

TECHNOLOGY READINESS AND THE LIKELIHOOD TO USE SELF-SERVICE TECHNOLOGY: CHINESE VS. AMERICAN CONSUMERS

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This study compares Chinese and American consumer's readiness and willingness to use new technology through the use of the Technology Readiness Index (Parasuraman 2000). The findings show that Chinese consumers exhibit higher levels of discomfort and insecurity, and lower levels of optimism and innovativeness with regard to using new technology. The findings also indicate that American consumers are more likely than Chinese consumers to use self-service technologies to complete retail transactions. Strategies aimed at increasing the likelihood of using retail self-service technologies may need to vary when focusing on Chinese versus American consumers.

INTRODUCTION

The proliferation of new self-service technologies found in the retail environment today suggests a need to assess the extent to which consumers are ready and willing to actually use the new technology. Self-service technologies are likely to become increasingly more important as retailers around the globe continue to strive to minimize costs and maximize service in order to remain competitive in the marketplace. Common self-service technologies being used today by retailers include: 1) telephone-based technologies and interactive voice response systems, 2) direct online connections and Internet-based interfaces, 3) interactive freestanding kiosks, and 4) video or CD technologies (Bitner, Ostrom and Meuter 2002). Specific examples of self-services would include automated hotel checkout, banking via ATMs or by telephone, self-scanning checkouts at grocery or discount stores, Internet shopping, and paying bills online.

While the use of self-service technologies in the retail setting within the United States has seen an increasing level of acceptance by consumers, the same should not be assumed for other countries throughout the world. Some countries have been very receptive to new retail self-service technology, while others have been slow to accept and adopt it. Getting consumers to try a new self-service technology for the first time is a critical first step in getting them to embrace the technology. Not only must consumers change their behaviors, but they must also become co-producers of the service, with responsibility for delivery of the service and for their own satisfaction (Bendapudi and Leone 2003).

The purpose of this study is to compare Chinese and American consumers on their propensity to use self-service technology in a retail setting and on their levels of Technology Readiness. The Technology Readiness Index (TRI) was introduced by Parasuraman (2000). It measures the "propensity to embrace and use new technologies for accomplishing goals in home life and at work." The TRI identifies four dimensions of technology belief that impact an individual's level of techno-readiness. Two of the dimensions are considered contributors and two are considered inhibitors of technology adoption. Finally, this research attempts to

determine the extent to which the propensity to use self-service technology is influenced by the four dimensions of technology readiness and whether the influence patterns vary across Chinese and American consumers.

Chinese consumers were selected for comparison with American consumers because China is one of the fastest growing economies in the world. The 11.5 percent increase in economic output for the three months ending September 2007 has China on track to surpass Germany as the world's third-largest economy by early 2008 (International Herald Tribune 2007). Moreover, China is expected to become the second largest consumer market by 2015 (Boston Consulting Group 2007).

Moreover, thanks to a rapidly growing middle class, consumer consumption in China is expected to rise sharply by 2015, driven by the expanding consumer group of "upper aspirants" whose household income is between \$40K - \$100K (McKinsey Group 2006). In addition, it is anticipated that by 2025 the majority of the Chinese population will live in urban communities with better access to technological advances.

As a result of all this growth, retailers around the world will seemingly be aiming more and more at Chinese consumers in the foreseeable future. China offers an excellent opportunity for growth for many retailers who provide self-service options to complete retail transactions. A better understanding of similarities and differences between Chinese and American consumers with regard to their technology readiness and likelihood to use self-service retail technology to complete retail transactions should give retailers a better understanding on how best to market to both consumer groups.

