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Key Success Factors of Online Food Ordering Services: An Empirical Study

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ABSTRACT

This study examines the determinants of the customer ordering experience, which include website trust, customer satisfaction and loyalty. The determinants are represented by website quality and service quality. A survey data of 353 online food ordering customers were used to test the research model using structural equation modelling (SEM). Results reveal that not only is there a significant positive relationship between website quality and website trust but also a significant positive relationship between service quality and customer satisfaction. Furthermore, significant positive relationships are also found not only between website trust and customer satisfaction but also between customer satisfaction and loyalty. Finally, the study also found an unexpected direct link between service quality and loyalty. Overall, the study provides valuable insights for operating online food ordering services successfully.

Key Words: *Website quality, service quality, website trust, customer satisfaction, loyalty.*

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INTRODUCTION

Consumers' response to the Internet has broadened opportunities for many businesses, ranging from small to large corporations. The creation of online banking has further facilitated various online businesses including online food ordering. Online food ordering satisfies the needs of busy individuals living in the city who place their order online and receive delivery within a few minutes. Prior studies on food ordering have investigated the determinants of trust, satisfaction and loyalty mostly in the offline consumer environment. However, researchers have recently discovered that the online environment offers great opportunities for interactive and personalised marketing (Burke, 2002). Unlike the offline environment, the online environment (Wind and Rangaswamy, 2001) offers more opportunities for interactive and personalised marketing. The Internet provides an impulsive shopping channel (Phau and Lo, 2004). Customers can easily search the competitive providers that match their expectation (Singh, 2002), besides receiving input from peers through interactive media such as blogs, Facebook and Twitter) in making purchase decisions (Herring et al., 2005; Bernoff and Li, 2008).

Furthermore, website design has been discovered to be an important factor in the online business environment (Marcus and Gould, 2000) and thus, service providers should adapt their design to suit the local culture concerned (Gommans et al., 2001).

Recently, customer trust has also been examined in the context of online business (McKnight and Chervany, 2002) as its presence helps maintain sustainable relationships with customers (Morgan and Hunt, 1994). Several researchers have studied the area of information quality, privacy/security, and efficient payment system (e.g., Liu et al., 2008) and focused on the effects of website design on trust, satisfaction and loyalty (Cyr et al. (2008). Liu et al. (2008) and Shankar et al. (2003) have found that delivery and customer services have significant relationship with satisfaction.

The research questions investigated by this study are as follows:

1. How is website quality consisting of information quality, website design, security/privacy and payment system related to building customer's online trust to place their foods and food order online?
2. How is service quality consisting of delivery, customer service and food quality related to customer satisfaction?
3. What can be the mediating effect of website trust on the relationship between website quality and customer satisfaction?
4. What can be the mediating effect of customer satisfaction on the relationship between service quality and loyalty?

Furthermore, the research gaps identified in the existing literature in the context of online food ordering services are as follows:

- 1) The causal relationship between the second order factor namely website quality consisting of information quality, website design, security/privacy and payment system related to website trust?
- 2) The causal relationship between the second order factor namely service quality consisting of delivery, customer service and food quality related to customer satisfaction?

Therefore, this current study posits that website quality – consisting of information quality, website design, security/privacy and payment system – is critical in building customers' online trust to place their food order online. It also posits that service quality – consisting of efficient delivery, excellent customer service and food quality – is critical to satisfy the customers and increase their loyalty towards the online food ordering operators. Based on these rationales, this study formulated and tested a conceptual model with four hypotheses. The next section of the paper presents the literature that incorporates the key determinants of the conceptual model and hypotheses. Other sections report the findings of the study and suggest its theoretical and practical implications.

2. LITERATURE REVIEW

The following section discusses research of all variables and their relationships.

2.1 Website Quality

The last decade has witnessed extensive literature on website quality as a cue for customer satisfaction; a factor that drives purchase intention. Website quality comprises factors like interactivity, customisation, care, cultivation, choice, community, character and convenience (Srinivasan et al. 2002); interactivity, novelty and complexity (Huang, 2003); community, individualisation, free services, technical integration and convenience (Wirtz and Lihotzky, 2003); information quality, connectivity playfulness, learning and interactivity (Chiu et al. 2005); appearance, content quality, specific content and technical adequacy (Liao et al. 2006); website design, communication, order fulfilment, security/privacy, promotion and merchandising (Jin and Park, 2006); and, transaction speed, information quality security and user-friendliness (Shih and Fang, 2006). Among all these factors, customers usually expect three website merits to assist their online encounters, that is, system quality, information quality, and service quality (Shih, 2004). A number of attempts have been made to categorise website's multiple attributes (Dholakia and Zhao, 2010). Online shopper viewing time averages 30 seconds before he moves to another website (Brohan, 1999). The website must be enticing (Dawson and Kim, 2010) because its cues lead to affective and cognitive internal states (Robert and John, 1982) compared with traditional retail stores with tactile and olfactory cues (Eroglu et al. 2003). Recently, a number of researchers have conducted empirical study on website quality such as Dickinger and Stangl (2013), Rahimnia and Hassanzadeh (2013), Liu, Li and Hu (2013), Xu, and Benbasat and Cenfetelli (2013). Therefore, the preceding discussion proposes four important elements of website quality, namely information quality, website design, security and payment system.

