

Attitudes toward Online Shopping: A Comparison of Online Consumers in China and the US

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Abstract- As online shoppers become progressively global and multicultural, more cross-cultural research is called for to better understand online consumers' purchase behaviour. Based on the diffusion of innovation theory, literature on perceived risk in e-tailing and theories of national culture, this research investigates the perceptions of online consumers in China and the U.S. toward online shopping. A total of 503 Chinese consumers participated in a nationwide Internet survey in China and the results were compared to the data revealed by Pew Internet & American Life Project. Findings indicate that Chinese and American consumers hold significantly different perceptions regarding the relative advantage, ease of use, and risk of shopping on the Internet.

Keywords- Chinese Online Consumers; American Online Consumers; Internet Shopping; B2C Electronic Commerce; Online Shopping Attitudes

I. INTRODUCTION

China's Internet penetration rate reached 31.8 percent during June, 2010, exceeding the world's average of 28.7 per cent at the same time (1, 2, 3). The sheer size of China's population means that the country now has 420 million Internet users (4). This is the highest per country usage in the world, nearly twice as large as the U.S., which has an online population of 221 million in 2010 (5). While China's online retail market has been growing steadily with 108 million users now shopping on the Internet (6), compared to the 154 million in the U.S. who have shopped online (7), online shopping penetration in China still appears to hold considerable growth potential.

Analysts have questioned whether Chinese consumers will become avid online shoppers (e.g., 8). Academic researchers have suggested that China's cultural history of preferring face-to-face business interactions, coupled with the country's restrictive regulatory climate, may inhibit the development of online shopping (9). CNNIC's surveys have consistently shown that Chinese Internet users are less involved in e-tailing activities such as online shopping and payment, compared to their use of the Internet as a tool for entertainment, communication and information. The low adoption of e-tailing activities by Chinese consumers lags those of their Western counterparts (10).

China is a national market that is in a state of flux. Younger Chinese have grown up in an open China with rapid development of information and communications technologies as well as the influx of western ideologies. In addition, many other key structural factors such as availability of distribution/logistics networks and online payment mechanisms, the dynamic business environment and relative sophistication of government regulations have important bearings in shaping consumers' attitudes and behaviours toward online shopping. Consider that the US is among the top three countries in the world in terms of e-readiness (11), whereas China is ranked only as No. 56. Nonetheless, China is an important national

market, one that is striving to transform its economy from being manufacturing-based to technology-based. The Chinese government has attached great importance to e-tailing in spurring economic growth and recently has released a series of policies to regularize and guide Internet and e-tailing development (6). Furthermore, China has overtaken Japan as the world's second-largest economy and is predicted to replace the US as the world's top economy in roughly a decade (12). Collectively, all of these factors bode well for an improving e-tailing environment in China.

The focus of this study is to examine whether online consumers in China and the US share similar attitudes with regard to online shopping. While there is a wealth of research focusing on online shopping behaviour in Western countries, relatively little research has compared consumer attitudes toward online shopping across nations. Reflecting the call by Van Slyke, Belanger and Sridhar (13) for more cross-cultural comparison research on consumers' e-tailing attitudes and behaviour, the present study examines this phenomenon in national cultures that reflect the East versus the West, namely China and the U.S.A, respectively. This paper intends to begin filling this knowledge gap. Drawing on theories of national culture, along with diffusion of innovation theory and the literature on perceived risk in e-tailing, we hypothesize and empirically test what similarities and differences exist in the attitudes of online shoppers from these two nations. The findings of this study will guide e-marketers in their design of e-tailing Websites and their underlying information systems so that they can better cater to the needs and lifestyles of online shoppers in different countries.

The next section provides a review of the literature relevant to the current study. Following that, we describe our methodology, present the results of our analysis, discuss the implications of these findings and end by tendering recommendations for future research.

II. RELEVANT LITERATURE

A. Overview of China's Online Retail Market

Over the past two decades China's continuous rapid economic growth has manifested itself in its population's swelling consumption power (10). During this same timeframe the growing affordability and availability of Internet access has enabled a growing number of Chinese consumers to get on the Internet for information, entertainment and communication purposes. Facilitated by consumers' increasing understanding of online applications, the availability of a more transparent and convenient online shopping environment, and expanding investments in this sector, more and more Internet users have turned into online shoppers. This is reflected in recent economic data showing that the Chinese online retail market value reached USD 18.8 billion with a vigorous growth rate of 128.5 per cent in 2008 (14). Chinese Internet users have

increased their online spending over the years. In 2008, their online average spending totalled RMB 1,600 (USD 234.3), an increase of RMB 582 (USD 85.2) from 2007 (14). Chinese online shopping lists have also broadened considerably, shifting from the initial simple selection of books, music and video products to now comprise a broader array of product categories, including apparel, housewares, digital products and many others (see Appendix 1).

B. Adoption of Technological Innovations

Diffusion of innovations (DOI) theory explains how adoption takes place over time within a social system (15). According to Rogers (1983), the adoption rate of an innovation is influenced by (1) characteristics of the innovation itself; (2) the communication channels through which the benefits of the innovation are communicated; (3) the time elapsed since the introduction of the innovation; and (4) the social system in which the innovation is to diffuse. Analyses of adoption levels and diffusion rates can be conducted at both the individual level (such as measuring adopters' demographic traits or perceptions of an innovation's characteristics) or the system level (such as those describing the nature of a socio-economic system). While the individual versus system levels are conceptually distinct, consumers' perceptions, attitudes and behaviours are influenced by the social system in which they are embedded (16) as well as macroeconomic and structural factors noted earlier. Recognizing that economic and infrastructure variables do not explain all the variation at the system level (17), we instead use a dual perspective to posit factors that influence individual level attitudes and behaviours related to online shopping. Specifically, we provide rationales for cross-country differences based on both national infrastructure conditions along with the social influence of national culture in our conceptual model.