SELF-SERVICE TECHNOLOGIES

The importance of self-service technology in the retail environment has grown significantly over the last decade. Many retailers today are investing in self-service technology to improve service quality and to cut costs (Weijters,

Rangarajan, Falk, and Schillewaert 2007). Self-service technologies allow retailers to standardized their interaction with consumers, which results in a more consistent service atmosphere independent of employees' personality and mood (Hsieh, Yen, and Chin 2004). In addition, self-service technologies allow consumers to be productive resources involved in the service delivery, thus allowing retailers to handle demand fluctuations without expensive adjustment of employee levels (Curran, Meuter, and Surprenant 2003).

Not all consumers embrace self-service technology in the retail environment today. Some consumers actively seek out self-scanning checkouts, online banking services, and Internet shopping options. Other consumers, however, intentionally avoid such self-service technologies. For example, some retailers who are using in-store Internet kiosks have found that not all consumers are interested in using the new technology (Mearian 2001).

The extent to which consumers desire to use new technology is commonly influenced by such factors as consumer attitudes toward specific technologies (Bobbitt and Dabholkar 2001; Curran et al. 2003), the level of technology anxiety exhibited by consumers (Meuter, Ostrom, Bitner, and Roundtree 2003), and consumer capacity and willingness (Walker, Lees, Hecker and Francis 2002). Mick and Fournier (1998) argue that consumers can simultaneously exhibit positive feelings (such as intelligence or efficacy) and negative feelings (such as ignorance or ineptitude) towards new technology. Venkatesh (2000) found that "computer playfulness" and "computer anxiety" serve as anchors that users employ in forming perceptions of ease of use about new technology. Therefore, consumers can be arrayed along a hypothetical technology-belief continuum with their position on the continuum correlating with their propensity to embrace technology (Parasuraman 2000).

Studies have also shown that perceived performance satisfaction, usefulness, self-efficacy, inherent novelty seeking, need for

interaction with a service employee, self-consciousness and social influence may impact a consumers attitude toward using technology (Davis, Bagozzi, and Warshaw 1989, 1992; Dabholkar and Bagozzi 2002; Ellen, Bearden and Sharma 1991; Lin and Hsieh 2006). In addition, some consumers have shown a preference to self-service technology because of ease of use or because it helps them avoid interaction with retail employees (Dabholkar 1996; Meuter, Ostrom, Roundtree and Bitner 2000). Not surprisingly, Szymanski and Hise (2000) also found convenience to be a key factor influencing e-satisfaction with technology use in retailing.

Several studies have looked at user profiles to explain receptiveness to self-service technologies. For example, Barczak, Ellen and Pilling (1997) looked at consumers' use of ATMs, automatic deposits/withdrawals, and telephone banking and identified the consumer profiles of security conscious, maximizers, instant gratifiers, and hassle avoiders. Other studies have looked at age profiles of consumers to predict the adoption rate of consumer-related technologies (Gilly and Zeithaml 1985).

TECHNOLOGY READINESS

Research has shown that consumers who are "ready" to use self-service technology are more likely to try it. Davis (1989) developed the technology acceptance model (TAM) that identifies potential drivers and inhibitors of technology acceptance. Parasuraman (2000) proposed a "Technology Readiness Index" (TRI), which measures the "propensity to embrace and use new technologies for accomplishing goals in home life and at work." The TRI identifies four dimensions of technology belief that impact an individual's level of techno-readiness. Two of the dimensions are contributors and two are inhibitors of technology adoption.

The contributors are: 1) Optimism – the degree to which individuals believe that technology can benefit their lives and give them more

control over their life, and 2) Innovativeness – a natural desire to experiment with new technologies, as well as to be a thought leader. The inhibitors are: 1) Discomfort – a feeling of lacking both control over technology and the confidence in making the technology work, and 2) Insecurity – a need for assurance that a technology-based product, service or process will operate reliably and accurately. The four dimensions are relatively independent of each other, therefore, an individual could harbor both contributor and inhibitor feelings towards technology.

