Asia Pacific Journal of Marketing and Logistics

yingxia cao, Haya Ajjan, Paul Hong,

Article information:

Stockholms universitetsbibliotek

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

Post-Purchase Shipping and Customer Service Experiences in Online Shopping and Their Impact on Customer Satisfaction:
An Empirical Study with Comparison of China and Taiwan

Abstract

Purpose – The purpose of this paper is to understand the role of post-purchase logistic services on customer satisfaction and future purchase decision, to reveal any differences across China and Taiwan, to fill in a gap in the literature focused on post-purchase logistic activities related to shipping, return, and tracking, to provide managerial guidance in logistics for e-commerce, and to develop insights on logistic services for future research.

Design/methodology/approach – Using a validated survey instrument, 384 respondents in China and 145 respondents in Taiwan are collected. The research model is analyzed using component-based estimation approach to structural equation modelling.

Findings - The structural equation analysis of the study found that post purchase shipping and tracking have an impact on customer satisfaction in both China and Taiwan. It also found that customer service is the most significant factor among the examined antecedents for online shoppers in China. While, return service is more important for shoppers in Taiwan. Finally customer satisfaction played a stronger positive role for online shoppers in Taiwan as compared to their counterparts in China.

Research limitations/implications - This research extended current literature about post-purchase logistic services in an online shopping environment with a literature-based research model and good empirical data support. However, one limitation of the study is that the data collected represents a cross-sectional sample, future research should examine longitudinal sample to study customers' purchase intentions over-time.

Practical implications - This study can help both scholars and practitioners understand the importance of tracking, return, shipping, and customer service in an online shopping environment and across countries. It provides insights on designing ecommerce relevant shipping services to satisfy and attract customers across countries.

Originality/value - The study investigated how post-purchase activities contributed to customer satisfaction in online shopping and explored the influence of customer satisfaction on future purchase intention in China and Taiwan. This is one of the first studies available in the literature to provide empirical support and managerial insights about post-purchase activities regarding shipping, tracking, and returns for e-commerce with cross-regional comparison.

Keywords-Online shopping, Shipping, Customer Service, Post-Purchase Activity, Customer Satisfaction, Future purchase intention

Paper type – Research paper

Introduction

The ubiquitous internet and its development through mobile and social media have boosted the growth of global e-commerce to an unprecedented level. Consumers shop enormously online. Global e-commerce sales has demonstrated consistent growth for many years and is said to top $27 trillion in 2020 (eMarketer, 2016). This is partially true in emerging market such as Asia-Pacific, which increased 31.5% in 2016 and will remain the largest retail e-commerce market around the world in the near future, while its sales is expected to top $1 trillion in 2016 and reach $2.725 trillion by 2020 (eMarketer, 2016). Within Asia-Pacific region, China is said to represent almost half (47.0%) of the world's retail e-commerce and to reach $899.09 billion in 2016, compared to $423.34 billion in North America and the second largest regional ecommerce market (eMarketer, 2016).

The rapid expansion of e-commerce in the past and its expected growth in the future are attributed to advancing shipping and payment options as well as other reasons (eMarketer, 2016). Jain, Gajjar, Shah, & Sadh (2017) conducted an extensive literature review and suggested that availability, timeliness, condition and ease of return, along with e-business quality, product quality, and pricing, are linked to shopping satisfaction and repurchase intention of customers in e-tailing. However, Jain, et al (2017)'s review revealed that very few studies have focused on the relationships between the post-purchase activities such as shipping and return services and customers' behavioral and attitudinal aspects. It is unclear how important post-purchase activities such as shipping and return are in comparison with customer service to e-commerce and its growth. Nevertheless, it is also reported that many online shoppers drop their orders if free shipping is not provided and 78% of consumers regarded free shipping as either "very important" or "somewhat important" in their decision to make an online purchase (Tuttle, 2011). The study of UPS and ComScore found that free shipping and delivery are reported to be key to customer satisfaction (Moth, 2012). In addition, same-day delivery is usually very expensive, most customers are not willing to pay the extra price, though it provides instant gratification; companies may consolidate their supply chain and deliver the products to local stores for free (Stevens, 2014).

Therefore, it is understandable that supply chain guru Hau Lee considers leveraging post-purchase activities such as shipment as one of the five most important strategies (Lee and Whang, 2001). To maximize profits and gain a competitive advantage internet retailers also strategically manipulate their shipping and delivery options available to customers (Yao and Zhang, 2012). The research by UPS and comScore found that the top recommendations from online shoppers in the US are related to shipping: free or discounted shipping, delivery within expected time, flexibility of shipping, and return service (comScore, 2014). Other research also supported the findings about shipping for online shopping (Spagnoletti, 2014).

The importance of post purchase activities such as customer services, post affective state in the form of customer satisfaction and affective behavior are recognized (Santos and Boote, 2003; Tam, 2011). Yet, scholarly research about those activities and their impact on satisfaction are still limited. Theory-based empirical research about such role relative to other sales and purchasing activities are scant in e-commerce research, especially with reliable survey instrument. This study aimed to explore the impact of post-purchase logistic activities, including shipping, tracking, and return, on customer satisfaction and their future purchase intention.

In addition, studies show that economic and cultural/social factors affect consumer behavior in e-commerce (Chauhan and Rambabu, 2017). However, a systematic comparison of regions of emerging market regarding the post-purchase logistics is lacking. Therefore, this study addresses this gap in the literature. Based on the authors' familiarity and accessibility, the study considered China and Taiwan, which have close cultural/social similarities and similar level of economic development. By comparing China with Taiwan, we investigate how these post-purchase logistic activities in these vibrant economies are different in relation to customer satisfaction. Additionally, findings in this regard might further the validity of the research model and its hypotheses.

The rest of the paper is organized as follows. Next section presents a research framework based on the literature review on e-commerce satisfaction, post-purchase activities: logistic services, customer services, and post purchase intentions. The research methods and samples are presented in the following section, followed by data analysis, and results. The last section highlights implications, limitations, future research, and conclusion.

Theoretical background and hypothesis

This section provides a comprehensive review of the literature on e-commerce and online shopping, the role of customer service in online shopping, customer satisfaction in online shopping across regions. The review is followed by a research model with a set of hypotheses that are intended to explain the relationships of post-purchase logistic services (shipping, tracking, and return) and customer service in an online shopping environment and their impact on customer satisfaction and purchase intention (see Figure 1).

E-commerce and online shopping
Kalakota and Whinston (1997) define e-commerce as all activities related to information, products and services buying and selling via internet and online platform. These activities may be around four consumption purposes: (1) entertainment, (2) financial service and information, (3) the necessary service (i.e., home shopping), and (4) education and training. From a customer

perspective, online shopping is the core part of e-commerce. Customers purchases products, information, and services from an online website as opposed to a physical shop or store. There are different stages that make up the purchase activity: 1) pre-purchase activity, 2) purchase, and 3) post purchase activity (Gensler, Verhoef and Böhm, 2012). The post purchase activities include product assistance, customer service, shipping, repairs, and return (Zoltners, Sinha and Lorimer, 2004; Chauhan and Rambabu, 2017).

