

# E-Loyalty: The influence of product quality and delivery services on e-trust and e-satisfaction in China

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## ABSTRACT

This study proposes and tests an integrative model to examine the relations among product quality and delivery services, e-trust, e-satisfaction and e-loyalty in China. Analysis of survey data from 415 customers of e-tailing, Confirmatory Factor Analysis (CFA) has been performed to examine the reliability and validity of the measurement model. Structural Equation Modeling (SEM) technique was used to test the hypotheses of the causal model. Our study reveals that product quality and delivery services (i.e. product variety, quality, availability, reliable delivery, package safety and timely delivery) directly influence e-satisfaction and e-trust. Thus trust has both direct and indirect (through e-satisfaction) impact on e-loyalty. Consequently, both e-trust and e-satisfaction are significant determinants of e-tailing customer's loyalty. Managerial implications, research limitations and future research directions are provided in the following presentations of the findings.

**Keywords:** E-loyalty, E-trust, E-satisfaction, Product quality, Delivery services, China

## 1. Introduction

In recent years, the importance of e-loyalty has been a critical issue in the context of online retailing (Park and Kim, 2003; Yang and Peterson, 2004). E-loyalty is widely refers as customer's favorable attitude and commitment towards e-tailers that results in repeat purchase behavior (Srinivasan et al., 2002). Subsequently, e-loyal customers have increased profitability to the e-tailer based on long term customer commitment and reduced costs of acquiring new customers. E-loyal customers are willing to pay premium prices, which are not the ones seeking the lower prices. Particularly, they also provide rich enough source of profit as referring new customers to e-tailer (Markey and Hopton, 2000). Moreover, loyal customers purchase more than newly acquired customers and can be served with minimum operating costs (Van Riel et al., 2001). Consequently, the fundamental goal of online retailers and service providers is to develop loyal customers in e-tailing. There are two basic and complementary strategies to accomplish the revenue and profit that loyalty yields are to acquire new customers and retain existing ones (Grewal et al., 2004). In fact, the ability of online retailer is to attract and retain customers is quite vital to its success. Therefore, customer loyalty requires that there is a strong desire by the customers for products and that they have several vendors to choose products based on their preferences (Otim and Grover, 2006). Substantially, it is based on the positive experience by the customers on their purchase. There are number of factors contribute to the experience i.e. convenience, product availability, delivery and return policy (Ramanathan, 2011).

Currently, China has been experiencing huge growth in e-commerce. It is projected that e-commerce China worth will be US \$540 billion by 2015 and by 2020 its worth more than e-commerce in the U.S., UK, Japan, France and Germany collectively (Harun Rauf, 2014). Substantially, e-tailer can make differentiation with the help of designing efficient logistics system. Therefore, some e-tailers have setup their own warehousing and logistics system, and to provide assurance of same day delivery and various after sales services to improve user experience. However, it is observed that many consumers have complained about poor delivery services,

long delivery lead time, damage and loss during year 2011-12 (Fung Business Intelligence Center, 2013). In generally about 50% of online buyers are dissatisfied with their online shopping experience because of long delivery times (CNNIC, 2013). Particularly, In China counterfeit good remain a critical issue and the quality of products sold online is a major concern to online consumers (Fung Business Intelligence Center, 2013).

In fact, China's fast growing middle class have become familiarized to making frequent online purchases. Furthermore, as longer standing e-commerce markets, it is also concentrated to developing brand awareness, an increasing proclivity to buy high quality satisfying products. It is intended to showing a commitment to brand loyalty and repeat purchases. For instance, VANCL , a Chinese online clothing and apparel company has reported that 80 percent of its consumers had made repeat transaction in 2012 (Ben Chiang, 2012). In future, China e-commerce is strongly linked to the technology developments and behaviors of the Chinese consumers i.e. the way to search and order products online, preferences for delivery speed and convenience. Particularly, payment systems and physical delivery mechanisms to facilitate the development of e-commerce that were well in other developed markets but were especially lacking in China (KPMG, 2014).