Much of the extant DOI research has focused on the "perceived attributes" of an innovation, i.e., relative advantage, compatibility, complexity, trialability, and observability. Consequently it is theorized that individuals will adopt an innovation if they perceive that the innovation is superior to an existing one or the status quo; compatible or consistent with existing values, beliefs, needs and practices; not too complex or difficult to use or understand; testable for a limited time without adoption, and visible or apparent to others once adopted (18). The existing literature reveals that perceived relative advantage, complexity, and compatibility have received the most consistent empirical support (18, 19). Thus, we restrict our attention to these as the dependent measures in our model, along with risk perceptions, a mediating factor.

C. Perceived Risk of Online Shopping

Perceived risk plays a critical role in consumer decision-making and behaviours (20). This is particularly true with Internet purchases, which involve activities that are not only technology-intensive but also of an impersonal nature (21, 22, 23, 24). Prior research has indicated that the probability of consumers' choosing a marketing channel increases significantly if their confidence in that channel is high and the perceived risk is low (25, 26).

Various types of risk are perceived in online purchase decisions. According to Park, Lee and Ahn (27), perceived risk in the online shopping context can be differentiated between those related to product/service (such as functional loss, financial loss, time loss and opportunity loss) and those related to online transaction (such as privacy, security, and

nonrepudiation). Cases (28) found that e-shoppers are most concerned about privacy, source (i.e., website), performance and payment risks and least about social risk. The general negative relationship between perceived risk and consumers' attitudes toward online shopping and in turn, their intention to shop online has received wide empirical support and appears to hold across nationalities (e.g., 25, 29, 30, 31, 32, 33, 34, 35, 36, 37, 27, 38, 39, 40). Previous research has also demonstrated that risk perception has cross-cultural variation (41, 42, 43), in other words, we can infer that perceived risk mediates the effect of other antecedent factors with regards to attitudes toward online shopping and intention to engage in this behavior. In view of this, we include this additional variable, perception of risk associated with online shopping (i.e., e-trust), in our examination.

D. National Culture Differences

Culture, an important element of the social environment, has long been accepted in the marketing literature as an important factor shaping consumer behaviour. On a macro level, numerous studies have shown that different cultures react differently to new product and technological innovations (e.g., 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, and 54). Thus, it is not uncommon for a new product or technological innovation to gain rapid acceptance in particular countries but take substantially longer times to penetrate in others. While several cultural frameworks exist, we turn to Hall (55, 56) and Hofstede (57, 58), who have developed the most widely accepted frameworks for understanding cultural differences among nations.

Hofstede (57, 59) identifies five dimensions along which national cultures vary: power distance, uncertainty avoidance, individualism vs. collectivism, femininity vs. masculinity, and long-term vs. short-term orientation (57, 59), and provides ratings on these dimensions for many countries (http://www.geert-hofstede.com/hofstede_dimensions.php). Power distance refers to the extent to which members of a society accept that power in institutions and organizations is distributed unequally; uncertainty avoidance is the degree to which a society can tolerate uncertainty and ambiguity; individualism-collectivism describes the relation between the group and the individual and focuses on the degree a society reinforces individual or collective achievement and interpersonal relationships; masculinity-femininity addresses the degree to which a society is characterized by assertiveness versus nurturance and is closely related to societal expectations of gender roles; and long-term orientation measures the degree a society embraces long-term devotion to traditional, forward thinking values. Table 1 provides index scores and rankings for these cultural dimensions for China and the US. These data suggests that the national culture of China significantly differs from the US in all but one dimension, i.e., masculinity/femininity.

TABLE I
SUMMARY OF HOFSTEDÉ'S CULTURAL DIMENSIONS FOR CHINA AND THE US

Dimension	Measurement	China**	US
		Score	Score
Power distance (PDI)	The higher the PDI, the more likely a society expects and accepts unequal power and wealth distribution (scores range from 11 to 104).	80	40
Uncertainty	The higher the UAI, the lower the	30	46

Avoidance (UAI)	level of tolerance a society has for uncertainty and ambiguity (scores range from 8 to 112).		
Individualism/Collectivism (IDV)	The higher the IDV, the more likely a society emphasizes individuality and individual rights (scores range from 9 to 91).	20	91
Masculinity/Femininity (MAS)	The higher the MAS, the lower the level of differentiation and discrimination between genders (scores range from 5 to 95)	66	62
Long-term Orientation (LTO)*	The higher the LTO, the more likely a society values of long-term commitments and respect for tradition (scores range from 0 to 118).	118	29

*The four original dimensions are based on the results from 50 countries and 3 regions, while the fifth dimension is based on later results from 23 countries.

**Estimated values

It has also been widely recognized in cross-cultural research that people derive different meaning and often key information from the contextual aspects of the interaction (56). In Hall's approach, one aspect of culture is to consider how individuals and their society seek information and knowledge. He suggests that countries can be grouped into high or low context categories. In high context cultures (e.g., China, Japan), people try to become well informed about the facts associated with a decision or a deal by obtaining information from personal information networks. In contrast, people from low-context cultures (e.g., U.S., Canada) seek information about decisions and deals from a research base and much emphasis is placed on the use of reports, databases, and the Internet (60).

As noted earlier, the adoption and diffusion of an innovation is highly dependent on the communication channel and process within a social system (15). Takada and Jain (1991) found that the diffusion rates in countries characterized by high-context cultures and homophilous communication were faster than the diffusion rates in countries characterized by low-context cultures and heterophilous communication. Based on a large-scale secondary data study, Gong (61) found that a high-context culture provides a communication context that is more conducive to the adoption and diffusion of Internet retailing, suggesting that culture influences consumers' abilities and desires for online communication and purchase.

The implication of this appreciation of cultural differences is that China and the U.S. represent far different cultural milieus, which in turn are apt to influence and distinguish the adoption rates of online retailing in these countries.