Figure 1 Here

Factors related to online shopping are important to understand by both e-commerce providers and online shoppers. Many studies explored the factors of customer satisfaction in an online shopping environment. They show that many factors are associated with purchase intention and purchase decisions. These factors include customer service, e-service quality, security, fulfillment, usefulness and price, ease of use and convenience, trust, and many other factors (Chen and Chang, 2003; Chiang and Dholakia, 2003; Park and Kim, 2003; Spagnoletti, 2014).

By no means, this study is intended to explain exhaustively the factors that lead to customer satisfaction. Many studies have already tried to do so. For example, Liu *et al.* (2008) have come up with eight factors that can impact satisfaction: information quality, web site design, merchandise attributes, transaction capability, security/privacy, payment, delivery, and customer service. McKinney, Yoon and Zahedi (2002) found that information quality and system quality are two main factors impacting customer satisfaction. Szymanski and Hise (2000) concluded that convenience, product offering/information, site design, and financial security are four factors that influence customer satisfaction.

Instead of explaining factors that influence overall customer satisfaction in online shopping, this study is designed to answer questions that are specifically related to the role of post purchase activities (more specifically: shipping, tracking, and return) and their impact on customers' satisfaction

The role of customer service
Customer service is often broadly used to include many service aspects, such as sales clerk service in merchandise selection and support, problem solving, answers to frequently asked questions through emails and other channels, distributed desired information, credit and payment transaction completion, and logistic related activities (such as the handling of returns) (Zeithaml,

3

Parasuraman and Malhotra, 2002; Park and Kim, 2003). This study separates logistic activities (return, shipping, and tracking) from other customer service activities including service promptness, ease of access, and quality of interaction. Norizan and Abdullah (2010) found that perceived customer service quality has a significant impact on satisfaction, which in turn affects customers' future purchase intention. Reibstein (2002) reported that post-purchase customer support service is one factor that that is a key to customer's satisfaction. More specifically, several activities are found to be crucial to a good e-commerce company and they ensure company's success in an e-business environment business. These activities include promptness in responding to customer's inquires in complaints, access to service, and perception of service quality received (Hsu, 2008; Liu et al., 2008). In line with previous research, we expect that customer service is related to customer satisfaction. Hypothesis 1 is thus stated as

> *H1: Customer service is positively associated with customer satisfaction.*

The role of post-purchase logistic services

On-time delivery and shipping and handling are ranked moderately important to predicting customers' satisfaction as compared to price, which is often what e-commerce research has emphasized (Reibstein, 2002). Past literature has found that delivering goods to the customer's home accurately and dealing with returned goods properly are two reported factors that influence the satisfaction of online shoppers (Hsu, 2008). Ho and Wu (1999) found that logistic specifications were the most important factors to determine customer's satisfaction in e-business. These characteristics included timely delivery, after service repairs, warranty availability, and ability to return merchandise. It is expected that post-purchase logistic activities such as shipping, tracking, and return services are positively associated with customer satisfaction. Therefore, this study hypothesizes that:

> *H2: Shipping service is positively associated with customer satisfaction.*
> *H3: Tracking service is positively associated with customer satisfaction.*
> *H4: Return service is positively associated with customer satisfaction.*

Customer satisfaction and continued online shopping

The majority of studies focusing on antecedents and customer satisfaction with e-business have examined the relationship between customer satisfaction and purchasing intention. Lee and Lin (2005) reported that service quality and customer satisfaction are significantly related to customer purchase intentions. It is expected that customer satisfaction with the online store quality of service will result in repeat purchase and customer online store recommendations to friends and family. Thus, this study hypothesizes that:

4

H5: Customer satisfaction is positively associated with future online shopping.

E-commerce and customer satisfaction in different regions/countries

Local culture has an impact on online shopping behavior and outcomes. For example, Malaysian consumers prefer in-store shopping over online shopping, because they engage in other activities such as having dinner with friends or family while shopping (Vegiayan, Ming and Harun, 2013). Also, they are not able to bargain if they purchase products online (Vegiayan, Ming and Harun, 2013). Nevertheless, given the similarities in culture between China and Taiwan, there is no reason to expect any systematic differences in factors that influence customers' satisfaction regarding online shopping, particularly around post-purchase logistic activities. Thus, we hypothesize that:

H6: The relationships in H1-5 are similar for online shoppers in China and Taiwan.

Methodology

Data collection

Individuals who have shopped online are more likely to have opinions about online shopping and are able to report their experience in regard to post-purchase activities such as customer service, return, shipping, and tracking. Therefore, to address the research objectives, this study gathered data from individuals who have shopped online. The sampling of this study limits to any individuals, who are 18 years or older, citizens of China or Taiwan at the time of the survey and are currently living there, and have shopped online domestically in their respective countries. To maximize diversity of the sample, especially for such a big country as China, 19 students from China and 6 students from Taiwan in an MBA statistics class of an American university helped identify individuals that matched the criteria above. They were instructed to use stratified sampling approach to select 30 people with various demographic background and then help reach individuals from all geographical regions in China and Taiwan, which have close cultural similarity, but slightly different online shopping environments.

From April 26 to May 12, 2014, data was collected via an online survey hosted on surveymonkey.com via email. The survey was reviewed by two experts knowledgeable with survey construction and the topic of online shopping. The survey was updated based on their feedback in order to establish its face and content validity (Nunnally & Bernstein, 1978). To uncover any issues with the wording and content of the updated survey, the authors recruited 10 MBA students from a statistics class, of which 5 were from China and 5 were from Taiwan. The

5

updated survey was then pilot-tested with the 10 students. Pilot respondents provided written comments regarding the survey, which resulted in further minor refinement of the survey. The survey was administered in native languages and translated to English and back to native languages to ensure accuracy in translation. A total of 395 people from China responded to the survey, of these, 4 were non-online shoppers; 7 were either non-Chinese and/or did not live in China. Thus, only 384 Chinese online shoppers who lived in China were included in this analysis. For Taiwan, 147 responses were collected, of which 2 responses were excluded due to lack of online shopping experience. Our final sample for the analysis of online shoppers in Taiwan thus included 145, larger than the minimum requirement of 75 observations that is needed for PLS analysis (Hair, Ringle and Sarstedt, 2013)

The China sample included 63.8 % women with 76.5% being between 22 and 45 years old, 69.5% employed. Our sample profile from Taiwan included 66.9 % women, with 82.7% being between 22 and 45 years old, 59.3% being employed (as shown in Table 1). Individuals of all educational backgrounds and degrees were represented in the sample, including high school or lower (5.5% in China and 11.7% in Taiwan), associate degree (15.1% in China and 62.8% in Taiwan), bachelor's degree (64.8% in China and 12.4% in Taiwan), master's and professional degrees (12.5% in China and 11.0% in Taiwan), and doctoral degree (1.3% in China and 0.7% in Taiwan). The majority of respondents (73.7%) in China shopped online "often" or "very often", while only 38.0% of them in Taiwan did so. The number of websites visited by respondents was mainly three or fewer (77.3% in China and 75.5% in Taiwan), including Taobao, Jingdu, Amazon, Dangdang, and others.