2.1.1 Information Quality

Information is a prerequisite to trust (Flavian et al., 2006; Wang and Emurian, 2005). In a related study, Yoon (2002) tested the relationship of website properties such as width of product selections, accuracy of online information, and firm's reputation to website trust. He found that website properties have a significant relationship with website trust. According to Park and Kim (2003), more extensive product information leads to better buying decisions and levels of consumer satisfaction. Ballantine (2005) also found a positive relationship between website's

information attributes and consumer satisfaction. However, little research has empirically examined the effect on the amount of information provided on a website (Peterson and Merino, 2003), and this calls for further examination (Kim and Lennon, 2010). As a sub-set of “usability” construct, information design includes navigation or website structure (Flavian et al., 2006). If the former is poorly designed, a customer will leave the website (McKinney et al., 2002). Availability of information reduces search time and hence increases consumer satisfaction (Glazer, 1991; Lynch and Ariely, 2000) and facilitates informed decision making. Moreover, the amount of information (Ballantine, 2005) available may determine the success or failure of electronic commerce (Yang, 2001).

2.1.2 Website Design

Website design deals with emotional appeal, balance, uniformity and aesthetics of the website. It includes colour, shapes, photography, or even the font style (Garrett, 2003). Some research suggests positive association between trust and aesthetic beauty of the websites (Karvonen, 2000) although a few of them show significant association between these two (Wang and Emurian, 2005). However, all empirical studies show the positive stance in terms of the relationship between enjoyable user experience and website aesthetics (Tarasewich, 2003). According to McKinney et al. (2002), “No matter how thorough the information content of a site is, a customer who has difficulty in searching and getting the needed information is likely to leave the site” (p. 308).

2.1.3 Security

Intention to buy a product from the website is affected by the level of trust. Therefore, security has been addressed as the primary concern among online consumers (Flavian et al., 2006). Mukherjee and Nath (2007) also suggest that perceived value over privacy and security features of the websites is the crucial antecedent of trust which eventually positively influences the behavioural intention of the consumers. Hence, security and privacy of all the e-service providers have been addressed as the primary concern in many studies (Sathye, 1999; Liao and Cheung, 2002; Poon, 2008). Specifically, privacy is treated as the key element for generating the online trust (Hoffman et al. 1999) while security indicators such as Better Business Bureau and trustee seals adopted by the websites have positive association with trustworthiness (Cheskin Research and Studio Archetype/Sapient, 1999).

2.1.4 Payment System

Online shoppers are known for low tolerance (Chen and Chang, 2003) for system feedback. On average, online shoppers only wait for eight seconds before leaving (Dellaert and Kahn, 1999). A web page design should consider appearance, functionality and loading time (Weinberg, 2000). Therefore, trustworthy website design should save the customers’ transaction time. Otherwise, the customers may hesitate to use the website’s payment system. If the company’s website is considered equivalent to characteristics of a salesperson, then the former should embody characteristics of the salesperson such as expertise (Crosby et al., 1990; Doney and Cannon, 1997) and likeability (Hawes et al. 1989; Doney and Cannon, 1997) which are positively associated with customer trust in the salesperson and the company (Doney and

Cannon, 1997; Friedman et al., 2000; Tan and Thoen, 2000-2001). During information search, information quality, website design, security and payment system play important roles in determining customers' trust in their online experiences. Based on the above discussion, it is hypothesised that:

H1: Website quality has positive impact on customer satisfaction.

2.2 Service Quality

Service quality plays an important role for customer satisfaction because it is the customers who are the patrons of the products or services. Consequently, efficient tools to assess service quality are invaluable to companies who earn their revenues or part of it from delivery of service. Furthermore, service quality dimensions known as the SERVQUAL tool is widely used by various organizations to measure their customer satisfaction and loyalty (Landrum, et al., 2009). The concept of SERVQUAL was first introduced by Parasuraman et al. (1988) as a generic instrument used for the measurement of service quality on the basis of focus group's inputs. Despite its development in the marketing sector, it has been applied by many other organizations such as libraries and web services (Gede and Sumaedi, 2013; Reichl, Tuffin and Schatz, 2013; Wang et al., 2014).

Quality has generally been defined as "fitness for use" and "those product features which meet customer needs and thereby provide customer satisfaction" (Juran and Godfrey, 1999). According to Gravin (1984), the definition of quality varies depending on the methods of approach driven to transcendental experience, product, manufacture, value, and user. On other hand, service means an intangible activity or benefit provided by the services provider to customer, which can be tangible products and something that is added to intangible service, or in an independent form (Kotler, 1991). According to Rolland and Freeman (2010), the concept of service quality in e-Tailing defines (1) the extent to which a website facilitates efficient and effective shopping, purchasing and receipt of products and services, and (2) the customer service delivered throughout the whole experience from initial contact to fulfilment of the service. While service perceptions influence loyalty (Juga et al., 2010), satisfaction represents a more general evaluative construct in comparison with the episodic and transaction-specific nature of service performance (Oliver, 1997) which works as a mediator in linking service quality and a customer's repurchase loyalty (Olsen, 2002). The core sustainable strategy for online food ordering companies is the provision of excellent service to the customers. Therefore, perceived quality of the service provided by the online food ordering companies has a large influence on the customer satisfaction.

Based on the above discussion, three dimensions have been identified as critical for satisfying and retaining the customers, namely delivery, customer service and food quality.

