.77 (d.f. = 258, $P < 0.001$) (see Fig. 1). The GFI, the AGFI and the CFI were 0.86, 0.80 and 0.93, respectively, and the standardized RMR was 0.042. This model was also compared with the chi-square for an alternative model where all 27 items loaded on the same factor instead of 12 factors. If the chi-square difference statistic between the two models is significant, the more constrained model (i.e. the 12-factor model) is accepted. The confirmatory analysis of this alternative model resulted in the chi-square value of 1991.74 (d.f. = 324, $P < 0.001$). The chi-square difference between the two models was 1427.97 (Δd.f. = 66) and significant ($P < 0.001$). Therefore, the 12-factor model proved to be a significantly better fitting model.

The chi-square value for the 10-factor model for the Korean sample was 528.29 (d.f. = 279, $P < 0.001$) (see Fig. 2). The GFI, AGFI and CFI were 0.90, 0.86 and 0.95, respectively, and the standardized RMR was 0.039.

Table 1 WebQual™ dimensions and indicators

		US sample		Korean sample	
Dimension	Indicators	Factor loading	Alpha	Factor loading	Alpha
Informational fit-to-task			0.72		0.66
	The website adequately meets my information needs.	0.79		0.73	
	The information on the website is effective.	0.74		0.68	
Interactivity			0.71		0.66
	The website allows me to interact with it to receive tailored information.	0.73		0.61	
	The website has interactive features, which help me accomplish my task.	0.76		0.80	
Trust			0.86		0.79
	I feel safe in my transactions with the website.	0.74		0.72	
	I trust the website to keep my personal information safe.	0.90		0.86	
	I trust the website administrators will not misuse my personal information.	0.81		0.67	
Response time			0.71		0.79
	When I use the website there is very little waiting time between my actions and the website's response.	0.71		0.85	
	The website loads quickly.	0.76		0.77	
Design appeal			0.71		0.77
	The display pages within the website are easy to read.	0.75		0.64	
	The website labels are easy to understand.	0.70		0.59	
Intuitiveness			0.79		
	Learning to operate the website is easy for me.	0.78		0.76	
	It would be easy for me to become skilful at using the website.	0.83		0.70	
Visual appeal			0.77		0.81
	The website is visually appealing.	0.77		0.81	
	The website displays visually pleasing design.	0.85		0.84	
Innovativeness			0.87		0.78
	The website is innovative.	0.83		0.80	
	The website design is innovative.	0.88		0.79	
	The website is creative.	0.83		0.78	
Integrated communications			0.81		0.83
	The website projects an image consistent with the company's image.	0.74		0.69	
	The website fits with my image of the company.	0.78		0.77	
	The website's image matches that of the company.	0.78		0.75	
Business process			0.77		0.78
	All my business with the company can be completed via the website.	0.75		0.75	
	Most all business processes can be completed via the website.	0.84		0.74	
Viable substitute			0.75		
	The website is easier to use than calling an organizational representative agent on the phone.	0.75		0.53	
	It is easier to use the website to complete my business with the company than it is to telephone, fax, or mail a representative.	0.82		0.73	
Flow-emotional appeal			0.90		0.76
	I feel happy when I use the website.	0.85		0.77	
	I fell cheerful when I use the website.	0.96		0.79	