The previous finding highlighted the need for understanding how e-loyalty has been developed. In this regard, it is demonstrated that development of e-loyalty based on both e-satisfaction (Anderson and Srinivasan, 2003) and e-trust (Reichheld and Scheffer, 2000) are explored to play an essential role in this context. It has been discovered that e-satisfaction and e-trust influence e-loyalty both separately i.e. e-satisfaction e-loyalty (Anderson and Srinivasan, 2003), and e-trust-e-loyalty (Sirdeshmukh, 2002) and in a specific sequential order such as e-trust-e-satisfaction- e-loyalty (Gummerus et al., 2004). However, despite the examined importance of e-satisfaction and e-trust on e-loyalty, the study of their determinants has only been partially proven in the e-loyalty development process. This study strengthens the literature by adding different components of e-tailer offline characteristics. These are possible critical antecedents in the model of e-loyalty development and attempt to build a stronger holistic model by comprising product quality and delivery services as offline characteristics of e-tailers.

The objective of this study is to propose and test a model of e-tailers online consumers' development of e-loyalty, incorporating offline e-tailing characteristics i.e. product quality and delivery services, e-satisfaction and e-trust. Particularly, this research focuses on the consumers' attitude and behavior towards e-tailers, not a brand or manufacturer. Thus, within the model we maintain that numerous aspect of e-tail offline characteristics have different impact on developing and enhancing e-satisfaction and e-trust, which in turn, lead to customer's e-loyalty. This paper begins with the proposed model and the hypotheses. We described the research design, methodology, result analysis, managerial and researcher's implications, limitations, and suggestions for future research with conclusion.

## 2. Literature review and research hypotheses

This study draws from previous theories to develop hypotheses with regard to the impact of offline line characteristics of e-tailing i.e. product quality and delivery services on e-satisfaction, e-trust and e-loyalty. We derive a structural equation model (Fig. 1), which demonstrated the hypothesized relationships discussed in the consequent sections.

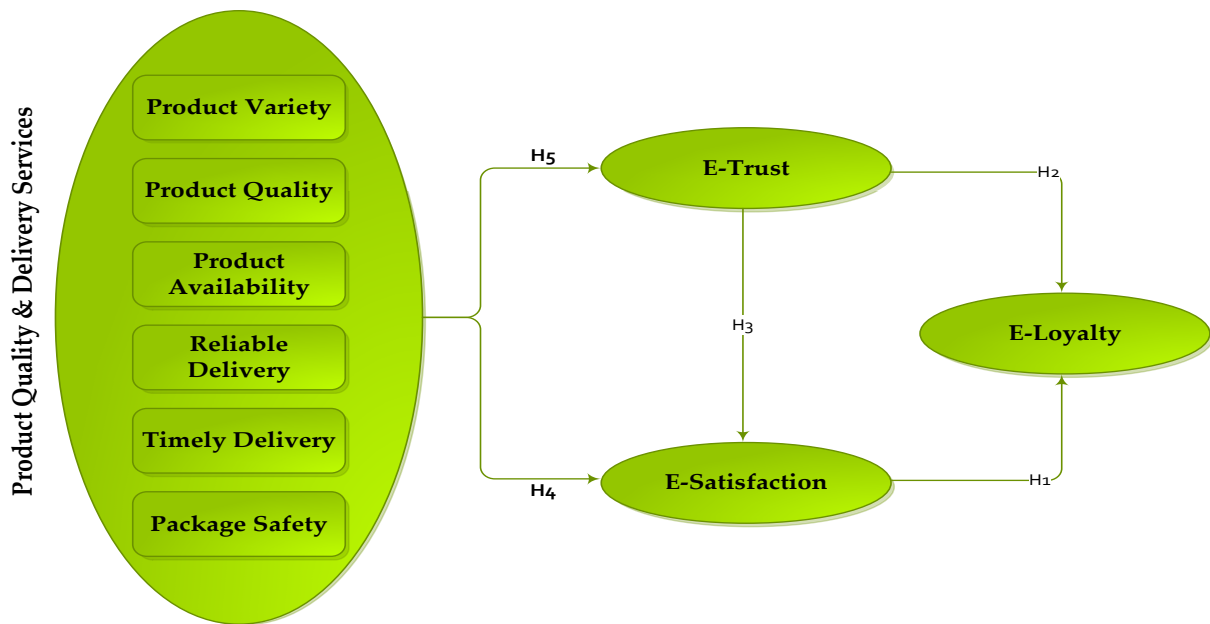


Fig.1 Theoretical Model and Hypotheses

## 2.1 The relationship between e-satisfaction and e-loyalty

Loyalty refers as the repeated purchase behavior presented over a period of time driven by a favorable attitude toward the subject (Keller, 1993). A true loyal customer has strong commitment and attachment towards retailer. It is quite difficult to distracted customer towards slightly more attractive alternatives. Substantially, a true loyalty shows higher purchase intention, willingness to pay more and resistance to switch toward alternative (Shankar et al., 2003). Lim and Razzaque (1997) have classified four main categories of loyalty i.e. brand loyalty, vendor loyalty retailer loyalty and service loyalty (Lim and Razzaque, 1997). In this research, we used retailer loyalty in the context of online shopping.