2.2.1 Delivery

In the e-commerce environment, the time of delivery plays a crucial role in satisfying and retaining customers. Dholakia and Zhao (2010) found that timing plays an important influence

on the relationship between online store attributes and satisfaction. Delayed delivery beyond the common practice (e.g. one hour delivery) will have a negative effect on satisfaction regardless of the road and weather conditions. According to China Online Shopping Report produced by China Internet Network Information Centre (CNNIC) accessed in 2004, Liu et al. (2008) found that 25 per cent of Chinese customers were not satisfied with delayed delivery or wrong product. Furthermore, their research revealed that delivery is found to have a significant positive influence on customer satisfaction. Order fulfilment variables, particularly on-time delivery, dominate the effects on overall customer evaluations and satisfaction (Dholakia and Zhao, 2010). Delivery becomes particularly important to non-store, including online, retailing where there is a temporal separation between order placement and delivery of ordered merchandise (Dholakia and Zhao, 2010). As a result, on time delivery plays a very significant role in overall satisfaction and loyalty of customers in online food ordering business.

2.2.2 Customer Service

Reibstein (2002) found that perceived customer service support has a high correlation with likelihood to purchase again. Posselt and Gerstner (2005), using the theory of order effect, argue that satisfaction with a service will be influenced by the sequence of service encounters. In fact, websites that were rated poorly in customer service were the least likely to be shopped again which reflects the state of customer dissatisfaction. Furthermore, Suleyman (2010) found that customer service quality has strong effect on overall online customer satisfaction. Many Internet customers are concerned with real time, return and replacement issues, and speed of response time to their queries from customer service representative. Finally, despite a considerable debate about the causal ordering between service quality and satisfaction, this research proposes in line with previous researchers (Selnes, 1998; Wiertz et al. 2004) that service quality is an important antecedent of satisfaction.

2.2.3 Food Quality

Food quality is viewed to be related to satisfaction with fast-food restaurants (Kivela et al., 1999; Law et al., 2004). Although food can be argued to not be part of service quality, the focus is on its characteristics such as fresh, healthy, well presented and cooked which are influential factors for the customers to be satisfied and make their decisions to purchase again. In line with this observation, according to Kotler (1991), service also means an intangible activity or benefit provided by the services provider to customer, which can be a tangible product and something that is added to intangible service, or in an independent form.

Previous researchers (Qin et al., 2010) found that three factors, that is, food quality, perceived value and service quality all had a direct and positive relationship with satisfaction. Also, other researchers such as Andaleeb and Conway (2006) and Parasuraman et al. (1994) revealed that price and product quality together with service quality influence customer satisfaction. Furthermore, several studies on fast food restaurants showed that food quality is related to satisfaction and it was tested as a potential determinant of customer satisfaction (Kivela et al., 1999; Law et al., 2004). In this study, it is expected that there will be significant relationship between food quality and customer satisfaction. Therefore, food delivery companies should consider that food quality is one of critical strategies to create customer satisfaction.

H2: Service quality has direct and positive relationship with customer satisfaction.

2.3 Relationship between Website Trust and Customer Satisfaction

Trust is earned based on previous experience of the customer. In the e-commerce environment, if the customer has positive experience from his or her previous use of a product or service, then he or she will choose the same website to place the order. Likewise, in the case of online food ordering, customers will revisit the website if they trust it. Yoon (2002) found that there are four factors that are crucial in the formation of trust such as transactional security, website properties, search functionality, and personal variables. These four factors formulate trust and if they are fulfilled then the overall satisfaction is increased (Yoon, 2002). Therefore, based on this discussion, it is expected that website trust will have a significant effect on customer satisfaction.

H3: Website trust has positive influence on customer satisfaction.

2.4 Relationship between Customer Satisfaction and Loyalty

Customer satisfaction is the ultimate objective of the customer relationship and has some major antecedents such as perceived value and perceived quality. It eventually leads to the customer loyalty. Numerous studies have been focusing on the relationship between satisfaction and the firm's performance in the conventional marketing approach, whereas the literature reveals only limited number of studies in online retailing (Evanschitzky et al. 2004; Hsu, 2008; Jiang and Rosenbloom, 2005; Kim et al., 2006; Szymanski and Hise, 2000).