Put Table 1 Here

Control variables

This study examined the relationship of customer satisfaction with post-purchase shipping, tracking, and returns in an online shopping environment by controlling the impacts of other possible factors. Studies show that cultural/social, economic, and demographic factors affect consumer behavior in e-commerce (Chauhan and Rambabu, 2017). First of all, the study considered two countries, China and Taiwan, which have close cultural/social similarities and similar level of economic development. It also included control variables to account for the demographic differences that may influence the online shopping experience. Gender differences in perception of web-based shopping have been observed in the literature (Van Slyke, Comunale and Belanger, 2002; Garbarino and Strahilevitz, 2004), which are critical to control as they may

have an impact on customers' satisfaction with different aspects of the shopping process. Similarly, age may have an impact on the use of online shopping and the related behavioral differences (Sorce, Perotti and Widrick, 2005), and thus has been controlled for in this study. Also, controlling for income is important as it impacts issues such as frequency of online shopping, total amount spent, and product/brand needs (Levin, Levin and Weller, 2005), which then may have an impact on online shopping satisfaction. Lastly, the frequency of online shopping is important to control for because such frequency may be a factor related to customer satisfaction and frequent shoppers may have different perception of online shopping (Li, Kuo and Rusell, 1999).

Constructs and research instrument

The variables used in the study were operationalized using multi-item reflective measures. Survey items for the construct variables were adopted from existing measures of various sources. Some items were slightly adapted to reflect the online shopping context in China and Taiwan. Table 2 provides listing for the survey items as well as their respective constructs and main relevant references. A 5-point Likert scale was used for each survey item (1 "Strongly disagree" and 5 for "Strongly agree"). The survey instrument and the relationship among the constructs were then pilot tested using 33 samples from respondents in Taiwan and 40 samples from respondents in China. The survey was further refined based on the feedback received and the pilot results analyzed to ensure content and face validity (Nunnally and Bernstein, 1978)

Put Table 2 Here

Results

Measurement model

To check the reflective measurement validity, the authors analyzed the internal consistency, convergent validity and discriminant validity. The descriptive statistics and correlations among the reflective constructs are presented in Table 3. Convergent validity, discriminant validity and internal consistency of all the reflective measures were examined. This instrument of this study was found to have a good internal consistency (Cronbach's alpha for all constructs exceeded 0.7 and the composite reliability of all constructs exceeded 0.7). In addition, average variance extracted (AVE) of the measures exceeded the recommended minimum of 0.5 (Gefen and

Straub, 2005) and the square roots of the AVEs were higher than the cross-construct correlations, which indicated acceptable convergent and discriminant validity.

By examining the values of outer model loadings, the authors confirmed convergent validity of the reflective measures. The statistical significance of loadings was tested with a bootstrapping sample of 5000. The factor loadings of each reflective item on its latent construct and significant levels are presented in Table 4. For Taiwan, all loadings were satisfactory either reaching or exceeding the recommended level of 0.7. For China, all loadings are satisfactory, with the exception to a few items of the loadings on shipping. We decided to keep these indicators for the shipping construct, because the indicators (SP4-Free, SP7-Reroute) had acceptable (0.69 and 0.64, respectively) loadings and their t-values were significant.

Put Table 2 Here

Put Table 3 Here

Put Table 4 Here

Structural model

Several considerations motived the use of Partial Least Squares (PLS) for the data analysis. This research is intended to explain the variance of the endogenous constructs and the predictive causal analysis (Chin and Newsted, 1999). The exploratory nature of our research and lack of existing theory in this area also calls for the use of PLS (Geffen et al., 2000). The results of the path analysis for the structural model are presented in Figure 2. For the Taiwan sample, all path coefficients were statistically significant and in the expected direction as hypothesized, except customer service (H1). For the China sample, all paths coefficients were statistically significant and in the expected direction as hypothesized, with the exception of return service (H4). For the control variables, none were found to have a significant relationship with customer satisfaction in China, while all except gender, including age, income, and relative frequency of shopping, are related to customer satisfaction in Taiwan.

Put Figure 2 Here

8

In order to assess the structural model, a bootstrapping resampling method using 5000 samples was used with mean replacement; each sample consisted of the same number of cases as original sample set (i.e., n=145 for Taiwan, 384 for China) (Hair et al., 2013; Chapman and Kihn, 2009). We then examined the path coefficient of each hypothesized relationship and its statistical significance to determine the support for the hypothesis. The overall significance of the relationships between constructs and the explained variance of the dependent variables were used to estimate the fit of the PLS model (Hair et al., 2012). The results showed that the model accounted for 0.38 of variance in customer satisfaction and 0.32 of variance in future purchase intention for Chinese online shoppers in China; it accounted for 0.50 of variance in customer satisfaction and 0.59 of variance in future purchase intention for online shoppers in Taiwan. Additionally, with exception to return service relationship with customer satisfaction for China and customer service relationship with customer satisfaction in Taiwan, all paths are statistically significant at the level of 0.05 and are in the expected direction. Therefore, the research model has a good statistical support and post-purchase shipping activities can be considered to have good predictive power.

The analysis suggests that customer satisfaction of online shoppers can be partially predicted by post-purchase activities such as shipping service (H2: B=.16 for China and B=.14 for Taiwan, p <.05) and tracking service (H3: B=.12 for China, p <.05; B=.22 for Taiwan, p <0.01). It can also be partially predicted by customer services in China (H1: B=.32, p <.001), but not in Taiwan (H1: B=.09, p >.05). On the contrary, it is can partially predicted by return service in Taiwan (H4: B=.32, p <.001), but not in China (H4: B=.10, p > .05). The direct path between customer satisfaction and future shopping behavior is strong and significant as shown in Figure 2 for both online shoppers from both China (H5: B=0.56, p < .001) and Taiwan (H5: B=.77, p < .001). In addition, two controlled demographic variables, both age (B=-.11, p < .001) and (B=-0.12, p <0.01) income are found to negatively impact customer satisfaction of online shoppers from Taiwan, but not that of those from China. It means that the higher the age and income are the people in Taiwan, the lower are the customer satisfaction. As expected, higher frequency of shopping is also strongly related to higher customer satisfaction (B= 0.25, P<0.001). Gender does not have significant relationship with customer satisfaction for online shoppers either in China or in Taiwan.

Model comparison of China with Taiwan

In order to test the moderating effect we compared the above described separate models for online shoppers in China and Taiwan. Possible differences between the model results were

9

investigated. We analyzed the differences in path coefficients with a mean comparison method developed by means of a modified independent samples t Qtest, as described by Sarstedt, Henseler and Ringle (2011). Specifically, path coefficients' standard errors are obtained from independent bootstrap analyses of the two models and are used as input variables for the parametric tQtest. The original sample path coefficients and sample sizes are also used for the test (Sarstedt, Henseler and Ringle, 2011). Details of the input data as well as the results of these tQ tests are presented in Table 5.

Put Table 5 Here

The comparison results of the antecedents and outcomes for customer satisfaction of online shoppers show that three major differences exist between online shoppers in China and in Taiwan. First, the role of customer service on customer satisfaction is different. We found that the direct path coefficients for customer service and customer satisfaction (p<.05) differs significantly between the two models for shoppers in China and in Taiwan. Customer service's influence on customer satisfaction is considerably stronger for shoppers in China (B=.32, p<.001) than for those in Taiwan (B=0.09, p >.05). Second, the direct path coefficients for return service and customer satisfaction in the two models are also significantly different (p<.05). Return service is found to be the most important of all the post-purchasing logistic-related activities for online shoppers in Taiwan (B=.32, p<.001), while it has no impact on customer satisfaction in China (B=0.10, p >.05). Third, the role of customer satisfaction in influencing future purchase intentions is found to be significantly different between online shoppers in China and their counterparts in Taiwan, while both have strong positive impact on future online shopping. The relationship is much stronger (p<.001) in Taiwan (B = .77, p <.001) than in China (B = .53, p <.001). Therefore, H6 is partially confirmed, with some differences between China and Taiwan.