Satisfaction refers as the perception of pleasurable fulfillment in the customers' transaction experience. In this study, we have used e-satisfaction as a construct which is "based on the sum of satisfaction on each purchase and consumption experience with a good or service over time" (Oliver Richard, 1997). Therefore, satisfied customers tend to have more repurchase intention, often more tendency and eager to recommend products to their acquaintances relative to those customers who are not satisfied (Verhoef et al., 2002). In addition, dissatisfied customers are intended to search more information about alternatives, there are more chance to switch toward another retailer. Hence, these sorts of customer cannot develop a close relationship with retailers (Anderson and Srinivasan, 2003). It is found that e-satisfaction is the predictor of e-loyalty in some previous studies (Anderson and Srinivasan, 2003; Cai and Xu, 2007). Therefore, we propose subsequent hypothesis.

**H1: E-satisfaction will positively affect e-loyalty**

## 2.2 The relationship between e-trust and e-loyalty

Trust refers as the customer confidence in the quality and reliability of service offered (Garbarino and Johnson, 1999). It has been played a critical role in the context of relationship initiation, formation and maintenance (Sirdeshmukh et al., 2002; Verhoef et al., 2002). Previous studies examined that trust has a significant effect on development of loyalty in both offline (Sirdeshmukh et al., 2002; Singh and Sirdeshmukh, 2000) and online

shopping environment (Pitta et al., 2006). Reichheld and Schefer (2000) found that “to gain the loyalty of customers, you must gain their trust. Therefore, we propose subsequent hypothesis.

**H2: E-trust will positively affect e-loyalty**

## 2.3 The relationship between e-trust and e-satisfaction

Researchers have been considered trust as critical determinants of developing relationship between buyers and sellers (Sirdeshmukh et al., 2002; Verhoef et al., 2002). It is also investigated that trust has direct influence on the post purchase satisfaction. Specifically in the context of online shopping trust might be the fundamental element for initiating the transaction. Thus customer perceives a higher level of risk in e-tailing than in traditional retailing in the shape of delivery, information disclosure and payment. In this regard online customer prefers to make transaction with those e-tailers they can trust more (Singh and Sirdeshmukh, 2000). It is found that trust is the predictor of e-satisfaction in e-commerce (Harris and Goode, 2004; Jin and Park, 2006). Therefore, we propose subsequent hypothesis.

**H3: E-trust will positively affect e-satisfaction**

## 2.4 The relationship between product quality/delivery services, e-trust and e-satisfaction

Buzzell and Gale (1987) defined product quality as customer’s perceptions of all non-price attributes of an organization’s goods and services. This definition comprises both intrinsic characteristics and associated all services (Cowherd and Levine, 1992). The various kinds of products have been traded by online retailers. Thus online product quality concept is similar with the conventional traded products. Particularly in online shopping there are two most influential factors have been considered quite critical and important while making decisions such as product quality and product variety (Jarvenpaa and Todd, 1996). As customer’s expectation has been met online in this manner they tend to continue to visit that specific e-tailor. Keeney (1999) argues that online firm’s fundamental objective is to maximize product quality for online buyers. Similarly it is argues that cost minimization and quality maximization are the critical success factor of e-commerce. In fact customer’s become satisfied when product performance meets customers’ expectations. Patterson argues that product performance (quality) is the most fundamental determinant of customer’s satisfaction (Patterson, 1993). Lin et al. (2011) found that product quality has positively improved customer’s satisfaction in internet shopping. Moreover, e-tailor has been offering consistent quality products along with maximum product depth and length and ensures round the clock assurance of product availability to their customers. Therefore, these sorts of e-tailor product related characteristics can develop, sustain and improve customers trust in internet shopping. Houston and Taylor (1999) found that product quality is the fundamental determinant of customer’s willingness to purchase from the website and reflects the Web trust seal. Kaplan and Nieschwietz (2003) indicated that perceived product quality is the important measure of the outcome variable impacted by the formation of trust.