CULTURAL INFLUENCES ON INDIVIDUAL BEHAVIOR

Culture has been defined as "the collective programming of the mind which distinguishes the members of one group from another" (Hofstede 1980). Cultural differences have been observed and reported in a number of studies to have a significant impact on consumer decision-making and individual behavior (Erumban and de Jong 2006; Leo, Bennett and Hartel 2005; Lin and Peng 2005; Singh 2006). Hofstede (1980) originally identified four dimensions of culture which influence the way people interact and behave. A fifth dimension was added later (Hofstede 2001). The five dimensions are briefly discussed below.

1) Individualism/Collectivism – Cultures differ from one another in terms of the perceived role of the individual versus the role of the group. This dimension refers to the degree to which individuals in a society prefer to act as individuals rather than as members of a social group. People in individualistic societies (e.g., American society) are inclined to make their own choices and therefore more inclined to be innovative and adopt new ideas (Erumban et al. 2006). In contrast, members in collective societies tend to conform to the norms of the group or society and are less likely to accept new ideas. Individualists tend to be concerned primarily with separating the self from others by displaying qualities of uniqueness and not allowing others to influence them. Collectivists, however, are concerned

with affiliating and maintaining a connectedness.

2) Power Distance - The power distance dimension refers to the degree to which members of society accept an uneven distribution of power. Cultures with large power distance tend to be hierarchical, while cultures with small power distance tend to value equality where knowledge and respect are perceived as sources of power. Research has shown that individuals are more innovative when they are given autonomy and empowerment (Mumford and Licuanan 2004). Moreover, cultures with a high degree of power distance tend to be less open to new ideas because this may require decision-making on issues where little information is known (Lee and Peterson 2000).

3) Uncertainty Avoidance - The uncertainty dimension concerns the extent to which people seek to avoid, or feel threatened by, ambiguous or risky situations. Individuals in cultures characterized by high uncertainty avoidance may be risk averse in trying new ways of doing things, and tend to emphasize continuity and stability rather than innovation and change. Consumers in high uncertainty avoidance cultures are likely to wait for others to try new products and base their expectations on others (Singh 2006). In cultures with low uncertainty avoidance, members may more readily embrace change, may show more initiative, and may be more accepting of different views and new ideas.

4) Masculinity/Femininity - Masculine societies place a high value on earnings, recognition, achievement, competition, and material things. Feminine societies are characterized by care giving, nurturing, cooperation, and concern for social relationships and quality of life. Hofstede (2001) found that organizations in masculine cultures emphasized innovative activities, such as training.

5) Long-Term/Short-Term Orientation - Hofstede (2001) added a fifth cultural dimension called Confucian Dynamism (later

changed to Long/Short-Term Orientation), and reflects whether a society has a long-term or a short-term orientation. This dimension, based on Confucianism, captures the distinctive cultural characteristic of East Asian cultures: diligence, patience, frugality, and long-term orientation. A society with a long-term orientation places a high value on traditional values. Cultures with a short-term orientation place less importance on tradition and are more open to new ideas (i.e., products).

Chinese vs. American Culture

The U.S. and China have been shown to be culturally very different (Hofstede 1980). The Chinese culture is characterized as a highly collective society that prefers to conform to the norms of society and appears less likely to accept new retail self-service technology (i.e., self-scanning check-outs, Internet shopping, paying bills online), than an individualistic society (i.e., American society) that is inclined to make individual choices and therefore seemingly more likely to be innovative and adopt new ideas. The Chinese culture also is characterized as a high power distance society, thus not likely to be open to new ideas because of the lack of information available.

In addition, the Chinese culture is viewed as a long-term society that values patience and traditional values. Patience and traditional values do not lend themselves to the quick adoption of new technology. However, a short-term orientation and the fast pace lifestyle of the typical American does suggest a greater likelihood of adopting new technologies. The U.S. and Chinese cultures are relatively similar in uncertainty avoidance and masculinity as compared to other countries throughout the world, thus no differences are distinguishable on these two cultural dimensions.