III. HYPOTHESES

"Anytime, anywhere" convenience has been touted as one of the major benefits associated with online shopping. As such, Internet connectivity is fundamental to accrue the resultant benefits. Despite the phenomenal growth of Internet users, China's Internet penetration still is only ranked the 87th in the world (6). Although broadband Internet access has gained a wide popularity in China (98% in year 2010) (62, 6, 1), download speeds remain far behind that of developed countries such as US, Japan and Korea (4) and the data transfer rate further slows down during peak hours because broadband width is shared (14). These local conditions may greatly reduce the convenience and in turn, diminish the perceived advantage of online shopping among Chinese consumers.

E-tailing takes place in the context of Web-based communication, which is considered to be a largely low-context medium due to its lack of contextual factors (63). As such, the relative impersonal nature (lack of face-to-face interaction) of online shopping may be viewed as a disadvantage in a high-context collectivistic society such as China where cultural values are largely formed and created from interpersonal relationships and social orientations (64). Empirical evidence has also shown that individuals in collectivist cultures are less innovative than those in individualistic cultures (65), which may also account for varying rates of acceptance of online shopping.

On the other hand, as the Internet becomes more affordable, accessibility has been greatly enhanced in recent years and increasingly more Chinese are searching on the Internet. Product information made available on the Internet via comparison sites, chat rooms, blogs or social media networks may be perceived as a great advantage. There is an old Chinese saying "never make a purchase until you have compared three shops". Prudence and the desire to make the better consumption choice usually leads Chinese consumers to compare among shops before they make a purchase, even if the product belongs to the low involvement category (66). Such comparison convenience may be more appreciated by Chinese consumers. Further, source credibility greatly affects Chinese consumers' search activity and WOM is greatly valued due to their group orientation. Information shared by other consumers can be very influential because it is not controlled by the marketers and is thus seen as more credible.

Since these rationales do conflict, we propose competing hypotheses. Reflecting the local conditions and context perspectives, we posit:

H1a: Chinese consumers perceive online shopping to have less relative advantage than do American consumers.

Conversely, the comparison argument leads us to propose:

H1b: Chinese consumers perceive online shopping to have more relative advantage than do American consumers.

As a nation's computer/telecommunications capabilities are crucial to e-tailing, so is its commercial infrastructure for ensuring the security, reliability and affordability of e-tailing (67). Right now the poor nationwide distribution networks and the lack of a safe and efficient online payment mechanism are apt to be seen as significant hurdles that hinder Internet purchases in China. Despite the growing popularity, credit card usage and transaction volume are still very low in China, compared to those of developed economies (68).

Culturally speaking, the Confucian value of "living properly" manifests itself in the classic Chinese belief and behaviour of "saving for a rainy day". From a young age onwards, Chinese are taught to live within their means and avoid accumulating debts. Borrowing money is traditionally seen as a shame. Unlike Westerners who are used to credit spending and taking on loans, the traditional Chinese value of thriftiness means they are not apt to spend what they have not earned. Although this kind of mentality has been gradually changing, particularly among the younger generations, this culture tends to have great inertia.

As a collectivistic and high-context society, kinship ties and interdependence are strong. Chinese traditionally rely heavily on face-to-face communications for information. Nonverbal

and contextual cues are important in the interpretation of a message. In other words, a verbal message may have little meaning without the surrounding context, which includes physical aspects, time and situation in which the communication takes place, and the overall relationship between all the people engaged in the communication. On the contrary, in an individualistic society such as the US where low-context communication is typical (59), people are more independent and value straight talk. Information is explicitly expressed in the words that have precise and literal meanings. As such, the computer-mediated communication environment allows people to work or live more independently from one another. Moreover, the needs of individuals can be more easily satisfied without time or location constraints of others (69). This would seem to suit an individualistic society better as the Internet's inherent absence of face-to-face contact may make it more difficult for people in a collectivistic society to effectively discern and utilize the context cues. Based on this line of reasoning, we expect that consumers in China, who are more collectivistic than the US, will perceive online shopping to be less easy to use.

H2: Chinese consumers will perceive online shopping to be more complex than do American consumers.

In spite of Chinese consumers' growing acceptance of debts as a normal part of their life and becoming more familiar and comfortable in using credit due to their increasing exposure to and aspirations for Western lifestyle (70), the Confucian value of "living properly" is still deep seated and the majority are still conservative savers who refuse or tend not to buy on credit. Besides, Chinese consumers prefer to see things before buying. The lack of face-to-face contact and the inability of them to touch and feel tangible products may make them fearful of shopping online. Hence, e-tailing is apt to be perceived as being less compatible with existing values and behaviours to Chinese consumers.

In contrast, American consumers are used to credit spending and taking on loans. Moreover, they have been engaging in "distance" shopping such as catalogue shopping for decades (13). Thus, it is reasonable to expect that American consumers will perceive online shopping to be more compatible with their existing values and experiences.

As a collectivistic society, balance, moderation and harmony are stressed in China. In consumption, they tend to enjoy available things and conformity with social norms is highly expected to preserve group harmony. E-tailing is still emerging in China with many difficulties and the majority are very cautious about using the Internet to make purchases. Because adopting something new can be contrary to the prevailing social/group norms, nations with strong group orientation (e.g., China) tend to have lower degree of adoption (71). Conversely, people from an individualistic society such as the US are more independent and freethinking, thus making them more acceptable to new ideas and innovations.

In addition, power distance is related to conservatism and maintaining the status quo (65). The higher the index, the more likely a culture will be towards conservatism. Thus, consumers of more power distant countries (such as China) may be more likely to shop the "status quo" way than consumers of less power distant cultures (such as the US). Research has shown that nations with low power distance values (e.g., US, Canada) tend to have more innovative technologies and have social structures more likely to support technological innovations (69).

Reflecting these multiple rationales, we hypothesize:

H3: Chinese consumers will perceive online shopping to be less compatible than do American consumers.

The abundance of fake or poor quality products in China has resulted in general distrust of both online and offline vendors among Chinese consumers (14). Relative to many other nations, Chinese consumers have little legal recourse, which appears to be another inhibitor of online purchasing. In the US there is not only a longer history of Internet transactions via credit card systems, but third-party protection of online transactions is widely adopted by US Web merchants (72).