Discussions and conclusions

Discussions of the findings

The use of e-commerce and online shopping has accelerated in recent years due to the increased access and utilization of new connected mobile and social applications. Research shows that improved customer service plays an important role in explaining such an increase (Jain et al., 2017). The sample in China seems to confirm that customer service in online shopping increases

10

customer satisfaction, which in turn leads to increased future online shopping intention. However, this study also finds that customer service is not associated with customer satisfaction for online shoppers in Taiwan. This interesting finding is in accord with what Oh, Yoon and Park, (2012) find in their study about e-shopping malls that communicationQrelated customer service attributes of eQshopping malls did not have significant association with customer satisfaction.

Previous studies have found that accurate delivery increases e-shopping satisfaction (Oh, Yoon and Park, 2012) and concerns about delivery or non-delivery is part of the reasons that many people hesitate to shop online (Gurjeet and Khanam, 2015). As for post-purchase logistic activities, the results show that both shipping and tracking services for China and Taiwan are positively associated with customer satisfaction with online shopping, which in turn has an impact on customer decision to purchase more products online. The analysis results indicate that the role of shipping and tracking related logistic services is critical in determining future online shopping decisions, in terms of customer satisfaction and for future customer retention and referral.

For return-related logistics, the results show that such service is significantly related to customer satisfaction for online shoppers in Taiwan, which is in turn highly associated with their future purchase intention. However, the results do not suggest return service is related to customer satisfaction for online shoppers in China. Interestingly, post-purchase service activities impact satisfaction differently across countries, as this study further reveals. First, customer service plays the most important role in determining customer satisfaction in China, while that role is not as important for online shoppers in Taiwan. The difference is opposite for return service, which is important to customers in Taiwan, but not in China. Why did the relationships in the model not hold across the two regions despite the fact that the respondents in China and Taiwan have similar cultural background? The authors interviewed some online shoppers in China and Taiwan to better understand the results. The interviews revealed that the difference lies in the return policy of e-commerce in China and in Taiwan. While return is often guaranteed in Taiwan, it is very rigid in China, where most of online sellers only permit exchange. The alternative exchange policy seems to explain why customer service in China plays a significant role in online shoppers' satisfaction. In addition, the relationship between customer satisfaction and future purchase intention is significantly stronger in Taiwan than in China, which further demonstrates that the importance of shipping-related services for e-commerce expansion now and in the future. Nevertheless, such differences in the relationships in online shopping may be common, as what Norizan and Abdullah (2010) have found in Malaysian and Qatari's perceptions of service quality dimensions on customer satisfaction, trust, and loyalty in an eQ commerce setting.

11

Conclusions

In sum, this study examined the impact of post-purchasing activities on online shopping satisfaction and future purchase intentions in China and Taiwan. The findings of this study suggest that customers' post-purchase activities related to shipping and tracking play a significant role in online shopping for both Chinses and Taiwanese online shoppers. The results also show that customer service is the most significant factor among the examined antecedents for online shoppers in China. Return service is important for shoppers in Taiwan whereas there is limited return policy in China. In predicting customer future purchase intention, customer satisfaction played a stronger positive role for online shoppers in Taiwan as compared to their counterparts in China. Such differences in determinants of customer satisfaction may due to the market contexts in different parts of the world. Future studies may examine on the role of post-purchasing activities in other emerging economies.

Implications, limitations, and directions for future research

Research implications

First, this study extends the concept of customer satisfaction beyond purchase-related activities, provides research model that defines the determinants of e-commerce satisfaction including post-purchasing logistic activities. Much of literature has focused on pre- or on-purchase related activities on immediate customer satisfaction (Chen and Chang, 2003; Chiang and Dholakia, 2003; Park and Kim, 2003; Spagnoletti, 2014). Our study has extended post-purchase related activities which further lead into future purchase intention. Thus, our study enriches the concept of customer satisfaction.

Also importantly, the empirical analysis explores an important but less-well understood practice in the shipping industry. Marketing literature focuses on the front- and back-end role of promotion, advertising, sales, retail infrastructure, and distribution channel, customer service on customer satisfaction (Chen and Chang, 2003; Chiang and Dholakia, 2003; Park and Kim, 2003; Spagnoletti, 2014). Our research expands the current literature on e-commerce customer satisfaction and includes the impact of post-purchasing logistic activities (e.g., shipping, tracking, return) in the context of online shopping. In view of increasing volume of on-line sales (e.g., Amazon.com), our findings confirm that post-purchase logistic services such as shipping, tracking, and return are useful in predicting customer satisfaction for online shoppers. Their importance may be as strong as customer service, if not stronger.

12

Above all, this study also notes the significant differences between China and Taiwan. As Norizan and Abdullah (2010) have suggested, online companies should tailor their marketing strategies to fit each marketing environment and consider cultural adaptability in the specific regions their individual companies are in. The data analysis showed that the role of post-purchasing logistic activities in online shopping model has reasonable explanatory power ($R^2 =$ 38% of customer satisfaction for China sample and $R^2 =$ 50% for Taiwan sample; $R^2 =$ 32% of future purchase-intention for China data and $R^2 =$ 59% for Taiwan sample), with most of the post-purchase logistic activities paths supported, with the exception of return service for the China sample that is due to lack of return policies in China. Therefore, the resulting model can provide additional information that is useful in understanding satisfaction and purchase intentions for online shoppers.

Managerial implications

Based on the empirically tested results of this study, management may consider post-purchase logistic activities for competitive advantage. The findings of this study have a number of practical implications for e-commerce post activities setup. This study finds that post-purchase logistic activities have a significantly positive influence on customer satisfaction of online shoppers, which in turn have an impact on their repeated online shopping and recommending their shopping site to friends or relatives.

The study can provide directions for managers regarding building customer satisfaction for continuous online shopping. More positive feelings about logistic services can lead to higher likelihood of customer satisfaction and continuance of online shopping. Thus, e-commerce companies should manage their post-purchasing logistic services. They may try to understand their customer opinions about their post-purchase logistic services first and then integrate targeted metrics throughout the shipping, return, and tracking processes to ensure customer's satisfaction.

The findings also suggest contextual accommodation through logistic configurations is necessary for managers. Different online companies should manage their post-purchase logistic services in accord with their different local situations of the regions they serve. For Taiwanese samples, all three post-purchasing logistic activities, e.g. shipping, tracking, and return services, had a significantly positive impact on customer satisfaction, while return service was the most important factor. On the other hand, in China, customer service was the strongest predictors of customer satisfaction with service quality of online shoppers while return service did not have significant impact on it. Since China's market scale with geographical boundaries and the growth

13

potential is much bigger than in Taiwan, it is increasingly crucial for firms to improve post-purchase shipping and customer service experiences.