Given the cultural influences identified by Hofstede (1980, 2001), it is hypothesized that American consumers will exhibit significantly higher levels of "Optimism" and "Innovativeness" towards using new self-service technology than will Chinese

consumers. Moreover, it is also hypothesized that Chinese consumers will exhibit significantly higher levels of "Discomfort" and "Insecurity" towards using new technology than will American students. Chinese consumers were socialized in an eastern culture, which tends to be more of collective society that exhibits high levels of power distance, and long-term orientation. American consumers were socialized in a western culture that emphasizes individualism, a low degree of power distance, and a short-term orientation.

HYPOTHESES

Based upon the underlying assumptions of the TRI and the cultural influences identified by Hofstede (1980; 2001), the following hypotheses are proposed:

Hypothesis 1 – American consumers will exhibit a higher level of Optimism towards using technology than Chinese consumers.

Hypothesis 2 – American consumers will exhibit a higher level of Innovativeness towards using technology than Chinese consumers.

Hypothesis 3 – Chinese consumers will exhibit a higher level of Discomfort towards using technology than American consumers.

Hypothesis 4 – Chinese consumers will exhibit a higher level of Insecurity towards using technology than American consumers.

Hypothesis 5 – American consumers will be more likely to use self-service technologies to complete retail transactions than Chinese consumers.

Hypothesis 6 – The TRI dimensions of Optimism, Innovativeness, Discomfort, and Insecurity will all be significant predictors of likelihood to use self-service technologies for Chinese consumers.

Hypothesis 7 – The TRI dimensions of Optimism, Innovativeness, Discomfort, and Insecurity will all be significant predictors of

likelihood to use self-service technologies for American consumers.

METHODOLOGY

Questionnaire

A 41-item questionnaire was first developed in English by the principal researchers. The questionnaire was next translated into Chinese by native speakers. The questionnaire was then back-translated into English. The back-translated version of the questionnaire was then compared with the original English version by an English native speaker. The few discrepancies in the questions were resolved after discussing them with the translators.

Technology readiness was assessed through the use of the 36-item Technology Readiness Index (TRI) scale developed by Parasuraman (2000). The TRI is a Likert type scale with responses ranging from "Strongly Agree" (5) to "Strongly Disagree" (1). The TRI measures an individual's propensity to adopt and use innovative technology by assessing how "techno-ready" individuals are. In addition, the TRI helps explain how and why different individuals adopt technology. The TRI does this by looking at both forces that attract consumers to innovative products and forces that may repel them away from new products.

The TRI scale has demonstrated high internal reliability. Coefficient alpha scores range from .74 to .81 (Parasuraman, 2000) across the four dimensions of the scale. The TRI scale has also demonstrated high construct validity by being able to discriminate across different levels of consumer ownership of products/services for which one might a priori expect different levels of technology readiness to be very relevant.

"Likelihood to use self-service technology" was operationalized using a 5-item, 5-point Likert-type scale. The five retail self-service technology items selected were based on: 1) previous research that identified common self-service technologies found in the retail environment (Bitner, Ostrom and Meuter 2002;

TABLE 1
Likelihood of Using Self-Service Technology

1. How likely are you to use bank ATM services?
2. How likely are you to shop online for retail products?
3. How likely are you to use self-service checkouts at retail stores?
4. How likely are you to purchase e-airline tickets?
5. How likely are you to pay bills online?

*Likert-type scale – ("1" = Very Unlikely) ("5" = Very Likely)

Meuter, Bitner, Ostrom and Brown 2005), and 2) common technology interfaces found in both the Chinese and U.S. retail settings (online/Internet interfaces and self-checkouts). Table 1 identifies the five areas of self-service technologies that were assessed for likelihood of use. The self-service technologies include banks ATMs, online/Internet shopping, self-service checkouts, e-airline tickets, and online bill paying.