In the scenario of online shopping environment reliable, safe and timely delivery is fundamental and integral objective of online buyers. Customers tend to buy products at home and they required safe, reliable and quick delivery of desired product at their destinations. In online environment timely and reliable delivery play critical role to meeting customer’s expectations and make them satisfied. Customers can switch very easy form one web to another web page just a single click away or even customer moved towards conventional click and mortar retailers due to the late, unsafe and undesirable products delivery.

Online customers pay much more concentration and considered product delivery as an important factor as they have paid for it. However, reliable delivery is “means objective” while timely delivery is “fundamental objective” of online retailers in the e-commerce (Keeney, 1999). Particularly it has been considered three aspects critical for delivery performance of the firms and it encompasses that suppliers of product should be able to meet delivery schedule (Timely delivery), adjust and accommodate certain changes in delivery schedule

(flexibility) and consistently deliver right products (accurate) in the hand of customers (Cater and Cater, 2009). It is found that delivery performance has positive influence on customer's satisfaction (Chakraborty et al., 2007), and it is the antecedent of satisfaction (Ulaga, 2003). Liu et al. (2008) argues that delayed delivery of product can make customers dissatisfied. Trabold et al. (2006) stated that offline feature of online retailing such as delivery has significant effect on e-satisfaction as well it concentrate on the outcome quality of the service. Wolfenbarger and Gilly (2003) highlighted that delivery services of online retailer is the most critical factor to examine e-satisfaction level compared to other dimensions of the e-tailor quality performance. It is investigated that receiving the accurate product on expected time schedule according to promised conditions of the online retailer has effect on the customer satisfaction (Collier and Bienstock, 2006). Ahn, Ryu, and Han (2005) pointed out that reliable and timely delivery of product in online retailing increase customer's satisfaction and encourage repeat purchases. Wolfenbarger and Gilly (2003) indicated that fulfillment is described as the delivery of right product within expected time frame along with accuracy of product on the basis of that information which has been displaced on the online retailer website. It is examined that in e-trust studies that consumers are more concerned about order fulfillment when establishing trust with an online retailer (Reynolds, 2000). It is matter of competence that online retailer deliver their promised services in a reliable and honest manner (Singh and Sirdeshmukh, 2000). Thus, it is suggested that delivering and fulfilling promises and consumers belief towards products or services information presented would be a prerequisite to generating consumer trust in online shopping (Markey and Hopton, 2000; Urban et al., 2000). Therefore, we propose subsequent hypotheses

**H4: Product quality and delivery services will positively affect e-satisfaction**

**H5: Product quality and delivery services will positively affect e-trust**

### 3. Research Methodology

#### 3.1 Questionnaire design

We investigated the literature to identify valid measures for this study related constructs and adapted existing scales to measure offline characteristics of e-tailing dimensions, i.e. product quality and delivery services (Ahn et al. 2005), e-satisfaction (Fornell et al. 1996; Kim et al. 2009), e-trust (Garbarino and Johnson 1999; Ribbink et al. 2004) and e-loyalty (Srinivasan et al. 2002). Initially, scales from literature were in English, therefore initial questionnaire was developed in English. Later, English version questionnaire were translated into Chinese by two Chinese Master and Ph. D students. Moreover, Chinese version questionnaire were translated back into English, so this version of questionnaire was counter checked against the original English version for discrepancies and their rectification. It is just done to facilitate appropriate measurement development and to ensure meaning consistency, to improve understandability of the survey and proper use of terminology in Chinese. All the indicators in the questionnaire were measured using a 7-Point Likert scale ranging from strongly disagree to strongly agree (1= strongly disagree; 7= strongly agree).

#### 3.2 Sampling and data collection

Fung Business Intelligence Center reported that Chinese online shoppers are young people and over 60% were aged 30 or below in 2012. The trend of middle aged customers has been observed to buy online, especially this group of buyers have more purchasing potential (Fung Business Intelligence Center 2013). Therefore, it suggests that universities students are likely to be the first and more attractive consumers segment to adopt e-commerce due to their high education level and income potential (Lightner et al. 2002). Thus, we used convenience sampling and paper survey method to collect data from different universities locations (libraries, research labs, canteens, mini markets) in mainland China. In our study 480 respondents have completed the survey, after sorting and removing errors 415 valid and usable questionnaires left for data analysis. The response rate was 86 percent. The profile of respondents and their characteristics are stated in Table 1.