Limitations and directions for future research

It is important to mention the limitations of this research. The first limitation is associated with the sample of this study. It is cross-sectional survey of a convenience sample, despite the fact that the authors tried to maximize the diversity and obtain respondents from different areas in China and Taiwan. The second limitation is related to the region comparison of China with Taiwan. China is much bigger than Taiwan in terms of geographical dispersion and online activities. Although both are of Chinese ethnicity and have common cultural origins, the two regions are very different in market, demographic and behavioral characteristics. However, our study does not examine these diverse contextual complexities. A last limitation is related to the scope of analysis in this study. As controlled variables, the authors only briefly analyzed a few demographic and social factors. Due to emphasis of this study, this study purposefully left out many other factors, such as education, race/ethnicity, employment sectors, marriage status etc.

Future research may overcome the limitations of this research through better research design and different analysis perspectives. For example, a more systematic random sampling in diverse groups would better examine the role of post-purchase logistic activities in an online shopping model. Future research many also use group analysis to investigate how people are different in different demographic backgrounds.

References

Cao, Y., Ajjan, H. and Hong, P. (2013), "Using social media applications for educational outcomes in college teaching: A structural equation analysis", *British Journal of Educational Technology*, 44(4), pp. 581–593. doi: 10.1111/bjet.12066.

Chauhan, V. and Rambabu, A. (2017), "An exploratory study on consumer attitude towards buying on shopping", *International Journal & Mangazine of Engineering, Technology, Management and Research*, 4(3), pp.408–413.

Chen, S. and Chang, T. (2003), "A descriptive model of online shopping process: some empirical results", *International Journal of Service Industry Management*, 14(5), pp. 556–569. doi: 10.1108/09564230310500228.

Chiang, K.-P. and Dholakia, R. R. (2003), "Factors driving consumer intention to shop online: An empirical investigation", *Journal of Consumer Psychology*, 13(1–2), pp. 177–183. doi: 10.1207/S15327663JCP13-1&2_16.

14

comScore (2014), *Study: Consumers Demand More Flexibility When Shopping Online*, *comScore, Inc*. Available at: http://www.comscore.com/Insights/Press-Releases/2014/6/Study-Consumers-Demand-More-Flexibility-When-Shopping-Online (Accessed: 13 October 2014).

eMarketer (2016), *Worldwide Retail Ecommerce Sales Will Reach $1.915 Trillion This Year - eMarketer*. Available at: https://www.emarketer.com/Article/Worldwide-Retail-Ecommerce-Sales-Will-Reach-1915-Trillion-This-Year/1014369 (Accessed: 14 April 2017).

Garbarino, E. and Strahilevitz, M. (2004), "Gender differences in the perceived risk of buying online and the effects of receiving a site recommendation", *Journal of Business Research*, 57(7), pp. 768–775.

Gefen, D. & Straub, D. W. (2005), "A practical guide to factorial validity using PLS-graph: Tutorial and annotated example", *Communications of the AIS,* 16(5), pp. 91-109.

Gefen, D., Straub, D.W., and Boudreau, M.-C. (2000), "Structural equation modeling and regression: Guidelines for research practice", *Communications of the Association for Information Systems,* 4(7), pp. 2-77.

Gensler, S., Verhoef, P. C. and Böhm, M. (2012), "Understanding consumers' multichannel choices across the different stages of the buying process", *Marketing Letters*, 23(4), pp. 987–1003.

Gurjeet, K. and Khanam, Q. T. (2015), "Factors obstructing intentions to trust and purchase products online", *Asia Pacific Journal of Marketing and Logistics*, 27(5), pp. 758–783. doi: 10.1108/APJML-10-2014-0146.

Hair, J. F., Ringle, C. M. and Sarstedt, M. (2013), "Editorial-partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance". Available at: https://papers.ssrn.com/soL3/papers.cfm?abstract_id=2233795 (Accessed: 5 June 2017).

Ho, C.-F. and Wu, W.-H. (1999), "Antecedents of customer satisfaction on the Internet: an empirical study of online shopping", Paper presented in *Systems Sciences, 1999. HICSS-32. Proceedings of the 32nd Annual Hawaii International Conference on*. IEEE, p. 9–pp. Available at: http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6474470 (Accessed: 13 October 2014).

Hsu, S.-H. (2008), "Developing an index for online customer satisfaction: Adaptation of American Customer Satisfaction Index", *Expert Systems with Applications*, 34(4), pp. 3033–3042. doi: 10.1016/j.eswa.2007.06.036.

Jain, N. K. *et al.* (2017), "E-fulfillment dimensions and its influence on customers in e-tailing: a critical review", *Asia Pacific Journal of Marketing and Logistics*, 29(2), pp. 347–369. doi:

15

10.1108/APJML-11-2015-0167.

Kalakota, R. and Whinston, A. (1997), *Electronic commerce: a manager's guide*. Addison-Wesley Professional. Available at: http://books.google.com/books?hl=en&lr=&id=7UNqSnb52H4C&oi=fnd&pg=PA1&dq=Kalakota+and+Whinston+(1997)&ots=LSC-D5O96p&sig=x-F2b4pIUdNz1zmVhfEStN_Jhto (Accessed: 12 October 2014).

Lee, G.-G. and Lin, H.-F. (2005), "Customer perceptions of e-service quality in online shopping", *International Journal of Retail & Distribution Management*, 33(2), pp. 161–176.

Lee, H. L. and Whang, S. (2001), "Winning the Last Mile of E-Commerce", *MIT Sloan Management Review*. Available at: http://sloanreview.mit.edu/article/winning-the-last-mile-of-ecommerce/ (Accessed: 12 October 2014).

Levin, A. M., Levin, I. P. and Weller, J. A. (2005), "A multi-attribute analysis of preferences for online and offline shopping: differences across products, consumers, and shopping stages", *Journal of Electronic Commerce Research*, 6(4), pp. 281–290.

Li, H., Kuo, C. and Rusell, M. G. (1999), "The impact of perceived channel utilities, shopping orientations, and demographics on the consumer's online buying behavior", *Journal of Computer-Mediated Communication*, 5(2), pp. 0–0. doi: 10.1111/j.1083-6101.1999.tb00336.x.

Liu, X. *et al.* (2008), "An empirical study of online shopping customer satisfaction in China: a holistic perspective", *International Journal of Retail & Distribution Management*, 36(11), pp. 919–940. doi: 10.1108/09590550810911683.

McKinney, V., Yoon, K. and Zahedi, F. "Mariam" (2002), "The Measurement of Web-Customer Satisfaction: An Expectation and Disconfirmation Approach", *Information Systems Research*, 13(3), pp. 296–315. doi: 10.1287/isre.13.3.296.76.

Moth, D. (2012), *Free shipping and delivery timing are key for customer satisfaction*, *Econsultancy*. Available at: http://econsultancy.com/blog/10052-free-shipping-and-delivery-timing-are-key-for-customer-satisfaction?utm_campaign=bloglikes&utm_medium=socialnetwork&utm_source=facebook (Accessed: 13 October 2014).

Norizan, K. and Abdullah, N. A. (2010), "The effect of perceived service quality dimensions on customer satisfaction, trust, and loyalty in e-commerce settings: A cross cultural analysis", *Asia Pacific Journal of Marketing and Logistics*, 22(3), pp. 351–371. doi: 10.1108/13555851011062269.

Nunnally, J. C. and Bernstein, I. H. (1978), *Psychometric theory*. New York: McGraw-Hill.