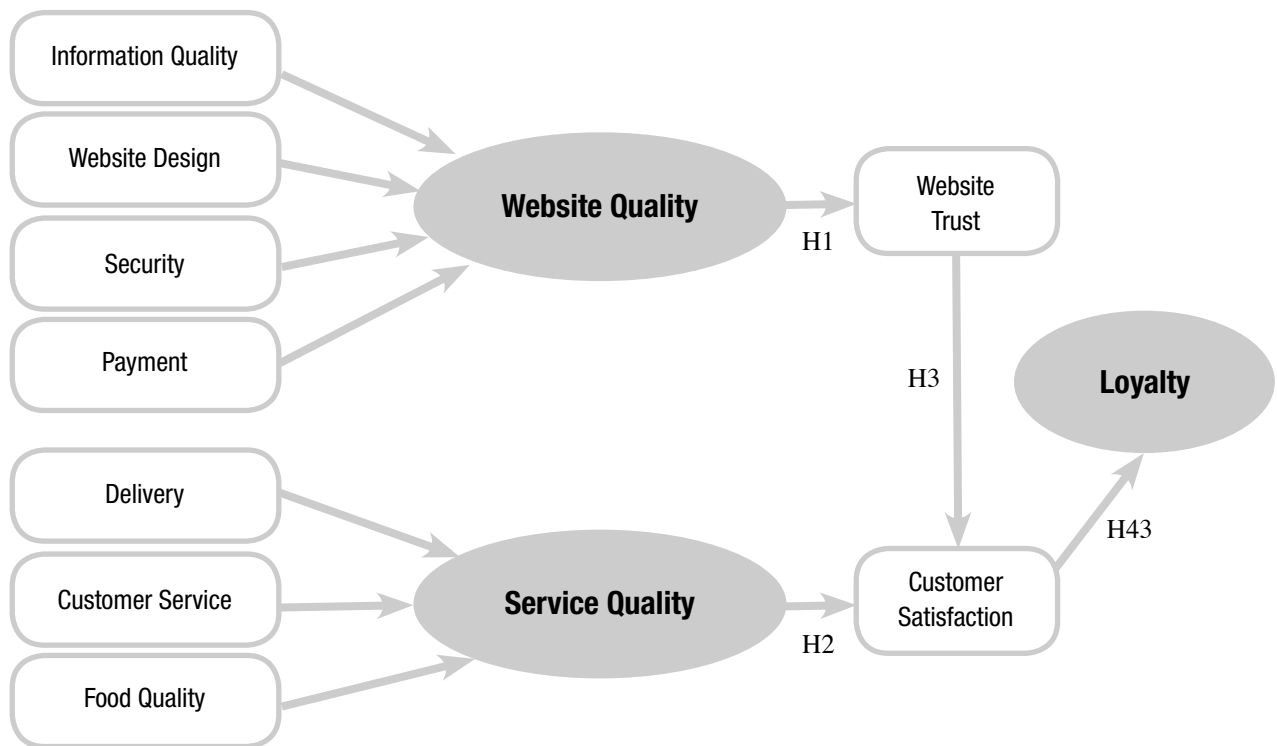
Indeed, customer satisfaction drives several beneficial outcomes. For instance, Fornell et al. (2006) shows a list of published evidences that confirms the favourable association between consumer satisfaction and performance of a business entity. Loyalty can be measured in terms of behaviour (e.g. choice probability and repeat purchase probability of a brand) and attitude (e.g. commitment, intention to buy and brand preference) (Dekimpe et al. 1997). Most of the consumers remain with the service providers due to the customised based and/or desired based attachments (Bansal et al., 2004; Juga et al. 2010; Tsai and Hunag, 2007). Caruana (1999) depicts service loyalty as the level to which a consumer shows repeat purchasing attitude from a specific value provider, have the favourable attitudinal disposition towards the offer and consider only these providers when a demand for this specific need exists. Many of the previous studies confirmed the significant association between repurchase intention and customer satisfaction (Mittal and Kamakura, 2001; Oliver, 1997; Yu and Dean, 2001), and positive (Hackman et al., 2006). Cass (2001) argues that a satisfied customer is expected to show brand loyalty, and customer e-loyalty is influenced by satisfaction (Flavian et al., 2006; Yoon, 2002). Hence, on the basis of the foregoing discussion, the following hypothesis is proposed:

H4: Customer satisfaction has positive impact on loyalty.

3.5 Conceptual Framework

The following conceptual model depicts the relationship between antecedents, namely, website quality and service quality and the outcomes, namely, website trust, customer satisfaction and loyalty.

Figure 1: Conceptual Model



3. METHODOLOGY

3.1 Research Setting

In order to test the aforementioned hypotheses, a quantitative study was conducted at one of the largest public universities in Malaysia whose respondents comprised a mixture of local and international students. The respondents were chosen because of their easy access to several online food ordering companies operating nearby such as Pizza Hut, McDonald's, Domino's, Nando's, Papa John's and Room Service Deliveries.

3.2 Data Collection

The questionnaires were distributed to 600 undergraduate students of the Kulliyyah of Economics and Management Sciences requesting them and their friends or family members who had experienced ordering food online to participate in the research project. Using a questionnaire is the most economical method of data collection, allowing for wide distribution and is best suited to handle complex questions.

3.3 Measurement of Research Variables

All constructs were measured using multiple items, 7-point Likert scales ranging from strongly disagree to strongly agree. Website quality consists of four scales namely information

quality, website design, security and payment system. Information quality will be evaluated from three dimensions: information accuracy, information comprehensibility and information completeness. These dimensions were adapted from the items initially developed by Jeong et al. (2003) and Muylle et al. (2004). On the other hand, website design will be evaluated from four aspects: navigation, colour combination and ease of use. The items were taken from Muylle et al. (2004), Jeong et al. (2003) and Kim and Stoel (2004). Furthermore, security and payment system were adapted from Wolfinbargerhe and Gilly (2003) and Liu et al. (2008), respectively. However, as the payment had only two items and can be considered not statistically reliable, the study developed two more items to evaluate it based on the researchers' online experience with just-eat.co.uk. The additional items include: "the website provides me with the payment options according to my preferences and the website provides an efficient payment gateway system for us to make payment". For service quality, it consists of three scales namely delivery, customer service and food quality. Delivery scale consists of four items, two of which are taken from Wolfinbargerhe and Gilly (2003).

The third item was developed by Liu et al. (2008) and the fourth item was developed based on the finding of an earlier exploratory study. Thus, the fourth item is "delivery riders are efficient in delivering the foods to our home or office". Furthermore, customer service scale was adapted from Liu et al. (2008). Finally, food quality scale was developed based on the findings of an earlier exploratory study on 34 academicians about their perceptions toward online food ordering and delivery services. This scale consists of four items, that is, the foods delivered are fresh, well presented, well cooked and food operators provide a variety of healthy foods. Furthermore, the authors proposed to utilise three scales to examine the study's outcomes, namely: website trust, customer satisfaction and loyalty. Website trust and satisfaction were adapted from Cyr et al. (2008). On the other hand, loyalty consists of three items, two of which were taken from Cyr et al. (2008) and one item from Ribbink et al. (2004). The survey instrument consists of two sections. In the first section, respondents were requested to rate their agreement on statements related to their latest online food ordering experience. Each item was measured on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). In the second section, respondents were asked to fill in their demographic profile.