Buying a product that does not perform as expected may be seen as having made a bad decision, regardless of culture. However, to the Chinese consumer this also represents losing face in front of others. Furthermore, Chinese consumers generally do not like confrontations and may fear that an online store is unreachable (immersed in the vast cyberspace) once a product problem arises (14).

On the other hand, a collectivistic culture such as Chinese society has historically focused on harmony and conformity in governing all-interpersonal relations (73). Thus, we can logically assume people in such a culture to be more at ease sharing their personal thoughts, beliefs, and trust within their family and community than people in individualistic cultures. This may lead to a diluted emphasis on personal privacy manifested as reduced perceived risk because of their reliance on in-group members to bear the negative consequences of risk (74). Hsee and Weber (75) found that the Chinese were significantly more risk seeking than the Americans, arguing that in collectivistic cultures like China, family and social network will help out any group member who loses a lot of money after selecting a risky option. In contrast, in individualist cultures, such as the US, a person is expected to bear the consequences of his/her own decision. As such, collectivism acts as a cushion against possible losses, or in other words, a social diversification mechanism of risks.

In addition, it has been reported that Chinese online shoppers would only pay after checking the quality of the goods (72). Due to their great concern and reluctance of submitting credit card information (14), the primary and preferred payment method by Chinese online shoppers is cash on delivery (COD), thus greatly reducing the inherent financial risk associated with online purchase.

The above reasoning again leads us to propose the competing hypotheses. The product quality and cultural rationales presented above suggest:

H4a: Chinese consumers perceive online shopping to be more risky than do American consumers.

Conversely, the COD payment argument supports the opposite:

H4b: Chinese consumers perceive online shopping to be less risky than do American consumers.

IV. METHODOLOGY, TEST OF HYPOTHESES AND RESULTS

A. Sample Size and Profile

DigitalBiz.com, a Washington DC-based company specializing in online marketing research, was commissioned for data collection among Chinese consumers. The sampling frame included e-mail addresses collected from major Internet

sites in China. Invitations to participate in the research were sent to 8,000 random addresses. A total of 503 respondents completed the survey, representing a response rate of 6.5 percent. Respondents were screened to be at least 16 years old. Data for American consumers were from Pew Internet & American Life Project (76). A total of 2,400 respondents were interviewed, of which 1,684 were Internet users. Table I presents the demographics of the two samples.

B. The Questionnaire and Measurement

The design of the questionnaire administered among Chinese consumers closely followed that of the report about online shopping by Pew Internet & American Life Project (77). Some changes (such as income categorization and product categories) were made to fit the Chinese context based on CNNIC Online Shopping Survey (78). After developing and pre-testing the questionnaire including translation and back-translation to ensure semantic consistency and measurement equivalency between Chinese and English versions (79, 80), the survey in Chinese was administered nationwide in September 2008.

A five-point Likert scale from strongly disagree to strongly agree was adopted for all the questions measuring consumers' perceptions about online shopping. The statements are listed in Appendix II.

TABLE II
SAMPLE DEMOGRAPHICS AND WEBGRAPHICS

	Chinese consumers	American consumers
	All (%) N=503	All (%) N=2,400
Gender		
Men	73.6	48.2
Women	26.4	51.8
Age		
16-17	1.0	
18-24	29.8	12.4
25-34	50.5	17.6
35-44	15.5	19.7
45-54	2.2	19.7
55-64	1.0	14.3
65+		16.3
Education		
Secondary and below	1.2	14.5
High School	8.0	35.7
Junior College	24.7	23.6
Undergraduate and above	66.2	26.2

C. Hypotheses Testing and Results

To test the proposed hypotheses regarding Chinese and American Internet users' perceptions about online shopping, a series of independent samples t-tests was conducted. Results are presented in Table 2. Significant differences were found between Chinese versus US consumers on all the aspects except perceived compatibility. The results reveal that Chinese consumers perceive online shopping to have more relative advantage than do American consumers, supporting H1b; Chinese consumers perceive online shopping to be more complex than do American consumers, supporting H2; and Chinese consumers perceive online shopping to be less risky than do American consumers, supporting H4b.

TABLE III

A COMPARISON OF PERCEPTIONS ABOUT ONLINE SHOPPING BETWEEN CHINESE AND AMERICAN CONSUMERS

Perceptions	Chinese (n=503)		American (n=1684)		T-value	Hypotheses
	Mean	Std. Dev.	Mean	Std. Dev.		
Relative Advantage	4.01	.75	3.58	.821	11.10*	H1b supported
Complexity	2.72	1.18	2.51	1.10	3.58*	H2 supported
Compatibility	4.04	.91	3.99	.96	1.16	H3 Not supported
Risk	3.72	1.06	3.91	1.18	-3.19*	H4b supported

* $p \leq .001$

V. DISCUSSION AND MANAGERIAL IMPLICATIONS

Based on the diffusion of innovation theory, literature on perceived risk in e-tailing and theories of national culture, e.g., Hofstede's multicultural framework and Hall's notion of context, this research investigated the perceptions of online consumers in China and the U.S. toward online shopping. Our results clearly indicate that significant cross-national differences exist. Although the Chinese consumers perceive online shopping to be more complex, they exhibit more favourable perceptions about the relative advantages of online shopping and are less concerned about the risks associated with online shopping, when compared to their American counterparts. The results obtained complement existing empirical evidence on factors influencing technology adoption by highlighting the importance of understanding the cultural context, and provide significant implications for managers to understand consumers' perceptions while devising strategies for information and communications technology adoption and diffusion.