Oh, J.-C., Yoon, S.-J. and Park, B. (2012), "A structural approach to examine the quality attributes of e-shopping malls using the Kano model", *Asia Pacific Journal of Marketing and Logistics; Patrington*, 24(2), pp. 305–327. doi: http://0-dx.doi.org.leopac.ulv.edu/10.1108/13555851211218075.

Park, C. and Kim, Y. (2003), "Identifying key factors affecting consumer purchase behavior in an online shopping context", *International Journal of Retail & Distribution Management*, 31(1), pp. 16–29. doi: 10.1108/09590550310457818.

Reibstein, D. J. (2002), "What attracts customers to online stores, and what keeps them coming back?", *Journal of the academy of Marketing Science*, 30(4), pp. 465–473.

Santos, J. and Boote, J. (2003), "A theoretical exploration and model of consumer expectations, post-purchase affective states and affective behaviour", *Journal of Consumer Behaviour*, 3(2), pp. 142–156.

Sarstedt, M., Henseler, J. and Ringle, C. M. (2011), "Multigroup analysis in partial least squares (PLS) path modeling: Alternative methods and empirical results", *Advances in International Marketing*, 22(1), pp. 195–218.

Sorce, P., Perotti, V. and Widrick, S. (2005), "Attitude and age differences in online buying", *International Journal of Retail & Distribution Management*, 33(2), pp. 122–132.

Spagnoletti, A. (2014), "Shipping and delivery: what customers expect from online retailers", 13 May. Available at: http://ventureburn.com/2014/05/shipping-and-delivery-what-customers-expect-from-online-retailers/ (Accessed: 13 October 2014).

Stevens, L. (2014), "Online Shopping's Hot Product: Free Shipping", 10 June. Available at: http://blogs.wsj.com/corporate-intelligence/2014/06/10/online-shoppings-hottest-product-free-shipping/ (Accessed: 12 October 2014).

Szymanski, D. M. and Hise, R. T. (2000), "E-satisfaction: an initial examination", *Journal of Retailing*, 76(3), pp. 309–322. doi: 10.1016/S0022-4359(00)00035-X.

Tam, J. L. M. (2011), "The moderating effects of purchase importance in customer satisfaction process: An empirical investigation", *Journal of Consumer Behaviour*, 10(4), pp. 205–215.

Tandon, U., Kiran, R. and Sah, A. N. (2017), "Understanding barriers and drivers to online shopping: an emerging economy case", *International Journal of Electronic Business*, 13(2–3), pp. 216–243. doi: 10.1504/IJEB.2017.083326.

Tuttle, B. (2011), "Holiday spending: Just how important is free shipping to online shoppers", *Time*, 5 December. Available at: http://business.time.com/2011/12/05/holiday-spending-just-how-important-is-free-shipping-to-online-shoppers/ (Accessed: 12 October 2014).

Van Slyke, C., Comunale, C. L. and Belanger, F. (2002), "Gender differences in perceptions of web-based shopping", *Communications of the ACM*, 45(8), pp. 82–86.

Vegiayan, K. D., Ming, C. W. and Harun, M. L. O. (2013), "Online Shopping and Customer Satisfaction in Malaysia", *International Journal of Marketing Practices*, 1(1), pp. 43–51.

Yao, Y. and Zhang, J. (2012), "Online retailers, shipping fees, and the bottom line", *strategy+business*, May. Available at: http://www.strategy-business.com/article/re00204?gko=ea1cf (Accessed: 12 October 2014).

Zeithaml, V. A., Parasuraman, A. and Malhotra, A. (2002), "Service quality delivery through web sites: a critical review of extant knowledge", *Journal of the academy of marketing science*, 30(4), pp. 362–375.

Zoltners, A., Sinha, P. and Lorimer, S. (2004), *Sales Force Design for Strategic Advantage*. Springer.

About the author

Dr. Yingxia Cao is Associated Professor of Decision Science and the former Director of Institutional Research at the University of La Verne.   Dr. Cao finished her post-doctoral AACSB Bridge program at the University of Toledo in 2010. She holds a Ph.D. and MA in Educational Administration & Policy Studies from the State University of New York at Albany. She is also an alumna of Xiamen University (MA, Institute of Higher Education) and Anhui Normal University (BA, Department of Education) in China. She has presented and published numerous articles. She currently conducts research on social media, e-commerce, and online business education.

Haya Ajjan is Associate Professor of Management Information Systems at Elon University. She earned her PhD from the University of North Carolina at Charlotte's Belk College of Business. Her research focuses on better understanding the impact of technology use on individuals, groups, and organizations. In particular, she is interested in understanding the role of emerging technologies such as wikis, blogs, and social networks in management information systems. Her research has appeared in The Internet and Higher Education, Information Resources Management Journal, and multiple regional and national conferences such as International Conference on Information Systems, American Conference on Information Systems, Decision Sciences, and International Council for Small Business.

Paul Hong is Professor of Operations Management at the University of Toledo, USA. He received his Ph.D. in Manufacturing Management and Engineering from the University of

Toledo. He also holds an MBA and an MA in Economics from Bowling Green State University, USA and a BA from Yonsei University in Seoul, Korea. His articles have published in the areas of global supply chain management, innovation strategy, and international comparative studies in journals including *Journal of Operations Management, International Journal of Production Research, International Journal of Operations and Production Management, Journal of Supply Chain Management, International Journal of Production Economics, Corporate Governance: An International Review, Journal of Business Research, Management Decision, European Journal of Innovation Management, Business Horizons and International Journal of Information Management and Benchmarking: An Internal Journal.* His research interests are in operational strategy and global supply chain management.

Figure 1: Post-Purchase Logistic and Customer Satisfaction in Online Shopping Model
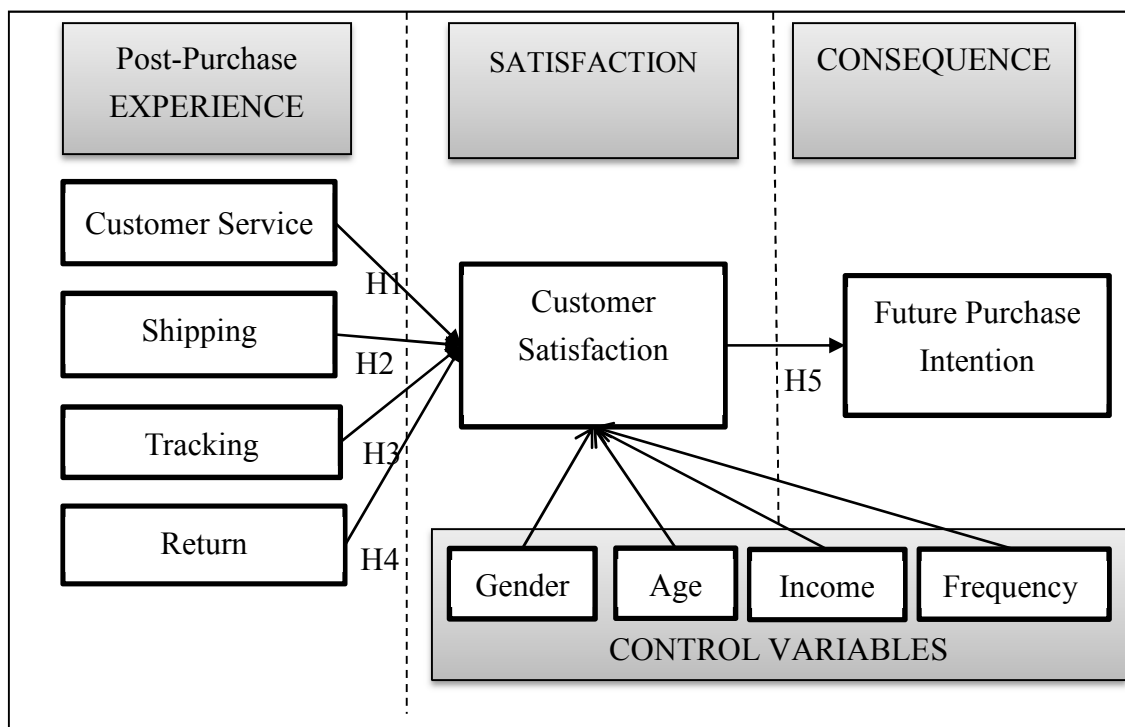