4. DATA ANALYSIS

This study comprises three sections of data analysis. The first section is descriptive analysis based on the demographic information of the respondents. The second section discusses the validity of the research variable based on the confirmatory factor analysis. Lastly, section three analyses structural equation modelling and test the hypothesised relationships.

4.1 Demographical Profile of the Respondents

The study generated 353 usable questionnaires which resulted in a response rate of 58.8%. Table 1 summarizes important demographic characteristics of the respondents.

Table 1: Demographic Profile of Respondents

Descriptive Statistics of Demographic Variables (N=353)		
Variables	Frequency	%
Age		
34 or less	335	94.9
35 and above	15	4.2
Gender		
Male	89	25.3
Female	263	74.5
Income		
29,999 or less	280	79.3
30,000-49,999	21	5.95
50,000-69,999	1	0.3
Education		
Secondary and below	7	2
Higher Secondary	337	95.5
No. of Adults in Household		
One adult		
Two adults	22	6.2
Three or more	43	12.2
	269	76.2
No. of Children in Household		
No child		
One child	172	48.7
Two children	40	11.3
Three or more	38	10.8
	77	21.8

As shown on Table 1, the demographic characteristics of respondents were as follows: 94.9 percent of respondents are below 34 years old and 4.2 percent of respondents are above 35 years old; 25.3 percent of respondents are male and 74.5 percent of respondents are female; 79.3 percent of respondents have an income bracket of RM29,999 or less, 5.95 percent of respondents have an income bracket of RM30,000 to RM49,999 and 0.3 percent has an income bracket of RM50,000 to RM69,999; 2 percent of respondents have secondary school education and 95.5 percent of respondents have higher secondary certificate; 6.2 percent of respondents have one adult, 12.2 percent of respondents have two adults, and 76.2 percent of respondents have 3 or more adults in their household respectively; 48.7 percent of respondents do not have

children, 11.3 percent of respondents have one child, 10.8 percent of respondents have two children and 21.8 percent of respondents have three or more children.

4.2 Tests for Confirmatory Factor Analysis (CFA)

Confirmatory factor analyses were performed to assess the following psychometric properties of the construct of the study: unidimensionality, reliability, convergent validity and discriminant validity (Wiertz, de Ruyter et al. 2004; Anderson and Gerbing, 1988; Steenkamp and van Trijp, 1991). The overall model fit provides the necessary and sufficient information to determine whether a set of items is unidimensional. For the full model, a good fit to the data was obtained, indicating unidimensionality. The goodness of fit statistics for the model is recorded here: $\chi^2 = 98.462$; $\chi^2/df = 2.956$; CFI = 0.986; RMSEA = 0.073. In assessing the constructs reliability, composite reliability is used (Joreskog, 1971). Above all the values of composite reliability are recommended at the cut-off value of 0.60 (Nunnally and Bernstein, 1994). In the study, convergent validity is assessed to test the magnitude of indicators coefficient and their significance (cf. Anderson and Gerbing, 1988). In the study at hand, all loaded items have substantial and significant loading which is more than 0.05 in relation to the concerned constructs. Discriminant validity is justified by the testing if pairs of constructs are correlated less than unity. Based on degree of freedom, Chi square is used to test the unity between the constructs. Chi square test is assumed to be significant at the given level of significance (0.003095). Assessment of correlation matrix with the associated standard errors revealed that

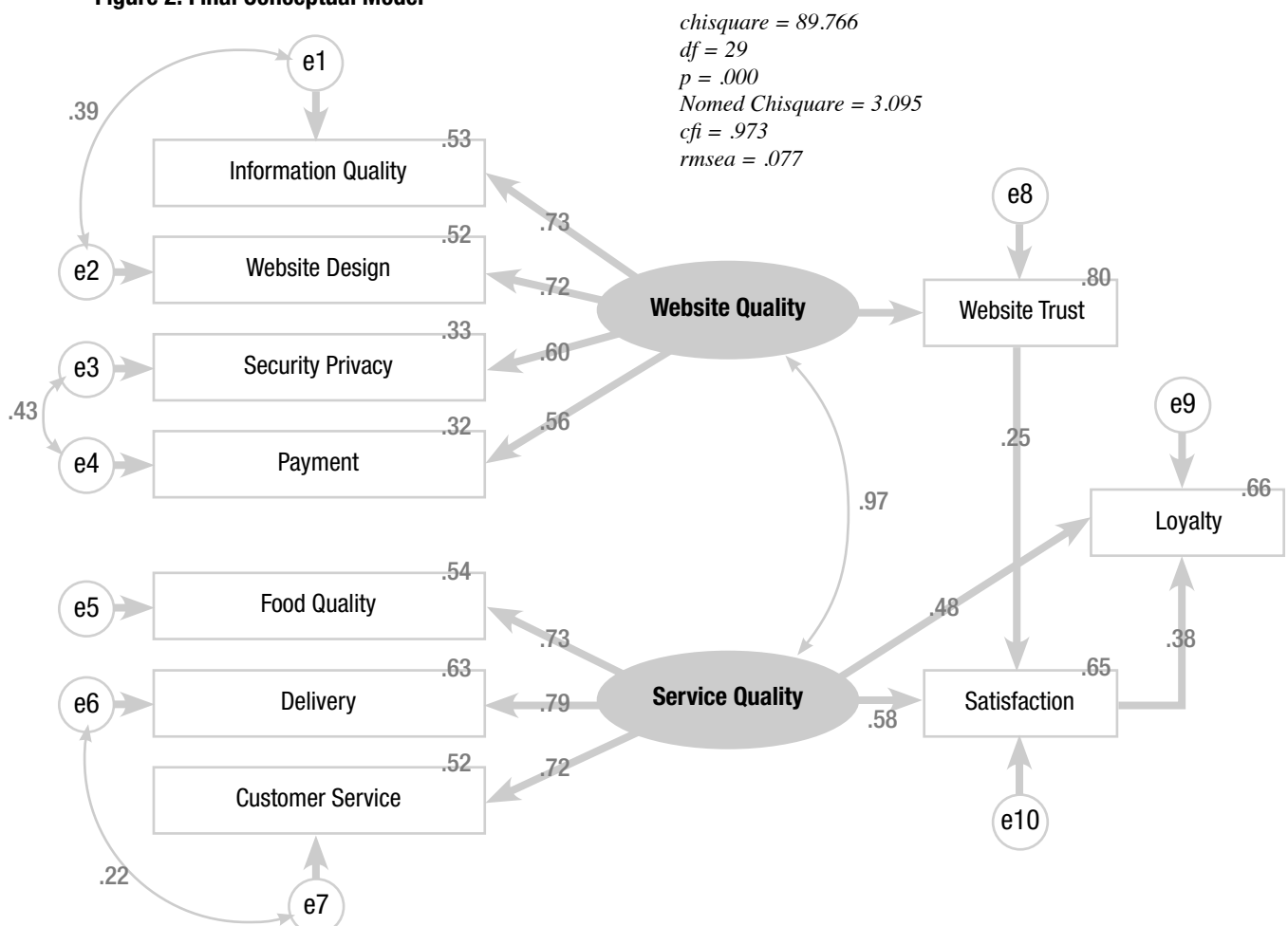
no correlation is within two standard errors at the value of 1.0. With the application of average trait variance extracted (Fornell and Larcker's, 1981), each construct pairs illustrate that the average variance extracted from the traits cross the estimate of squared correlation between the respective constructs. The presence of discriminant validity is justified by all the three tests of discriminant validity.