**Table 1: Respondent profile (n=415)**

Demographics Variable	Category	Sample	Percentage
<b>Gender</b>	Male	226	54.5
	Female	189	45.5
<b>Age (Years)</b>	Below-20	83	20.0
	20-29	327	78.0
	30-39	5	1.2
<b>Education Level</b>	High School	3	0.7
	Diploma	1	0.2
	Bachelor	244	58.8
	Master	152	36.6
	Ph. D	15	3.6
<b>Profession</b>	Students	415	100
<b>Shopping Experience (Years)</b>	Under 1	52	12.5
	1-4	264	63.6
	Over 4	99	23.9

### 3.3 Construct development

We used Kaiser-Meyer-Olkin (KMO) to measure sampling adequacy and the Bartlett test of sphericity. The output, which showed KMO value of 0.868 with the significance of Bartlett’s test at 0.000 level, indicates the data for exploratory factor analysis (EFA) fitting. We used maximum likelihood analysis for data reduction and promax rotation with Kaiser Normalizations for clarifying the factors. Hence EFA was conducted with specifying four numbers of factors. The cumulative variance explanation reaches 62%. All the items have strong loadings on the construct in the pattern matrix which are >0.30 (Hair et al., 1998). The results of EFA are shown in Table 2.

The internal consistency reliability of all items was examined by Cronbach alpha and item to total correlations. Therefore, the alpha coefficients and item to total correlations for each construct are shown in Table 3. The Cronbach’s alpha of all measurement constructs ranges from 0.89 to 0.85. A Cronbach’s alpha of value 0.7 or higher is commonly considered as a cut off for reliability (Nunnally 1978; Hair et al. 2006). Convergent validity has been examined based on measurement items standardized factor loadings, composite reliability and the variance extracted measures. The results of convergent validity test are also presented in Table 3. Standardized factor loadings of all items in each construct range from i.e. product quality and delivery services (0.88-0.66), e-satisfaction (0.88-0.85), e-trust (0.91-0.62) and e-loyalty (0.83-0.69) that exceed the recommended level of 0.60 (Hair et al. 1998). The composite reliabilities (CR) range from 0.91 (product quality and delivery services) to 0.88 (e-loyalty) which exceed the recommended level of 0.70. The average variance extracted (AVE) measure ranges from 0.75 (e-satisfaction) to 0.56 (e-trust) which is better than recommended value of 0.50 (Hair et al. 1998). The higher value of AVE, CR and factor loadings results, therefore adequately demonstrates the convergent validity of the measurement items.



**Table 2. Results of exploratory factor analysis (EFA)**

Items	Product Quality and Delivery Services	E-Trust	E-Loyalty	E-Satisfaction
PA	0.890			
PQ	0.869			
RD	0.615			
PS	0.589			
PV	0.567			
TD	0.682			
T1		0.796		
T2		0.770		
T3		0.754		
T4		0.677		
T5		0.648		
T6		0.606		
L1			0.843	
L2			0.808	
L3			0.799	
L4			0.780	
L5			0.619	
S1				0.899
S2				0.777
S3				0.769

Extraction Method: Maximum Likelihood. Rotation Method: Promax with Kaiser Normalization. a. Rotation converged in 6 iterations. \*(PA: Product availability, PQ: Product quality, PV: Product variety, RD: Reliable delivery, TD: Timely Devlivery, PS: Pakage safety, T: E-trust, S: E-satisfaction, L: E-loyalty)

**Table 3. Results of internal reliability and convergent validity tests**

Internal Reliability			Convergent Validity		
Construct items	Cronbach $\alpha$	Item Total Correlation	Standardized Factor Loadings	Composite Reliability	Variance Extracted
<i>P.Q &amp; Del. Services</i>	PA	0.89	0.862	0.80	0.62
	PQ		0.427	0.88	
	RD		0.805	0.76	
	PS		0.734	0.78	
	PV		0.732	0.66	
	TD		0.754	0.81	
	<i>E-Trust</i>	T1	0.85	0.636	0.62
T2			0.649	0.63	
T3			0.565	0.65	
T4			0.692	0.82	
T5			0.694	0.91	
T6			0.677	0.83	