19

Figure 2: The Role of Shipping in Customer Satisfaction Model Results- China (Taiwan)
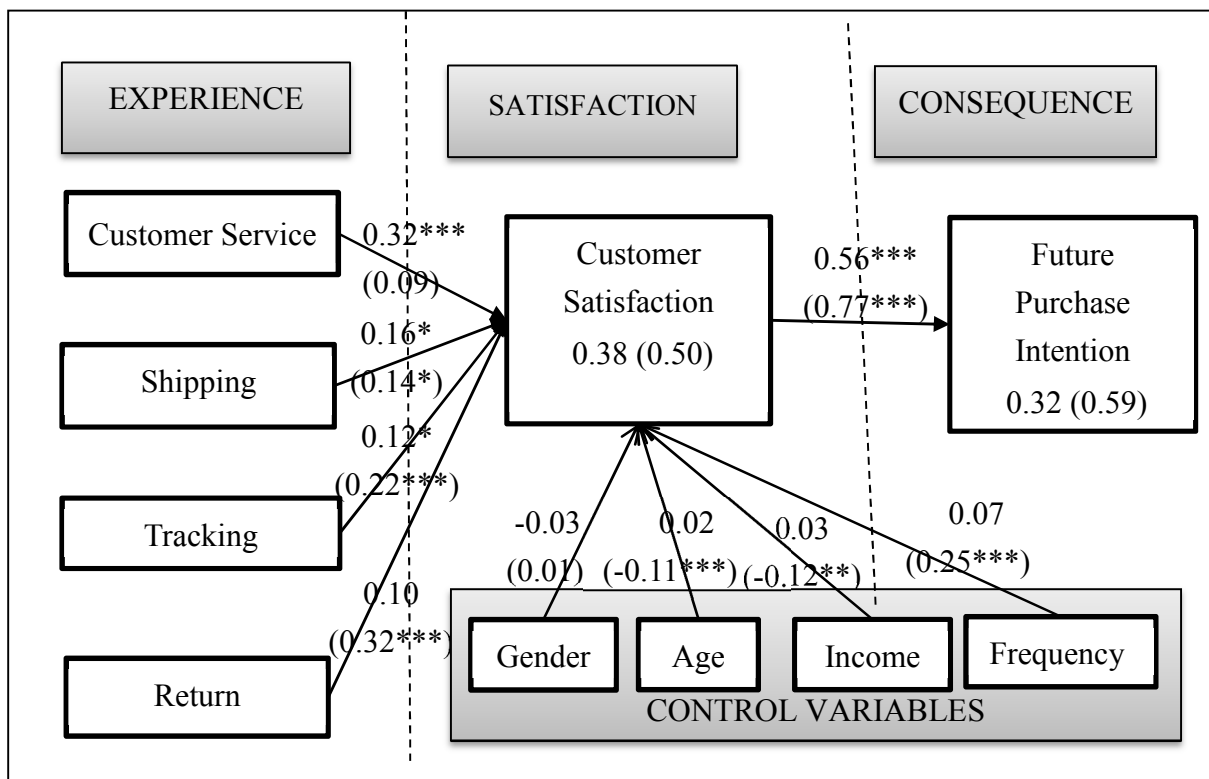
Table 1: Respondent Profile (N=395 for China; N=145 for Taiwan)

Profile		China		Taiwan	
		Frequency	**%**	**Frequency**	**%**
Gender	Male	135	35.16%	47	32.41%
	Female	245	63.80%	97	66.90%
	Unknown Gender	4	1.04%	1	0.69%
Age	Under 18	5	1.30%	2	1.38%
	18-24	152	39.58%	84	57.93%
	25-34	180	46.88%	36	24.83%
	36-44	26	6.77%	10	6.90%
	45 and above	21	5.47%	11	7.59%
	Missing	0	0.00%	2	1.38%
Income	Considerably lower than my peers	17	4.43%	9	6.21%
	Somewhat lower than my peers	64	16.67%	18	12.41%
	Similar to my peers	205	53.39%	75	51.72%
	Somewhat higher than my peers	87	22.66%	41	28.28%
	Considerably higher than my peers	11	2.86%	2	1.38%
Employed Status	Employed	267	69.53%	86	59.31%
	Unemployed	117	30.47%	59	40.69%
Education	High school or under	21	5.47%	17	11.72%
	Associate degree	58	15.10%	91	62.76%
	Bachelor's degree	249	64.84%	18	12.41%
	Master/Professional degree	48	12.50%	16	11.03%
	Doctoral degree	5	1.30%	1	0.69%
	Unknown degrees	3	0.78%	2	1.38%
Online Shopping Frequency	Not often	47	12.24%	43	29.66%
	Slightly often	54	14.06%	47	32.41%
	Often	79	20.57%	13	8.97%
	Very often	204	53.13%	42	28.97%

21

Table 2. Survey Items, Respective Constructs, and Relevant References

Construct Items	References
Customer service (CS): the services that a customer experiences during shopping at a company	(comScore, 2014); (Liu et al., 2008); ((Hsu, 2008).
1. I have received prompt service from the online stores 2. It is easy to find customer service number that I can call to ask questions 3. The online stores show a sincere interest in solving customer problems 4. I feel the online stores are always willing to help customers	
Shipping(SP): the shipping and its related services that a company provides	(comScore, 2014); (Reibstein, 2002); ((Hsu, 2008)
1. The online stores I use deliver the product based on an agreed time. 2. I often receive my product within expected time period. 3. I often find shipping options that best fit me. 4. I often receive free/discounted shipping. 5. The online stores provide tracking ability during shipping. 6. The online stores give me the flexibility to choose delivery date 7. The online stores provide flexibility to reroute packages	
Tracking (TR): The extent to which the customer can track their shipment using multi-channels.	(comScore, 2014); (Liu et al., 2008).
The shipping company of online store provides the following services: 1. Email or text notifications with a tracking number 2. The ability to track my shipment directly on the retailer's website 3. The ability to track my shipment with my mobile device 4. Sent instant email/text delivery alerts	
Return (RT): The extent to which that customer can return their shipment.	(comScore, 2014); ((Hsu, 2008).
1. It is easy to make returns/exchanges 2. The online stores have clear returns policy 3. I often do not have trouble getting the returned item to the shipping company 4. I often do not have to pay a return shipping/restocking fee	
Customer satisfaction(SAT): The extent that the customers are satisfied with online shopping	(comScore, 2014); (Reibstein, 2002)
1. The services provided by the online store and sellers are very good. 2. The online shopping store provides good customers service quality. 3. My online shopping experience is satisfying. 4. I am satisfied with my online shopping experience.	
Future Purchase Intention (FPI): The orientation of online shopping behavior in the future	(comScore, 2014); (Reibstein, 2002)
1. I will continue to do online shopping in the near future. 2. I will recommend my friends/relatives to do online shopping.	