For the Korean sample, design appeal and intuitiveness were combined and together renamed as readability and usability; business process and viable substitute were combined and together renamed as transaction.
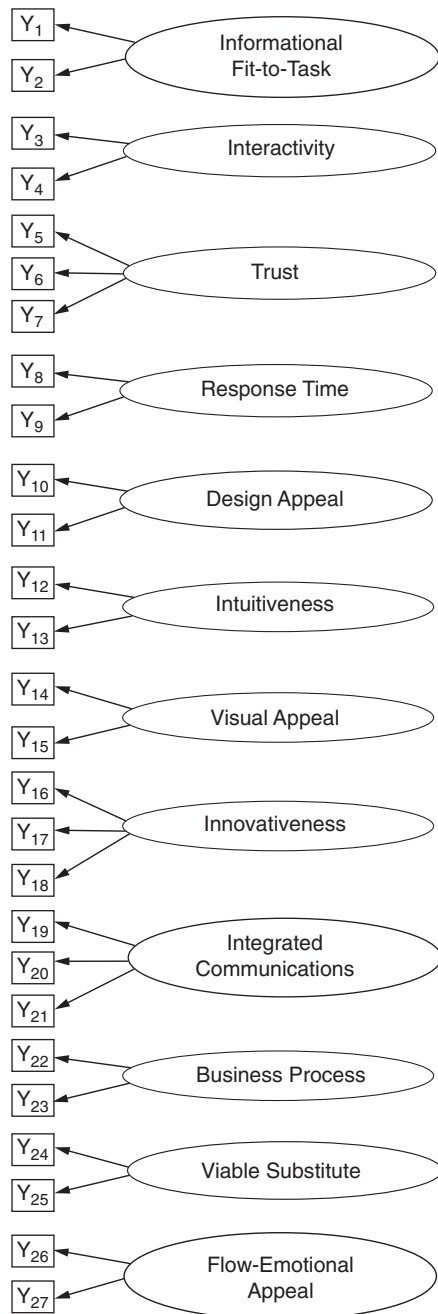
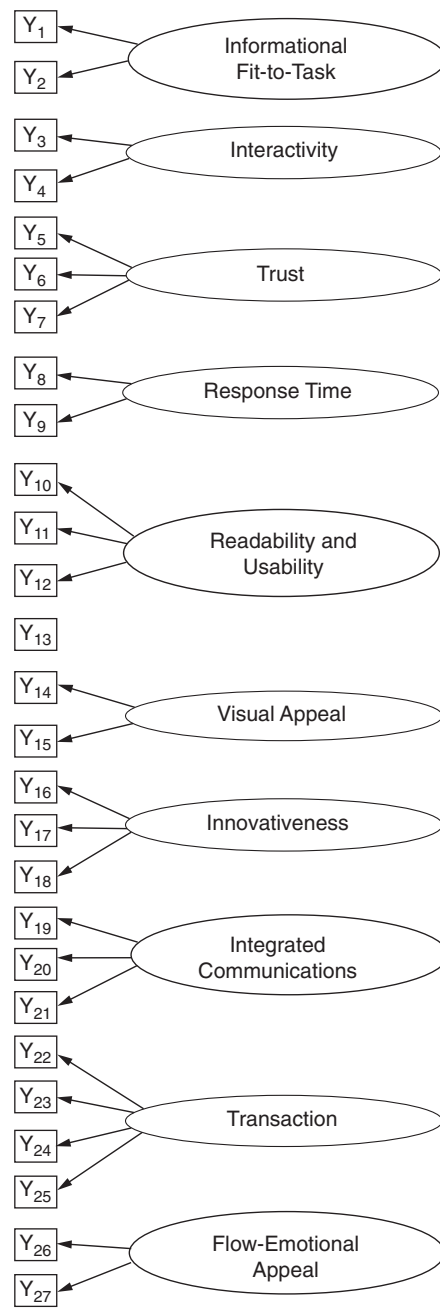**Figure 1** Website quality dimensions for the US sample.

Figure 2 Website quality dimensions for the Korean sample.

All these figures indicated an excellent model fit. As with the US sample, this model was compared with an alternative model (single-factor model). The chi-square value for the single-factor model was 1513.58 (d.f. = 324, $P < 0.001$). The chi-square difference between the two models was 985.29 (Δd.f. = 45) and significant ($P < 0.001$). Accordingly, the 10-factor model was accepted over the single-factor model.

Multiple regression analyses

For each sample, two multiple regression analyses using the standard enter method were calculated in order to determine which variables significantly influenced overall satisfaction and purchase intention. For the US sample, age, gender, income, online shopping frequency (i.e. number of online purchases in the past year), shopping from JCPenney catalogues (0 = no; 1 = yes) and frequency of conventional store shopping constituted the first block of independent variables. Twelve dimensions of website quality were entered in a second block (see Table 2). For the Korean sample, two variables, shopping from JCPenney catalogues and shopping at JCPenney stores, were not included because, at the time of the survey, JCPenney Korea was not operating any traditional retail stores and had just begun to distribute its catalogues. Therefore, age, gender, income and online shopping frequency were entered in a first block and 10 dimensions of website quality in a second block (see Table 3).