Data Collection

Data were collected using two independent convenience samples. One sample consisted of 237 Chinese students enrolled in a large regional university in China. The other sample included 231 American students at a large Midwestern regional university within the United States. Students were surveyed via a personal questionnaire in China and an online questionnaire in the United States. College students were deemed as viable respondents in this study because most college students are active and well informed consumers. Therefore, they are likely to be exposed to and often given the opportunity to use new self-service technologies before many other consumers within the general population. In addition, China's teenagers and "twentysomethings" enjoy significant spending power because of generous relatives, and are eager to try many Western goods that are flowing into China (Boston Consulting Group 2007).

Data Analysis

First, mean scores for all Chinese and American respondents were calculated for each of the four

dimensions (Optimism, Innovativeness, Insecurity, and Discomfort) comprising the 36-item TRI scale. Mean scores for the five-item "Likely to Use Self-Service Technology" scale were also computed for all respondents. Next, t-tests were conducted to assess differences in mean scores for Chinese and American respondents across the four dimensions comprising the TRI scale. T-tests were also used to determine differences in Chinese and American consumers across the five "Likely to Use Self-Service Technology" questions.

Finally, regression analysis was used to assess the relative importance of the four dimensions of the TRI scale in predicting likelihood of using self-service technology for both Chinese and American consumers. The four dimensions of the TRI scale were used as the independent variables, with the sum score of the five "Likely to Use Self-Service Technology" questions as the dependent variable.

RESULTS

TRI Dimensions - (Chinese vs. American Consumers)

Table 2 shows the results of t-tests for assessing differences in mean scores between Chinese and American consumers across the four dimensions comprising the TRI. American consumers exhibited a significantly higher level of "Optimism" towards using new technology than did Chinese consumers (3.97 vs. 3.59). This finding provides support for Hypothesis #1. American consumers appear to have a stronger belief than Chinese consumers that technology can benefit their lives, as well as give them more control over their life.

Table 2 also shows that American consumers reported a significantly higher level of "Innovativeness" related to the propensity to use new technology than did Chinese consumers (3.52 vs. 3.04). This result provides support for Hypothesis #2. American consumers exhibited a greater desire to experiment with new technologies than did Chinese consumers.

Chinese consumers reported a significantly higher level of "Discomfort" towards using new technology than American consumers (3.25 vs. 3.15). This finding provides support for Hypothesis #3. Chinese consumers exhibited a greater feeling of lack of control over technology and the confidence in making the technology work. In addition, Chinese consumers also reported a significantly higher level of "Insecurity" towards using new technology than American consumers (3.56 vs. 3.37). This result provides support for

Hypothesis #4. Chinese consumers feel a greater need for assurance that a technology-based product will operate reliably and accurately as compared to American consumers.

Likelihood to Use Self-Service Technologies

In order to assess differences in Chinese and American consumers related to the likelihood to use self-service technology, t-tests were also conducted using the mean scores for the five questions asking the likelihood of using specific self-service technologies. As shown in Table 3, American consumers reported significantly greater likelihood of use for all five retail self-service technologies.

American consumers appear to be more likely to use ATMs, to shop online, to use self-checkouts, to purchase airline e-tickets, and to pay bills online. These findings provide

TABLE 2
Mean Scores For Technology Readiness Index Dimensions
(Chinese vs. American Consumer)

TRI Dimension	Chinese Consumer	American Consumer	t Value	Significance
Optimism	3.59	3.97	9.495	.000
Innovativeness	3.04	3.52	8.491	.000
Discomfort	3.25	3.15	-2.127	.034
Insecurity	3.56	3.37	-3.944	.000

*Likert-type scale – ("1" = Strongly Disagree) ("5" = Strongly Agree)

TABLE 3
Mean Scores For Likelihood To Use Self-Service Technologies
(Chinese vs. American Consumer)

Self-Service Technology	Chinese Consumer	American Consumer	t Value	Significance
ATM	4.06	4.39	3.448	.001
Shop Online	3.68	3.90	2.085	.038
Self-Checkout	3.60	4.34	7.866	.000
Purchase E-Ticket	3.51	4.32	8.410	.000
Pay Bills Online	3.58	3.97	3.814	.000

*Likert-type scale – ("1" = Very Unlikely) ("5" = Very Likely)

support for Hypothesis #5. These findings could partially be a result of the current availability of the five self-service technologies in China as compared to the United States, however, cultural values seemingly also play a role in the responses of the consumers.