Despite the lower penetration in computer ownership and other disadvantageous local conditions in infrastructure and IT technologies, Chinese consumers are significantly more likely to agree that online shopping is convenient, time-saving, offers a wider range of product selection (hard-to-find items in particular) and is the best way to find bargains. This seems to be contradictory to conventional wisdom. The comparison convenience of shopping online and the non-commercial nature of e-WOM may have greatly accounted for this favourable perception of relative advantage. As such, online marketers and advertisers should take advantage of Chinese consumers' confidence in online shopping. Online retailers should not only understand such underlying motivations but also fine tune their offerings to provide differentiated solutions, especially given the very competitive nature of the e-tailing environment in China. In addition, due to the encyclopaedic nature of the digital environment, consumers may easily feel information overloaded if e-tailers do not implement an efficient and systematic browsing mechanism (81). Therefore, in order to increase consumers' shopping speed and efficiency, which may in turn enhance the time-saving benefit appreciated by Chinese consumers, it's important that the product offerings be differentiated, interesting or even compelling and the product information assembled on the company's website be concise, systematic, accurate and up-to-date.

Like their American counterparts, Chinese consumers shop online to save money. Thus e-tailers should emphasize the savings and focus their advertising on price comparison.

However, one phenomenon needs to be pointed out here. Given the intense price competition resulting from low entry barriers and low product differentiation, many brand companies have to compete with unauthorized resellers who tend to copy their original product designs quickly and use low cost materials to gain price advantages. As such, premium product quality and authenticity should also be stressed while promotional deals are advertised.

As expected, Chinese consumers perceive online shopping to be more complicated than American consumers. Poor distribution networks, the lack of an effective online payment mechanism and limited experience with shopping at a distance may all have contributed to the lower perception of ease of use. Since perceived ease of use is well documented in the literature as a driver for consumers' adoption of new technological innovations (e.g., 82, 83), it is imperative for e-tailors to make every effort to improve such perceptions. For example, with regard to the logistic aspect, distribution alliances or collaboration with well-established local logistic providers (cheaper than international carriers such as DHL and FedEx) would be a wiser choice for foreign marketers who are usually unfamiliar about the Chinese market but wish to reach a full coverage of their targeted consumers (84). Given Chinese consumers' current relatively low usage of credit cards and their preferred cash on delivery payment method, it seems to be in the best interests of the e-tailors to collaborate with reliable logistic providers for payment collections as well. When credit card consumption becomes more mature, collaboration with reputable third party payment companies such as Alipay should boost customers' confidence and lead to greater sales revenues.

Our results indicate that Chinese consumers are concerned about submitting their personal information online, but to a significantly lesser extent when compared to American consumers, echoing what was reported by Park and Jun (42) – Koreans (high uncertainty avoidance) were more risk-taking than their American counterparts (low uncertainty avoidance) in Internet buying behavior. Several reasons may help explain this interesting finding. First, as suggested by the results of this study, Chinese consumers perceive higher relative advantages associated with online shopping. This may counterbalance the risks associated with online shopping; second, contrary to our expectation, there is no significant difference in perceptions regarding compatibility. In other words, the Chinese are not more concerned about the lack of face-to-face contact or the inability of them to touch and feel tangible products or credit spending than their American counterparts; third, as mentioned above, unlike in the US, cash on delivery is the preferred and primary payment method by Chinese consumers, this may have greatly reduced the inherent financial risk associated with online purchase. In addition, it is noteworthy that, with the rapid advancement of information and communications technologies, it is expected that the perceived risk associated with Internet buying will decrease accordingly (42). In other words, perceived risk may be a decreasingly important predictor of consumers' online buying behaviour.

However, it's important for e-marketers to realize that concerns and reluctance of revealing personal information are still prevalent among Chinese online shoppers. Some simple steps may be taken to provide certain safety assurance. For example, asking for more relevant (to the transaction) and less sensitive information or even providing compensation for information submitted by the customer; posting formal privacy policies regarding how the collected information will be used;

educating consumers that a certain degree of privacy needs to be traded for the convenience of fulfilling an effective marketing exchange online (85); displaying logos, testimonials, declarations, records of achievement, etc. in every page of the company's websites as convincing evidence of financial security (86); and employing assurance seal programs (such as BBBOnline) as they strongly affect online shoppers' perceived trustworthiness toward e-tailors (87) and have been proven to be effective in reducing their privacy concerns, even when they face an unfamiliar entity (88). The latter two steps should also be helpful in relieving consumers' anxiety over merchandise quality due to the lack of face-to-face contact and the inability of them to touch and feel tangible products during the course of online shopping. No doubt, if these concerns can be minimized, a substantial growth of online sales will be realized in China's e-tailing market.

VI. LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

As with most research, this study has limitations. First, regarding the distribution of the demographics, it is clear that males and older consumers are over-represented in the Chinese sample, compared to general online customers' profile depicted by CNNIC (89), despite the fact that we conducted a nationwide survey. As such, the Chinese sample may not be representative of the Chinese online shopping population as a whole. Second, data for the US sample were secondary data obtained from Pew Internet & American Life Project (76). Due to categorization differences (such as income, Internet experience) and availability of demographic information of the US sample, we were not able to ensure matching samples in terms of income, level of Internet use, etc. Taking these issues into consideration, the results are to be interpreted in light of the limitations outlined here.

Despite these limitations, the results of the study are revealing and important for global e-tailing research. Researchers may use this study as a springboard to further investigate Chinese consumers' online shopping behaviour. For example, what factors will influence their online shopping intention, actual purchase and customer satisfaction and retention? How will Chinese consumers' perceptions, motivation, perceived risk and trust affect their choice of the online vs. offline channel? How do website design attributes affect consumers' cognitive and behavioural responses when they are goal-oriented vs. task-free? What logistic and payment mechanism would best suit China's e-tailing industry? The sheer size of the Chinese Internet population and the rapid development of the B2C e-tailing ensure research on any aspect of online shopping in China to have serious implications for retail managers and professionals alike.

Further, empirical studies can be carried out to evaluate whether Internet users in other countries would exhibit similar or different characteristics to attest the impact and importance of cultural factors on online shopping perceptions and behavior. This will be truly worthwhile especially in a time when more and more Western companies are looking outside their home country for more growth opportunities. Future comparative research on consumers' online shopping perceptions and behavior should provide global e-tailors with more insights that are crucial in developing and communicating their marketing strategies to more effectively convert Internet users into online buyers.