For the US sample, the first model examining satisfaction as the dependent variable showed that the respondents' previous experience of shopping at JCPenney stores negatively influenced satisfaction with the website ($\beta = -0.35$, $P < 0.001$). When 12 dimensions of website quality were entered, shopping at JCPenney remained significant. Three of the website quality dimensions were significant in predicting customer satisfaction. Those who perceived the website and the information it contained to be trustworthy were more likely to be satisfied with the website than those who did not trust the website and its information ($\beta = 0.19$, $P < 0.01$). Those who perceived the website to be innovative ($\beta = 0.22$, $P < 0.001$) and to project an image consistent with the company's image ($\beta = 0.25$, $P < 0.001$) also tended to show higher levels of satisfaction than

Table 2 Regression analysis results for the US sample

	Satisfaction with the site		Purchase intention	
Background information				
Age	−0.05	0.00	−0.02	−0.00
Gender (1 = female)	−0.01	−0.05	−0.03	−0.06
Income	−0.08	−0.4	−0.09	−0.05
Number of online purchases	0.02	−0.00	0.04	−0.04
Shopping from catalogues	−0.03	−0.04	−0.12	−0.09
Shopping at retail stores	−0.35***	−0.21***	−0.39***	−0.28***
Website quality dimensions				
Informational fit-to-task		−0.11		0.04
Interactivity		0.08		0.04
Trust		0.19**		0.15*
Response time		−0.04		−0.06
Design appeal		0.08		0.02
Intuitiveness		−0.03		−0.14
Visual appeal		−0.01		0.07
Innovativeness		0.22***		0.10
Integrated communications		0.25***		0.19**
Business process		−0.04		−0.05
Viable substitute		0.09		0.06
Flow-emotional appeal		0.02		0.07
R^2	36	63	45	58

*$P \le 0.05$; **$P \le 0.01$; ***$P \le 0.001$.

Table 3 Regression analysis results for the Korean sample

	Satisfaction with the site		Purchase intention	
Background information				
Age	0.12	0.01	0.11	0.00
Gender (1 = female)	0.02	−0.03	0.07	0.03
Income	−0.03	−0.04	0.08	0.10
Number of online purchases	−0.08	−0.09	0.01	0.01
Website quality dimensions				
Informational fit-to-task		0.24**		0.15
Interactivity		0.00		0.12
Trust		−0.07		0.03
Response time		0.03		0.05
Readability and usability		0.01		−0.04
Visual appeal		0.19*		−0.05
Innovativeness		0.00		0.22*
Integrated communications		0.03		0.01
Transaction		0.11		−0.04
Flow-emotional appeal		0.28**		0.25**
R^2	14	70	17	61

*$P \le 0.05$; **$P \le 0.01$; ***$P \le 0.001$.

those who did not perceive the website in the same way. The model accounted for 63% of the variance in satisfaction.

For the Korean sample, none of the independent variables in the first block were significant. Out of 10 dimensions of website quality, informational fit-to-task ($\beta = 0.24$, $P < 0.01$), visual appeal ($\beta = 0.19$, $P < 0.05$) and flow-emotional appeal ($\beta = 0.28$, $P < 0.01$) were significant in predicting satisfaction. The model explained 70% of the variance in satisfaction.

The second model examined intention to purchase from the website as the dependent variable. For the US sample, again, shopping at JCPenney stores was negatively associated with purchase intention ($\beta = -0.39$, $P < 0.001$). After website quality dimensions were entered, the variable was still significant. Among the website quality dimensions, trust ($\beta = 0.15$, $P < 0.05$) and integrated communication ($\beta = 0.19$, $P < 0.01$) proved significant. The model explained 58% of the variance in purchase intention.

For the Korean sample, only one dimension of website quality was significant in predicting purchase intention. Those who perceived the website to be innovative were more likely to purchase from the website than those who did not perceive it to be innovative ($\beta = 0.22$, $P < 0.05$). In parallel fashion, those whose emotional state was positively influenced by the site were more likely to purchase from the website than those who did not receive any positive emotional impact ($\beta = 0.25$, $P < 0.01$). The model accounted for 61% of the variance in purchase intention.

Conclusions and implications

The first research question of our study asked if WebQual™ would capture consumer perceptions of website quality in both the US and Korea. The findings suggested that the dimensionality of website quality was not consistent across the two samples. When tested with US Internet users, the WebQual™ scale proved to measure 12 distinct dimensions of website quality. With Korean users, however, the scale appeared to measure only 10 different dimensions. The Korean respondents did not differentiate between design appeal (i.e. easy to read and understand) and intuitiveness (i.e. easy to learn and use). Nor again did they differentiate with

regard to the business process dimension (e.g. all my business with the company can be completed via the website) and the viable substitute dimension (e.g. the website is an alternative to calling customer service or sales). In other words, business process and viable substitute were perceived by the Korean sample as similar in their contents.