<i>E-Loyalty</i>	L1	0.88	0.682	0.69	0.88	0.59
	L2		0.745	0.75		
	L3		0.746	0.82		
	L4		0.779	0.83		
	L5		0.636	0.74		
<i>E-SAT</i>	S1	0.89	0.793	0.88	0.90	0.75
	S2		0.805	0.86		
	S3		0.784	0.85		

#### 4. Analysis and results

We used AMOS-IBM version 21 to analyze the data and demonstrate structural equation modeling (SEM) of this study. It is a powerful multivariate analysis technique used to measure latent variables and investigate causal relationship among proposed model variable. Specifically, SEM allows conducting confirmatory analysis (CFA) for theory development and testing. The overall model fit indices are  $\chi^2 = 276.47$ ,  $df = 148$  ( $p$ -values=0.00),  $GFI = 0.94$ ,  $AGFI = 0.91$ ,  $NFI = 0.95$ ,  $CFI = 0.98$ ,  $RMSEA = 0.046$  indicating that model is acceptable with no substantive differences. Moreover, fit indices of structural model are presented in Table 4. The path between product quality and delivery services and e-satisfaction ( $B = 0.54$ ), product quality and delivery services and e-trust ( $B = 0.76$ ), e-trust and e-satisfaction ( $B = 0.31$ ), e-satisfaction and e-loyalty ( $B = 0.49$ ), e-trust and e-loyalty ( $B = 0.17$ ) are found significant and support H1, H2, H3, H4, and H5. In this way product quality and delivery services has direct significant influence on e-satisfaction and indirect impact via e-trust. This evidence shows that e-tailing should design effective mechanism of information management to improve their product quality, variety, availability by significantly considering e-tailing delivery services in the context of reliability, package safety and timely perspective in order to develop and sustainable relationship with online customers. This study shows that e-satisfaction and e-trust are the direct antecedent of e-loyalty in the context of online shopping. The results are consistent with the previous literature, which prove that higher level of customer's satisfaction (Morgan and Hunt 1994; Zins 2001) and e-trust will lead to greater customer loyalty (Kim et al. 2009). The standardized parameter estimates of hypothesized paths are presented in Table 5.

**Table 4. Fit indices for structural model**

Fit Index	Scores	Recommended cut-off values
Absolute fit Measures		
Minimum fit function chi-square ( $\chi^2$ )	276.47 ( $p = 0.00$ )	The lower, the better
Degree of freedom (d.f)	148	
$(\chi^2)/d.f$	1.868	<5
Goodness-of-fit index (GFI)	0.94	>0.80
Root mean square residual (RMSR)	0.046	<0.05
Incremental fit measures		
Adjusted goodness-of-fit index (AGFI)	0.91	>0.80
Tucker-Lewis index (TLI)	0.97	>0.90
Normal fit index (NFI)	0.95	>0.90
Comparative fit index (CFI)	0.98	>0.90
Parsimonious fit measures		
Parsimonious normed fit index (PNFI)	0.74	The higher, the better
Parsimonious goodness-of-fit index (PGFI)	0.66	The higher, the better



**Table 5. Standardized parameter estimates of hypothesized paths**

Hypotheses	Path	Coefficient (t-value)		Result
<b>The influence of e-tailing offline characteristics on e-satisfaction, e-trust and e-loyalty</b>				
H1	E-satisfaction→ e-loyalty	0.49	(7.26)	Supported
H2	E-trust→ e-loyalty	0.17	(3.2)	Supported
H3	E-trust→ e-satisfaction	0.31	(4.4)	Supported
H4	Product quality & Delivery services→ e-satisfaction	0.54	(14.6)	Supported
H5	Product quality & Delivery services→ e-trust	0.76	(22.8)	Supported

**The e-tailing quality role of offline characteristics as antecedents of e-commerce consumer's loyalty**

<b>Product quality &amp; Delivery services: Hypotheses testing of each individual elements</b>					
1	Product variety→ e-satisfaction	0.35	7.82	***	Supported
2	Product quality → e-satisfaction	0.55	13.64	***	Supported
3	Product availability→ e-satisfaction	0.48	11.37	***	Supported
4	Reliable delivery → e-satisfaction	0.51	12.13	***	Supported
5	Timely delivery → e-satisfaction	0.54	13.17	***	Supported
6	Package safety → e-satisfaction	0.51	12.32	***	Supported
7	Product variety→ e-trust	-0.041	-0.817	0.414	Rejected
8	Product quality → e-trust	0.13	2.59	0.01	Supported
9	Product availability→ e-trust	0.12	2.56	0.01	Supported
10	Reliable delivery → e-trust	0.051	1.04	0.011	Supported
11	Timely delivery → e-trust	0.090	1.84	***	Supported
12	Package safety → e-trust	0.097	1.97	0.049	Supported