REFERENCES

- [1] CNNIC. 2010a. Statistic Report on Internet Development in China (Jan 2010), <http://www.cnnic.cn/uploadfiles/pdf/2010/3/15/142705.pdf> (accessed June 13, 2010).
- [2] Chinadaily.com.cn. (2010) China Internet population hits 420m. [Online]. Available: http://www.chinadaily.com.cn/china/2010-07/15/content_10112957.htm (accessed Jan. 28, 2011).
- [3] Internetworldstats.com. 2010. World Internet users and population stats. <http://www.internetworldstats.com/stats.htm> (accessed Jan. 28, 2011).
- [4] CNNIC. 2010b. Statistic Report on Internet Development in China (July 2010). <http://www.cnnic.cn/uploadfiles/pdf/2010/8/24/93145.pdf> (accessed Jan. 28, 2011).
- [5] eMarketer.com. 2010. US Internet Users, 2010. http://www.emarketer.com/Reports/All/Emarketer_2000670.aspx (accessed July 18, 2011).
- [6] CNNIC. 2009. Statistic Report on Internet Development in China (Jan 2009). <http://www.cnnic.cn/uploadfiles/pdf/2009/3/23/153540.pdf> (accessed June 13, 2010).
- [7] Forrester Forecast. 2010. Forrester Forecast: Online retail sales will grow to \$250 billion by 2014. <http://techcrunch.com/2010/03/08/forrester-forecast-online-retail-sales-will-grow-to-250-billion-by-2014/> (accessed Sept 1, 2011).
- [8] S. Rein. 2008. In China, Online Shopping Soars. Forbes.com, June 6.
- [9] P. V. Raven, X. Huang and B. B. Kim. 2007. E-Business in Developing Countries: A Comparison of China and India. *International Journal of E-Business Research* 3(1): 91-110.
- [10] A. L. Zhao, S. Hanmer-Lloyd, P. Ward and M. M. H. Goode. 2008. Perceived risk and Chinese consumers' internet banking services adoption. *International Journal of Bank Marketing* 26(7): 505-525.
- [11] Economist Intelligence Unit. 2010. Digital economy rankings 2010: Beyond e-readiness. http://graphics.eiu.com/upload/EIU_Digital_economy_rankings_2010_FINAL_WEB.pdf (accessed July 18, 2011).
- [12] BBC News. (2011) China overtakes Japan as world's second-biggest economy. [Online]. Available: <http://www.bbc.co.uk/news/business-12427321>, Feb. 14 (accessed July 18, 2011).
- [13] C. Van Slyke, C. L. Comunale and F. Belanger. 2002. Gender differences in perceptions of Web-based shopping. *Communications of the ACM* 45(7): 82-86.
- [14] H-T Lee. 2009. Online-Shopping Market in China – Adventurous Kingdom for Foreign SME. CBC Marketing Research Shanghai Office.
- [15] E. M. Rogers. 1983. *Diffusion of Innovations*. New York, NY: The Free Press.
- [16] Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481–510.
- [17] C. La Ferle, S. M. Edwards and Y. Mizuno. 2002. Internet diffusion in Japan: Cultural considerations. *Journal of Advertising Research* 42(2): 65-79.
- [18] E. M. Rogers. 1995. *Diffusion of Innovations* (5th ed.). New York, NY: The Free Press.
- [19] L. G. Tornatzky, and K. J. Klein. 1982. Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. *IEEE Transactions on Engineering Management*. 29(1): 28-45.
- [20] V. W. Mitchell. 1999. Consumer perceived risk: Conceptualisation and models. *European Journal of Marketing*. 33: 163-195.
- [21] Y. Bart, V. Shankar, F. Sultan, and G. L. Urban, "Are the drivers and role of online trust the same for all Web sites and consumers? A large-scale exploratory empirical study." *Journal of Marketing* 69(4): 133-153. 2005.
- [22] L-C Hsu and Wang, C-H. 2008. A study of e-trust in online auctions. *Journal of Electronic Commerce Research* 9(4): 310-321.
- [23] S-C Yang, W-C Hung, K. Sung and C-K Farn. 2006. Investigating initial trust toward e-tailers from the Elaboration Likelihood Model perspective. *Psychology & Marketing* 23(5): 429-445.
- [24] L. Zhou, L. Dai and D. Zhang. 2007. Online shopping acceptance model – A critical survey of consumer factors in online shopping. *Journal of Electronic Consumer Research*. 8(1): 41-62.
- [25] A. Bhatnagar, S. Misra and H. R. Rao, "On risk, convenience, and Internet shopping behavior," *Communications of ACM* 43(11): 98-105. 2000.
- [26] N. J. Black, A. Lockett, C. Ennew, H. Winklhofer and S. McKechnie, "Modeling consumer choice of distribution channels: An illustration from financial services," *International Journal of Bank Marketing* 20(4): 161-173. 2002.
- [27] J. Park, D. Lee and J. Ahn. 2004. Risk-focused e-commerce adoption model: A cross-country study. *Journal of Global Information Technology Management* 7: 6-30.
- [28] A. Cases, "Perceived risk and risk-reduction in Internet shopping," *The International Review of Retail, Distribution and Consumer Research* 12(4): 375-394. 2002.
- [29] T. Dinev and P. Hart. 2005. Internet privacy concerns and social awareness as determinants of Intention to transact. *International Journal of Electronic Commerce* 10(2): 7-29.
- [30] M. Featherman, and P. A. Pavlou. 2003. Predicting e-services adoption: A perceived risk facets perspective. *International Journal of Human-Computer Studies* 59: 451-474.
- [31] S. L. Jarvenpaa, N. Tractinsky and M. Vitale. 2000. Consumer trust in an Internet store. *Information Technology and Management* 1(12): 45-71.
- [32] J. Joines, C. Scherer and D. Scheufele. 2003. Exploring motivations for consumer Web use and their implications for e-commerce. *Journal of Consumer Marketing* 20(2): 90-109.
- [33] A. Kolsaker, L. Lee-Kelley and P. C. Choy. 2004. The reluctant Hong Kong consumer: Purchasing travel online. *International Journal of Consumer Studies* 28(3): 295-304.
- [34] T-P Liang and H. Jin-Shiang. 1998. An empirical study on consumer acceptance of products in electronic markets: A transaction cost model. *Decision Support Systems* 24(1): 29-43.
- [35] Z. Liao and M. T. Cheung. 2001. Internet-based e-shopping and consumer attitudes: An empirical study. *Information and Management* 38(5): 299-306.
- [36] X. Liu and K. K. Wei. 2003. An empirical study of product differences in consumers' e-commerce adoption behavior. *Electronic Commerce Research and Applications* 2: 229-239.
- [37] F-J. Molina-Castillo and C. Lopez-Nicolas. 2007. Innovative products on the Internet: The role of trust and perceived risk. *International Journal of Internet Marketing and Advertising* 4(1): 53-71.
- [38] P. A. Pavlou. 2003. Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce* 7(3): 101-134.
- [39] K. Ruyter, M. Wetzels and M. Kleijnen. 2001. Customer adoption of e-service: An experimental study. *International Journal of Service Industry Management* 12(2): 184-208.
- [40] H. Van der Heijden, T. Verhagen and M. Creemers. 2003. Understanding online purchase intentions: Contributions from technology and trust perspectives. *European Journal of Information Systems* 12: 41-48.
- [41] R. N. Bontempo, W. P. Bottom and E. U. Weber, "Cross-cultural differences in risk perception: A model-based approach," *Risk Analysis* 17(4): 479-488. 1997.
- [42] C. Park and J. K. Jun. 2003. A cross-cultural comparison of Internet buying behavior. *International Marketing Review* 20(5): 534-553.
- [43] E. U. Weber and C. Hsee. 1998. Cross-cultural differences in risk perception, but cross-cultural similarities in attitudes toward perceived risk. *Management Science* 27: 25-37.
- [44] S. Dwyer, H. Mesak and M. Hsu. 2005. An Exploratory Examination of the Influence of National Culture on Cross-National Product Diffusion. *Journal of International Marketing* 13(2): 1-27.
- [45] H. Gatignon, J. Eliashberg and T. S. Robertson. 1989. Modeling Multinational Diffusion Patterns: An Efficient Methodology. *Marketing Science* 8(3): 231-247.
- [46] W. Gong, Z. G. Li and R. L. Stump. 2007. Global Internet Use and Access: Cultural Considerations. *Asia Pacific Journal of Marketing and Logistics* 19(1): 57-74.
- [47] V. Kumar and T. V. Krishnan. 2002. Multinational Diffusion Models: An Alternative Framework. *Marketing Science* 2(3): 318-330.
- [48] V. Mahajan and E. Muller. 1994. Innovation Diffusion in a Borderless Global Market: Will the 1992 Unification of the European Community Accelerate Diffusion of New Ideas, Products and Technologies? *Technological Forecasting and Social Change* 45(3): 221-235.
- [49] C. F. Maitland and J. M. Bauer. 2001. National Level Culture and Global Diffusion: The Case of the Internet. In *Culture, technology, communication: Towards an Intercultural Global Village*, ed. C. Ess, 87-128. New York: SUNY Press.
- [50] H. Takada and D. Jain. 1991. Cross-National Analysis of Diffusion of Consumer Durable Goods in Pacific Rim Countries. *Journal of Marketing* 55(April): 48-54.
- [51] T. Tellefsen and H. Takada. 1999. The Relationship between Mass Media Availability and the Multicountry Diffusion of Customer Products. *Journal of International Marketing* 7(1): 77-96.