In answer to the second research question, the results of the study also provide critical information as to which attributes of website quality retailers should emphasize in order to favourably affect customers' attitudes and decision making. For the US sample, integrated communications influenced both shoppers' satisfaction and purchase intention. Integrated communications was, however, not a significant predictor of either dependent variable for the Korean sample. This may result from the lack of prior knowledge among Koreans of JCPenney as a brick-and-mortar company whereas consumers in the US were influenced by a pre-existing awareness of the store image.

Innovativeness influenced US shoppers' satisfaction but did not affect their purchase intention. The US respondents' purchase intentions were significantly influenced by trust and integrated communication (whether or not the website image matched that of the company). Interestingly, trust and integrated communication seem to have some common ground in that lack of either one requires the user to deal with a high degree of uncertainty. Grabner-Kraeuter (2002) argued that trust plays a significant role in online shopping where only limited cognitive resources are available for shoppers to facilitate their purchase decisions. Online shoppers therefore use trust as a means to reduce the uncertainty and complexity of information and to lower the perceived risk of online transactions. Therefore, a lack of trust and integrated communication reflects a higher level of uncertainty and perceived risk, which negatively influences the shopper's intention to make an actual transaction. Retailers in the US should pay close attention to the fact that no matter how aesthetically well designed and how informative the website is, their customers will not want to purchase from a site that seems untrustworthy or which does not have an image consistent with that of its brick-and-mortar company.

As mentioned earlier, trust significantly influenced purchase intention for the US respondents but not for

the Korean respondents. Initially this came as a surprise given its inconsistency with our expectation that in a county with strong uncertainty avoidance, trustworthiness of a website would be a significant factor in the user's behavioural responses. A possible explanation for this may come from Zahedi *et al.*'s (2001) argument regarding the impact of the dimension of power distance (the extent to which a society accepts the unequal distribution of power in organizations) on website effectiveness. They proposed that in a country with a large power distance such as Korea, websites that contain references to status, authority and expertise will be perceived highly favourably. In that JCPenney has been introduced in Korea as a well-known US retailer with a long history, Korean consumers may have associated the retailer's website with high status, authority and expertise. Therefore, the question of trust may have become less important. Or rather, it seems likely that this perception of high status, authority and expertise engender in the consumer a broader and deeper level of trust superceding that more specific and narrow trust measured by this study. Another possible explanation for the insignificant impact of trust among Koreans is a lack of fear of credit-card fraud due to the relative absence of such experience in a society with low credit-card usage. As the use of credit and credit cards is far more widespread in the US than in Korea, so too is the prevalence of fraud. Accordingly, trust regarding transaction safety is likely a much greater issue in the mind of the US consumer than that of the Korean consumer.

In the absence of concerns about fraud, website innovativeness and emotional appeal emerged as the predominant factors which influenced the Korean respondents' purchase intentions. Visual appeal was a significant predictor of satisfaction but when it came to a decision as to whether or not to purchase from the site, innovativeness as well as emotional appeal were the attributes that influenced the shoppers' decision to purchase. Accordingly, the findings suggested that the relationship between website quality dimensions and the two dependent variables varied between the two countries.

The fact that some dimensions influenced only one dependent variable but not both, provided interesting insights into the relationship among satisfaction and purchase intention. For example, innovativeness for the US sample and visual appeal for the Korean sample influenced satisfaction but not purchase intention. These findings suggest that the company can emphasize improving certain dimensions to increase its shopper's satisfaction but these efforts may not necessarily result in the shopper's decision to buy. For example, US shoppers generally tended to derive satisfaction from an innovative website but when contemplating an actual purchase, it seemed to be trust as well as website image that ultimately influenced the decision. For the Korean sample, it appeared to be innovativeness and emotional appeal that ultimately encouraged shoppers to purchase from the site. These findings indicate that when entering a foreign market, e-retailers should build and evaluate their websites, not based on what has worked in their own country, but based on their study and understanding of how the target-market consumers perceive and respond to website quality.

The primary limitation of this study is that we have chosen only one retail site. We purposely selected a department store website in order to test whether Loiacono's scale could be validated with a type of website different from those previously tested. However, as acknowledged earlier, an examination of a retailer whose image is not associated with high status or authority might have provided different results. There likely also exist significant other variances among retail websites, even between the websites of similar retailers. Therefore, our findings should not be generalized to other websites. In addition, this study did not consider any product-specific variables for either the US or Korean websites. Future research should consider product variables such as product quality, style, price, brand recognition and country-of-origin effects along with website quality in predicting consumers' purchase decisions.

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