4.3 Test for Structural Equation Modeling (SEM) and Hypotheses

Structural equation modelling was used to test the hypothesized relationships depicted in the model. Two-step approach suggested by Anderson and Gerbing (1988) was performed. First, the assessment of the critical measurement properties of the scales used in the study was provided. Second, the researchers focused on the estimation of the structural model and the testing of the specified hypotheses.

A path model is estimated in order to test the observed hypothesis. To generate the maximum likelihood estimates for the path coefficients, the study used AMOS 16. Despite having the entire hypotheses supported by the data, the initial structural model does not exhibit the acceptable fit indices. However, an inspection of residuals and modification indices shows that there is still chance to obtain improved fit indices. Having, an additional path from service quality to customer loyalty improves the model fit, consistent with the literature. The final model shows the good fit indices to the data: ($\chi^2 = 89.766$; $\chi^2/df = 3.095$; $RMSEA = 0.077$; $CFI = 0.973$). An overview of the final conceptual model is displayed in Figure 2 below.

Figure 2: Final Conceptual Model



The significance tests for the structural model parameters are used as the basis for accepting or rejecting the hypotheses proposed. A significant positive relationship between website quality and website trust supports Hypothesis 1 (standardized path coefficient=.90, t value=16.803). Website quality in this study consists of several subscales: information quality, website design, security and payment system. These aspects contribute significantly to the level of website trust. The study also found significant positive relationship between service quality and satisfaction, which supports Hypothesis 2 (standardized path coefficient=.58, t value=14.891). Also, in this study, delivery, customer service and food quality are the subscales of service quality. If these aspects are improved, the satisfaction level will also directly increase. Furthermore, significant relationships are also found between website trust and satisfaction (standardized path coefficient=.25, t value=-2.147) and satisfaction and loyalty (standardized path coefficient=.38, t value=4.284), supporting Hypothesis 3 and Hypothesis 4 respectively. However, results also show unexpected link between service quality and loyalty. These findings confirm that service quality, website trust and satisfaction are critical processing factors that lead to loyalty with the online food ordering companies.

5. THEORITICAL IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

5.1 Theoretical Implications

An important contribution of this study is incorporating simultaneously the different types of quality as antecedents of website trust and satisfaction. As information quality, website design, security/privacy and payment system have been studied extensively in isolation, this study proposes a more complete conceptualisation of website quality. Likewise, delivery, customer service and food quality have also been studied extensively in isolation but not integrated with a service quality. The study confirms that website and service quality play a crucial role in building trust and satisfaction that can lead to customer loyalty.

As the study only focuses on customers' perception towards online food ordering companies, it cannot be generalised for use in other industries. As such, similar research in other online industries is needed to cross-validate the findings.

Furthermore, the use of self-reported scales to measure both independent and dependent variables may imply the possibility of a common method bias for the results. Therefore, qualitative studies should be considered to verify these findings amongst the regular online food ordering customers.

5.2 Managerial Implications

In an online shopping environment, products are not tangible. Unlike the traditional shopping, consumers in the online shopping environment cannot taste, touch, smell, see or listen to the product. Rather, consumers assess the quality by relying on the picture and the given description of the goods or services in the web page. Hence, to maximise the degree of trust of the customer, clear and understandable information should be provided. Moreover, complete information with reasonable explanation should be given such as width and depth of offerings. In addition, to assist the customer to visualise the offer, demonstration of virtual product or

service is also necessary.