- [52] G. J. Tellis, S. Stremersch and E. Yin. 2003. The International Takeoff of New Products: The Role of Economics, Culture, and Country Innovativeness. *Marketing Science* 22(2): 188-208.
- [53] Y. M. Van Everdingen and E. Waarts. 2003. The Effect of National Culture on the Adoption of Innovations. *Marketing Letters* 14(3): 2-30.
- [54] S. Yeniyurt and J. D. Townsend. 2003. Does Culture Explain Acceptance of New Products in a Country? An Empirical Investigation. *International Marketing Review* 20(4): 377-96.
- [55] Hall, E. T., 1959. *The Silent Language*, New York: Doubleday.
- [56] Hall, E.T., 1976, *Beyond Culture*. New York: Anchor Books.
- [57] G. Hofstede. 1980. *Culture's Consequences*. Beverly Hills, CA: Sage Publications.
- [58] Hofstede, G. (1991), *Cultures and Organizations: Software of the Mind*. McGraw-Hill, New York.
- [59] G. Hofstede. 2001. *Culture's Consequences* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- [60] T. Morden. 1999. Models of national culture – A management review. *Cross Culture Management*, 6(1): 19-44.
- [61] W. Gong. 2009. National Culture and Global Diffusion of Business-to-Consumer e-Commerce. *Cross-Cultural Management: an International Journal* 16(1): 83-101.
- [62] CNNIC. 2008a. Statistic Report on Internet Development in China (Jan 2008). <http://www.cnnic.cn/uploadfiles/pdf/2008/2/29/104126.pdf> (accessed June 13, 2010).
- [63] E. Würtz. 2006. Intercultural communication on Web sites: A cross-cultural analysis of Web sites from high-context cultures and low-context cultures. *Journal of Computer-Mediated Communication* 11: 274-299.
- [64] O. H. M. Yao. 1988. Chinese culture values: their dimensions and marketing implications. *European Journal of Marketing* 22(5): 44-57.
- [65] Jan. B. E. M. Steenkamp, F. Hofstede and M. Wedel. 1999. A cross-national investigation into the individual and national cultural antecedents of consumer innovativeness. *Journal of Marketing* 63(2): 55-69.
- [66] W. Gong. 2003. Chinese Consumer Behavior: A Cultural Framework and Implications. *The Journal of American Academy of Business*, Cambridge 3(1/2): 373-380.
- [67] R. Javalgi and R. Ramsey. 2001. Strategic issues of ecommerce as an alternative global distribution system. *International Marketing Review* 18: 376-391.
- [68] D. Hunkar. 2009. Growth in Credit Card Usage in India and China. Seeking Alpha. Nov. 26. <http://seekingalpha.com/article/175425-growth-in-credit-card-usage-in-india-and-china> (accessed July 18, 2011).
- [69] K. Bagchi, P. Hart, and M. F. Peterson. "National culture and information technology product adoption," *Journal of Global Information Technology Management* 7(4): 29-46. 2004.
- [70] W. Gong, Z. G. Li, and T. Li. 2004. Marketing to Chinese Youths: A Cultural Transformation Perspective. *Business Horizons* 47(6): 41-50.
- [71] A. A. Erumban, and S. B. de Jong. 2006. Cross-country differences in ICT adoption: A consequence of culture. *Journal of World Business* 41: 302-314.
- [72] C. X. J. Ou, C. L. Sia, and P. K. Banerjee. 2007. What is Hampering Online Shopping in China? -- A Comparative Evaluation with U.S. *Journal of Information Technology Management* 18(1): 16-32.
- [73] J.P. Neelankavil, A. Mathur and Y. Zhang. 2000. Determinants of managerial performance: A cross-cultural comparison of the perceptions of middle-level managers in four countries. *Journal of International Business Studies* 31(1): 121-140.
- [74] J. Choi and L. V. Geistfeld. "A cross-cultural investigation of consumer e-shopping adoption," *Journal of Economic Psychology* 25: 821-838. 2004
- [75] C. Hsee and E. U. Weber. 1999. Cross-national differences in risk preference and lay predictions. *Journal of Behavioral Decision Making* 12: 165-179.
- [76] PewInternet. 2007. Online Shopping. <http://pewinternet.org/Shared-Content/Data-Sets/2007/September-2007--Consumer-Choice.aspx> (accessed on June 18, 2011).
- [77] J. B. Horrigan. 2008. Online Shopping. Pew Internet & American Life Project. <http://www.pewinternet.org/Press-Releases/2008/Online-Shopping.aspx> (accessed June 13, 2010).
- [78] CNNIC. (2006) China Online Shopping Market Survey Report 2006. [Online]. Available: <http://www.cnnic.cn/uploadfiles/pdf/2006/5/26/141308.pdf> (accessed June 7, 2010).
- [79] J. Singh. 1995. Measurement Issues in Cross-National Research. *Journal of International Business Studies* 26 (3): 597-619.
- [80] Jan. B. E. M. Steenkamp and H. Baumgartner. 1998. Assessing Measurement Invariance in Cross-National Consumer Research. *Journal of Consumer Research* 25 (June): 78-90.
- [81] J.M-S. Cheng, E. S-T. Wang, J. Y-C. Lin and S. D. Vivek, "Why do consumers utilize the Internet as a retailing platform?" *Aisa Pacific Journal of Marketing and Logistics* 21(1): 144-160. 2009.
- [82] F. D. Davis and V. Venkatesh. 1996. A critical assessment of potential measurement biases in the technology acceptance model: Three experiments. *International Journal of Human-Computer Studies* 45(1): 19-45.
- [83] D. Gefen, E. Karahanna, and D. W. Straub. 2003. Trust and TAM in online shopping: An integrated model. *MIS Quarterly* 27(1): 51-90.
- [84] Shanghai Business Review. 2010. Click to add to cart. March.
- [85] A. D. Miyazaki and A. Fernandez. 2001. Consumer perceptions of privacy and security risks for online shopping. *The Journal of Consumer Affairs* 35(1): 27-44.
- [86] W. R. Swinyard and S. M. Smith. 2003. Why people (don't) shop online: A lifestyle study of the Internet consumer. *Psychology and Marketing* 20(7): 567-597.
- [87] S. M. Lee, J. Choi, and S-J. Lee. 2004. The Impact of a Third-Party Assurance Seal in Customer Purchasing Intention. *Journal of Internet Commerce* 3(2): 33-51.
- [88] Y. Xia, Z. U. Ahmed, S. Stone, C. S. Wei, C. L. Eng and H. L. Lian. 2008. Determinants of consumers' perceptions and attitudes towards assurance seals for Internet marketing: an Asia Pacific marketing perspective. *International Journal of Internet Marketing and Advertising* 4(2/3): 156-178.
- [89] CNNIC. 2008b. Statistic survey report on the online shopping market in China. <http://www.cnnic.net.cn/index/0E/manual/91/index.htm> (accessed June 24, 2010).