Predicting Likelihood to Use Self-Service Technology

In order to further analyze the difference between Chinese and American consumers with regard to the usage of self-service technology, regression analysis was utilized to assess the relative importance of the four dimensions of the TRI scale in predicting the likelihood of using self-service technology to complete retail transactions for both Chinese and American consumers. Table 4 shows the relative importance of the four factors of the TRI scale in predicting the likelihood of using self-service technology for Chinese consumers.

Although not an absolute test for the importance for each predictor, standardized

beta coefficients are often useful in determining the relative importance of independent variables in predicting dependent variables. Optimism and Insecurity were significant predictors of Likelihood to Use Self-Service

Technology for Chinese consumers. Innovativeness and Insecurity were not significant predictors. Optimism appears to be the strongest predictor of technology usage (beta = .477), followed by Insecurity (beta = -.236). This finding provides only partial support for Hypothesis #6, as only two of the four TRI dimensions were significant predictors of self-service technology usage.

Table 5 shows the relative importance of the four factors of the TRI scale in predicting the likelihood of using self-service technology for American consumers. Three of the four TRI dimensions were significant predictors of Likelihood to Use Self-Service Technology. Insecurity appears to be the strongest predictor (beta = -.351) for American consumers, followed closely by Optimism (beta = .340). Discomfort was also a significant predictor

TABLE 4
Predicting Likelihood of Using Self-Service Technology
(Chinese Consumers)

TRI Dimension	Standardized Beta	t Value	Significance
Optimism	.477	7.130	.000
Innovativeness	-0.50	-.782	.435
Discomfort	.107	1.469	.143
Insecurity	-.236	-3.189	.002

*Note: R = .454 R Square = .206

TABLE 5
Predicting Likelihood of Using Self-Service Technology
(American Consumers)

TRI Dimension	Standardized Beta	t Value	Significance
Optimism	.340	5.158	.000
Innovativeness	.115	1.701	.090
Discomfort	.168	2.360	.019
Insecurity	-.351	-5.052	.000

*Note: R = .526 R Square = .2277

(beta = .168) of Likelihood to Use Self-Service Technology, however, the positive relationship between the two constructs was somewhat surprising. The higher the Discomfort level, the greater the Likelihood to Use Self-Service Technology. Since only three of the four TRI dimensions were significant predictors of self-service technology usage for American consumers, Hypothesis #7 was only partially supported.

DISCUSSION/IMPLICATIONS

This study has attempted to assess differences between Chinese and American consumers with respect to their technology readiness and their resulting likelihood to use self-service technologies to complete retail transactions. Marketers need to take steps to encourage consumers to use and adopt self-service technologies that are offered within the retail setting. The results of this study suggest that strategies aimed at increasing the likelihood of using self-service technology may need to vary when focusing on Chinese versus American consumers. New technologies introduced into the American culture, characterized by small power distances, weak uncertainty avoidance, strong individualism, short-term orientation, and masculinity should have little trouble being accepted and adopted.

However, what might be true for the American consumer may not hold true for the Chinese consumer. Overall, American consumers appear to be more willing to use self-service technology to complete retail transactions than are Chinese consumers. Therefore, different strategies at the organizational level that can be adjusted at the regional level to account for cultural differences may be needed when focusing on Chinese consumers. Newman and Nollen (1996) report that businesses perform better when management practices are matched with natural cultures.