The finding is similar to the study of Koivumaki (2001) where a picture is shown to influence the consumers purchase decision instead of giving only the blank written description. Moreover, the study confirms affluent web page design is necessary to elicit positive first impression among the visitors while the importance of content comes next. Pleasant and comfortable web page is the key to attract and maintain visitor's online shopping experience which eventually increases purchase possibility and customer degree of trust. At the purchase stage, online food providers need to create safe online environment, protect customers' privacy, guarantee financial security and confirm secure payment system.

Online food ordering providers should also ensure the website facilitates time saving and convenient online payment. All of these factors will help the service providers to build the trust among their consumers. As a result, satisfied customers will make repeat purchase and recommendation to others.

Next, freshness of food, prompt delivery and prompt response to customers' orders are crucial because order fulfilment can be overlooked by some online food ordering companies in Klang Valley. In the online shopping environment, delayed delivery and indifference to customers' concerns and inquiries will cause customer dissatisfaction as the customers are busy professionals whose expectations are high. In the context of Klang Valley, the delivery service is exposed to risks such as traffic congestions, road constructions and bad weather. In cases of late delivery, a customer service representative must be able to respond to customer inquiries and solve problems promptly.

6. CONCLUSIONS

In this study, attempt was made to identify the key success factors that lead to loyalty in an online ordering environment. Results suggest that online food ordering companies have to emphasise on information quality, website design, security/privacy and payment system towards their customers in order to increase the level of web trust and satisfaction. The service providers could also enjoy continuous recurring revenues from the loyal customers if they provide efficient delivery, reliable customer service and food quality.

The results of the empirical study provide support for the positive relationships between website quality and web trust, service quality and satisfaction, web trust and loyalty, and satisfaction and loyalty. Therefore, this empirical study offers several important findings, summarised as follows:

- Information quality has a positive impact on web trust which is consistent with the study of Yoon (2002).
- Website design has positive impact on website trust which is consistent with the study of Yoon (2002).
- Security has positive impact on website trust. However, this finding differs from the finding by Roca, Garcí'a and de la Vega (2008) which found that there was no significant relationship between security/ privacy and online trust.

- The effect of payment system on website trust is also significant. Previous research on website trust seldom touches on it. Again, this study uncovers the effect of payment system on website trust.
- As hypothesised, delivery is found to exert a significant positive influence on customer satisfaction. This finding is consistent with the study of Liu et al. (2008).
- Customer service has positive impact on satisfaction which is consistent with the study of Zeithmal, Parasuraman and Malhotra (2002).
- Food quality has positive impact on satisfaction, which is consistent with the study of Qin and Prybutok (2009).
- Customer satisfaction has positive impact on loyalty which is consistent with the study of Flavian et al. (2006) and Yoon (2002).

Finally, an unexpected link between the second order factor namely service quality and loyalty reflects that efficient delivery, reliable customer service and food characteristics (e.g. freshness, presentation, healthy) are also essentials for operating successful food ordering services.

REFERENCES

- Anderson, R. E., & Srinivasan, S. S. (2003). E-satisfaction and e-loyalty: a contingency framework. *Psychology and Marketing*, 20(2), 123-138.
- Anderson, E. W. (2003). The formation of market-level expectations and its covariates. *Journal of Consumer Research*, 30(1), 115-124.
- Saad Andaleeb, S., & Conway, C. (2006). Customer satisfaction in the restaurant industry: an examination of the transaction-specific model. *Journal of Services Marketing*, 20(1), 3-11.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
- Law, A. K., Hui, Y. V., & Zhao, X. (2004). Modeling repurchase frequency and customer satisfaction for fast food outlets. *International Journal of Quality & Reliability Management*, 21(5), 545-563.
- Bansal, H. S., Irving, P. G., & Taylor, S. F. (2004). A three-component model of customer to service providers. *Journal of the Academy of marketing Science*, 32(3), 234-250.
- Ballantine, P. W. (2005). Effects of interactivity and product information on consumer satisfaction in an online retail setting. *International Journal of Retail & Distribution Management*, 33(6), 461-471.
- Bernoff, J., & Li, C. (2008). Harnessing the power of the oh-so-social web. *MIT Sloan management review*, 49(3), 36.
- Brohan, M. (1999). Gotta have it. *Internet Retailer*. <http://www.internetretailer.com/>.
- Burke, R. R. (2002). Technology and the customer interface: what consumers want in the physical and virtual store. *Journal of the academy of Marketing Science*, 30(4), 411-432.
- Caruana, A. (1999, January). The role of service quality and satisfaction on customer loyalty. In *American Marketing Association. Conference Proceedings*, 10, 139. American Marketing Association.
- Chen, S. C., & Dhillon, G. S. (2003). Interpreting dimensions of consumer trust in e-commerce. *Information Technology and Management*, 4(2-3), 303-318.
- Chen, S. J., & Chang, T. Z. (2003). A descriptive model of online shopping process: some empirical results. *International Journal of Service Industry Management*, 14(5), 556-569.
- Cheskin Research and Studio Archetype/Sapient, 1999. E-commerce trust study. http://www.added-value.com/source/wp-content/uploads/2012/01/17__report-eComm-Trust1999.pdf.
- Chiu, Y. B., Lin, C. P., & Tang, L. L. (2005). Gender differs: assessing a model of online purchase intentions in e-tail service. *International Journal of Service Industry Management*, 16(5), 416-435.
- Crosby, L. A., Evans, K. R., & Cowles, D. (1990). Relationship quality in services selling: an interpersonal influence perspective. *The journal of marketing*, 68-81.
- Cyr, D., Kindra, G. S., & Dash, S. (2008). Web site design, trust, satisfaction and e-loyalty: the Indian experience. *Online Information Review*, 32(6), 773-790.
- Dawson, S., & Kim, M. (2010). Cues on apparel web sites that trigger impulse purchases. *Journal of Fashion Marketing and Management: An International Journal*, 14(2), 230-246.
- Dellaert, B. G., & Kahn, B. E. (1999). How tolerable is delay? Consumers' evaluations of Internet web sites after waiting. *Journal of interactive marketing*, 13(1), 41-54.
- Dholakia, R. R., & Zhao, M. (2010). Effects of online store attributes on customer satisfaction and repurchase intentions. *International Journal of Retail & Distribution Management*, 38(7), 482-496.
- Dick, A. S., & Basu, K. (1994). Customer loyalty: toward an integrated conceptual framework. *Journal of the academy of marketing science*, 22(2), 99-113.
- Dickinger, A., & Stangl, B. (2013). Website performance and behavioral consequences: A formative measurement approach. *Journal of Business Research*, 66(6), 771-777.
- Dekimpe, M. G., Steenkamp, J. B. E., Mellens, M., & Abee, P. V. (1997). Decline and variability in brand loyalty. *International Journal of Research in Marketing*, 14(5), 405-420.
- Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *The Journal of Marketing*, 35-51.
- Robert, D., & John, R. (1982). Store atmosphere: an environmental psychology approach. *Journal of retailing*, 58, 34-57.
- Evanschitzky, H., Iyer, G. R., Hesse, J., & Ahlert, D. (2004). E-satisfaction: a re-examination. *Journal of retailing*, 80(3), 239-247.
- Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2003). Empirical testing of a model of online store atmospherics and shopper responses. *Psychology & Marketing*, 20(2), 139-150.
- Flavián, C., Guinalíu, M., & Gurrea, R. (2006).