Reichheld et al. (2000) examined that e-loyalty brings a high rate of customer retention and reduced cost of customer acquisition which leads to long term profitability to e-tailing. The purpose of this study is to propose and test an integrative model of e-tail offline quality dimensions effects on e-satisfactions, e-trust and its influence on e-loyalty. The results indicate that e-satisfaction and e-trust has a significant and direct relationship on e-loyalty. The results suggest that offline e-tail quality dimensions have different effects on e-satisfaction and e-trust. In particular, product quality and delivery services are found to be the strongest predictor for e-satisfaction and e-trust. Consequently, we investigate of each individual element of product quality and delivery services hypotheses. Thus, we get very little different results of some elements. In online retailing context, consumers prefer that their e-tailer should product quality and certain delivery services according to their promises. Particularly positive evaluation on the retailer's product quality and delivery services increases consumer level of e-satisfaction and e-trust. Moreover, e-trust has contribution to improve online customer's satisfaction. The product quality and delivery services in the context of quality, availability, variety of products, reliable and timely delivery and package safety e-tailers have positive significant effect on e-satisfaction, e-trust that leads to e-loyalty.

**5. Managerial and researchers implications**

This study should help marketing practionners to better understand the inter-relationship among product quality & delivery services, e-trust, e-satisfaction as well as the offline characteristics of e-tailing machanisms to enhancing e-loyalty. First, product quality and delivery services has been characterizes as a product variety, product quality, product availability, reliable delivery, package safety and timely delivery, that affects both e-trust and e-satisfaction. Thus, product quality and delivery services elements are key building blocks to improving e-satisfaction and e-trust which determine the online shopping custoemrs e-loyalty. Second, it investigated that e-satisfaction and e-trust are direct determinents of e-commerce customers loyalty.

Obviously, e-tailers are concerned with these outcomes and especially in this context they need to build and monitor both e-satisfaction and e-trust. In addition, e-commerce customer satisfaction is more significantly associated with e-loyalty as compared to e-trust. Third, in this study casual model, product quality and delivery services is an efficient vehicle to improve customer trust and enhance e-satisfaction and in turn customer e-commerce loyalty. Therefore, our results can help online retailers realize the role of offline features as a product quality and delivery services in building e-satisfaction, e-trust and e-loyalty. Particularly, China is the largest single market in the world. Therefore, knowledge about Chinese consumers is still remains insufficient (Zhao et al., 2006). Substantially, it is vital to building sufficient knowledge base about the Chinese market is necessary frontier for marketing academicians.

## 6. Conclusion, limitations and future research directions

This study examines a model incorporating product quality and delivery services, e-commerce customer's satisfaction and trust and loyalty. Among this, e-tailing in mainland China customer's e-satisfaction and e-trust directly influence e-loyalty. The contribution of this study are that we were able to see and recommend that in terms of the extended e-tailing quality measures by including offline characteristics and how the customers regard the quality measures of online shopping. It is empirically demonstrated that the offline characteristics have significant effect on customer satisfaction and trust. It suggests that online retailing managers and developers should have domain specific and integrative approach to evaluate the e-tailing, and can use selective strategies to enhance customer beliefs, improve customer positive intentions to initiate repeat purchases by considering offline characteristics along with online features of e-tailing. This study has several limitations. First, sample of this study consists of students which might not be a true representative of general population of China in the context of e-tailing. Second, this study does not distinguish various product or brand categories in testing and evaluating the casual model of e-loyalty. Finally, results generalization of this study is limited in the context of online shopping in China, because data or observations were drawn from mainland China. There are chances that online shopping in other countries may not resemble those in China. Therefore, future studies may be conducted to examine the specific product category or brand influence on e-loyalty in e-tailing. It is also suggested to investigate the online and offline antecedents of e-loyalty in the context of diverse countries, cultures under scenario of different circumstances.

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