Of specific interest in this study, the levels of Optimism and Insecurity towards using new self-service technology appear to be the most

important TRI influences on the likelihood of using retail self-service technologies for both Chinese and American consumers. Discomfort was also shown to impact American consumers' likelihood to use self-service technologies, although in an opposite direction as hypothesized. A possible explanation for this finding regarding Discomfort and the Likelihood to Use Self-Service Technology might be that American consumers' feeling of lack of confidence in making new technology work does not supersede their cultural influences of individualism, low uncertainty avoidance, and short-term orientation.

Since Chinese consumers exhibited significantly higher levels of both Discomfort and Insecurity towards using new technology than did American consumers, retailers need to emphasize to the Chinese consumer how safe the self-service technology is with respect to protecting identity theft and preventing the selling of consumer information. In addition, since consumers in both strong collectivists and uncertainty avoidance cultures like to wait for others to try out a new product or idea and base their future behavior on the experiences of others, stressing that Internet shopping, online banking, and paying bills online are common practices for many consumers throughout countries like the United States should also help to reduce the anxiety of using the self-service technologies for the Chinese consumer. Moreover, since high power distance cultures tend to accept what they are told by authority figures, role models and well-respected individuals within the Chinese culture could be used to advise Chinese consumers to use the various retail self-service technologies available.

Providing detailed information regarding how the different technology-based retail transactions work should also enhance the trust Chinese consumers have in the self-service technologies. As a result of this detailed information, Chinese consumers will also be more informed about the new technology and should then be able to discuss the different

types of technologies among themselves, which should lead to more rapid adoption processes of the new self-service technologies.

Also, since American consumers appear to have a stronger belief that technology can benefit their lives (Optimism) than do Chinese consumers, retailers need to focus on the specific benefits of using the new self-service technologies when developing strategies for the Chinese consumer market. Most Chinese consumers will not be prone to using new technology unless they perceive a benefit from doing so. Stressing benefits such as saving time, access to information, reducing transaction costs, or more control over the purchasing process could all be potential benefits that may motivate the Chinese consumer to consider using the new technology. Pleasure derived from using the technology could even be a potential benefit. For example, Bauer, Falk and Hammerschmidt (2006) identified the importance of hedonic aspects in technology-dominated retail settings.

CONCLUSION

Retailers need to continually assess consumers' propensity to accept and use the new self-service technology that they offer. This study has examined technology readiness factors that may impact Chinese and American consumers' willingness to use self-service technology to complete retail transactions. Since Chinese consumers exhibited higher levels of Discomfort and Insecurity, as well as lower levels of Optimism, and Innovativeness towards using new technologies than did American consumers, retailers may need to adjust their marketing strategies aimed at enhancing the likelihood of consumers using their new technologies to account for cultural differences between Chinese and American consumers. What works for American consumers may not have the same impact on Chinese consumers.

LIMITATIONS AND FURTHER RESEARCH

One limitation of this study relates to the sampling frame and sampling methodology. Convenience samples of Chinese and American college students were used, therefore, generalizing the findings to the general consuming publics in both China and the United States should be done with care. A second limitation has to do with the scope of this study. Assessing and predicting the likelihood of using self-service technology is a complex issue. This study has provided limited insight into the relative importance of predictors of using technology to complete a retail transaction because only a small sampling of predictor factors was analyzed. A final limitation pertains to the measurement of "likelihood to use self-service technology." This study conceptualized the construct via a self-developed, five-item scale. Although the five-item scale did generate a Cronbach's alpha of .743, other dimensions of self-service technology exists that could have been included in the measurement of this construct.

Further studies should examine whether the relative importance of the dimensions of technology readiness differs across other cultures. In addition, other predictors of propensity to use technology should be examined, as well as other types of self-service technologies. Future research might also investigate why the TRI dimension of Innovativeness (a natural desire to experiment with new technologies) does not appear to help predict the likelihood of using self-service technologies within a retail setting. Finally, future studies could examine whether the relationship between the technology readiness dimensions and "likelihood to use self-service technology" will vary across demographic characteristics of consumers.

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