Appendix I: Ranking of Best Sold Items over Internet, 2008

Items	Purchased by % of Online Buyers
1 Apparel, accessories and footwear	57.1%
2 Books, CDs and DVDs	46.0%
3 Cosmetics	40.6%
4 Electronics (Cameras, MP3)	35.4%
5 Rechargeable cards for games and cell phones	32.1%
6 Home decorations	29.2%
7 Cell phones and electronic accessories	27.4%
8 Gifts and toys	24.7%
9 Computer, laptops and hardware	23.0%
10 Home appliances	22.1%
11 Jewelries, watches, accessories, glasses	20.3%
12 Foods	19.7%
13 Maternity and baby products	11.5%
14 White goods (fridges, washing machines, air conditionings)	2.9%
15 Others	2.0%

Source: Lee (2009), 'Online-Shopping Market in China – Adventurous Kingdom for Foreign SME', CBC Marketing Research Shanghai

APPENDIX II: STATEMENTS MEASURING CHINESE CONSUMERS' PERCEPTIONS ABOUT ONLINE SHOPPING

Relative Advantage:

The Internet is the best place to buy items that are hard to find.
Shopping online is convenient.
Shopping online saves me time.
The Internet is the best place to find bargains.

Ease of Use:

Shopping online is complicated.

Compatibility:

I prefer to see things in person before I buy them.

Perceived risk:

I don't like giving my personal information online.