22

Table 3. Factor Analysis Results: China and Taiwan

	Region	CS	SP	TR	RT	SAT	FS	Gender	Age	Income
CS		--								
SP	China	0.61	--							
	Taiwan	0.65	--							
TR	China	0.50	0.67	--						
	Taiwan	0.57	0.71	--						
RT	China	0.61	0.59	0.48	--					
	Taiwan	0.66	0.52	0.47	--					
SAT	China	0.56	0.51	0.45	0.46	--				
	Taiwan	0.53	0.53	0.52	0.59	--				
FS	China	0.31	0.40	0.36	0.21	0.56	--			
	Taiwan	0.40	0.40	0.40	0.48	0.77	--			
Gender	China	-0.07	-0.06	-0.01	0.00	-0.04	0.05	--		
	Taiwan	0.06	-0.09	0.11	0.16	0.08	0.17	--		
Age	China	0.03	0.01	-0.01	0.04	0.03	-0.02	-0.09	--	
	Taiwan	0.03	0.02	-0.02	0.15	0.00	-0.02	0.11	--	
Income	China	0.06	0.13	0.12	0.06	0.09	0.13	0.09	0.05	--
	Taiwan	0.16	0.16	0.20	0.20	0.06	0.02	0.14	0.11	--
Frequency	China	0.18	0.13	0.11	0.08	0.16	0.28	0.21	-0.13	0.16
	Taiwan	0.13	0.12	0.08	0.30	0.34	0.40	0.11	0.31	0.18
Mean	China	3.16	3.51	3.59	3.22	3.50	3.95	--	--	--
	Taiwan	3.24	3.52	3.61	3.10	3.54	3.86	--	--	--
SD	China	0.80	0.67	0.73	0.81	0.67	0.73	--	--	--
	Taiwan	0.82	0.73	0.78	0.93	0.69	0.80	--	--	--
Cronbach's alpha	China	0.88	0.87	0.81	0.87	0.90	0.88	--	--	--
	Taiwan	0.88	0.88	0.87	0.91	0.91	0.88	--	--	--
Composite reliability	China	0.92	0.90	0.88	0.90	0.93	0.94	--	--	--
	Taiwan	0.91	0.91	0.91	0.94	0.94	0.94	--	--	--
AVE	China	0.74	0.56	0.64	0.65	0.76	0.89	--	--	--
	Taiwan	0.73	0.58	0.71	0.74	0.80	0.90	--	--	--
Square Root of AVE	China	0.86	0.75	0.80	0.81	0.87	0.94	--	--	--
	Taiwan	0.85	0.76	0.84	0.86	0.89	0.95	--	--	--

23

Table 4. Outer Model Loadings

| Construct | Item | China | | | Taiwan | | |
		Loading	Standard Error	T Statistics	Loading	Standard Error	T Statistics
Customer Service	CS1_prompt	0.83	0.02	37.06*	0.82	0.03	32.19*
	CS2_number	0.86	0.02	46.84*	0.76	0.04	20.41*
	CS3_solveprob	0.90	0.01	71.67*	0.93	0.01	122.00*
	CS4_willhelp	0.85	0.02	48.11*	0.89	0.01	77.34*
Shipping	SP1_time	0.79	0.03	27.20*	0.75	0.04	19.25*
	SP2_period	0.82	0.02	40.99*	0.73	0.04	17.04*
	SP3_options	0.82	0.02	35.71*	0.75	0.03	24.02*
	SP4_free	0.69	0.04	19.04*	0.78	0.02	37.35*
	SP5_track	0.71	0.03	21.61*	0.80	0.02	40.06*
	SP6_date	0.72	0.04	20.30*	0.76	0.03	25.76*
	SP7_reroute	0.64	0.05	13.56*	0.77	0.03	26.19*
Tracking	TR1_note	0.79	0.03	27.81*	0.84	0.02	35.25*
	TR2_website	0.79	0.03	23.97*	0.85	0.02	47.30*
	TR3_mobile	0.82	0.03	31.83*	0.83	0.03	30.50*
	TR4_alert	0.80	0.04	22.45*	0.85	0.02	46.31*
Return	RT1_easy	0.86	0.02	43.14*	0.81	0.03	26.70*
	RT2_policy	0.78	0.03	30.64*	0.87	0.01	64.86*
	RT3_notrouble	0.83	0.02	34.96*	0.91	0.01	71.42*
	RT4_nofee	0.76	0.03	24.70*	0.85	0.02	40.89*
	RT.5_notlong	0.80	0.02	33.34*	0.88	0.02	54.34*
Satisfaction	SAT1_good	0.86	0.02	47.79*	0.90	0.02	58.21*
	SAT2_cstmserv	0.85	0.02	39.59*	0.86	0.02	45.08*
	SAT3_satisfy	0.90	0.01	71.87*	0.91	0.01	74.82*
	SAT4_satisfied	0.88	0.02	56.17*	0.89	0.01	63.31*
Future Shopping	FS1_continue	0.95	0.01	124.34*	0.94	0.01	126.00*
	FS2_recomm	0.94	0.01	86.89*	0.95	0.01	141.24*

* All t statistics are significant at 0.001 level.

Table 5: Path Coefficient Results of the Model and t-Test of Model Differences
for Online Shoppers in China and Taiwan

	Region	Path Coefficient	Standard Error	T Statistics	p value	|Differ| Mean	t value	p value
Service -> Satisfaction	China	0.32	0.07	4.80	0.000	0.23	2.46	0.014
	Taiwan	0.09	0.07	1.35	0.089			
Ship -> Satisfaction	China	0.16	0.07	2.38	0.009	0.03	0.28	0.783
	Taiwan	0.14	0.07	1.99	0.024			
Track -> Satisfaction	China	0.12	0.06	2.03	0.022	0.10	1.18	0.237
	Taiwan	0.22	0.06	3.82	0.000			
Return -> Satisfaction	China	0.10	0.06	1.70	0.045	0.22	2.42	0.016
	Taiwan	0.32	0.07	4.60	0.000			
Satisfaction -> Future	China	0.56	0.04	13.12	0.000	0.20	4.28	0.000
	Taiwan	0.77	0.02	35.37	0.000			
Gender -> Satisfaction	China	-0.03	0.05	0.56	0.287	0.04	0.61	0.544
	Taiwan	0.01	0.04	0.28	0.391			
Age -> Satisfaction	China	0.02	0.04	0.38	0.350	0.13	2.53	0.012
	Taiwan	-0.11	0.03	4.00	0.000			
Income -> Satisfaction	China	0.02	0.04	0.55	0.293	0.14	2.35	0.019
	Taiwan	-0.12	0.05	2.68	0.004			
Frequency -> Satisfaction	China	0.07	0.04	1.64	0.051	0.19	3.26	0.001
	Taiwan	0.25	0.04	6.36	0.000			

25