- The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information & Management*, 43(1), 1-14.
- Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J., & Bryant, B. E. (1996). The American customer satisfaction index: nature, purpose, and findings. *The Journal of Marketing*, 7-18.
- Friedman, B., Khan Jr, P. H., & Howe, D. C. (2000). Trust online. *Communications of the ACM*, 43(12), 34-40.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 39-50.
- Garrett, J. J. (2010). *Elements of user experience, the: user-centered design for the web and beyond*. Pearson Education.
- Garvin, D. A. (1984). What does product quality really mean? *Sloan management review*, 26(1).
- Gede, M. Y. B. I., & Sumaedi, S. (2013). An analysis of library customer loyalty: The role of service quality and customer satisfaction, a case study in Indonesia. *Library Management*, 34(6/7), 397-414.
- Glazer, R. (1991). Marketing in an information-intensive environment: strategic implications of knowledge as an asset. *The Journal of Marketing*, 1-19.
- Gommans, M., Krishnan, K. S., & Scheffold, K. B. (2001). From brand loyalty to e-loyalty: A conceptual framework. *Journal of Economic and Social research*, 3(1), 43-58.
- Hackman, D., Gundergan, S. P., Wang, P., & Daniel, K. (2006). A service perspective on modelling intentions of on-line purchasing. *Journal of Services Marketing*, 20(7), 459-470.
- Hawes, J. M., Mast, K. E., & Swan, J. E. (1989). Trust earning perceptions of sellers and buyers. *Journal of Personal Selling & Sales Management*, 9(1), 1-8.
- Herring, S. C., Scheidt, L. A., Wright, E., & Bonus, S. (2005). Weblogs as a bridging genre. *Information Technology & People*, 18(2), 142-171.
- Hsu, S. H. (2008). Developing an index for online customer satisfaction: Adaptation of American Customer Satisfaction Index. *Expert systems with Applications*, 34(4), 3033-3042.
- Huang, M. H. (2003). Designing website attributes to induce experiential encounters. *Computers in Human Behavior*, 19(4), 425-442.
- Hoffman, D. L., Novak, T. P., & Peralta, M. (1999). Building consumer trust online. *Communications of the ACM*, 42(4), 80-85.
- Jeong, M., Oh, H., & Gregoire, M. (2003). Conceptualizing web site quality and its consequences in the lodging industry. *International Journal of Hospitality Management*, 22(2), 161-175.
- Jiang, P., & Rosenbloom, B. (2005). Customer intention to return online: price perception, attribute-level performance, and satisfaction unfolding over time. *European Journal of Marketing*, 39(1/2), 150-174.
- Jin, B., & Park, J. Y. (2006). The moderating effect of online purchase experience on the evaluation of online store attributes and the subsequent impact on market response outcomes. *Advances in consumer research*, 33, 203.
- Juga, J., Juntunen, J., & Grant, D. B. (2010). Service quality and its relation to satisfaction and loyalty in logistics outsourcing relationships. *Managing Service Quality: An International Journal*, 20(6), 496-510.
- Juran, J.M., & Godfrey, A.B. (1999). *Quality Handbook*. 5th Edition, McGraw-Hill, New York.
- Jöreskog, K. G. (1971). Simultaneous factor analysis in several populations. *Psychometrika*, 36(4), 409-426.
- Karvonen, K. (2000, November). The beauty of simplicity. In *Proceedings on the 2000 conference on Universal Usability* (pp. 85-90). ACM.
- Kim, S., & Stoel, L. (2004). Dimensional hierarchy of retail website quality. *Information & Management*, 41(5), 619-633.
- Kim, J. H., & Lennon, S. J. (2010). Information available on a web site: effects on consumers' shopping outcomes. *Journal of Fashion Marketing and Management: An International Journal*, 14(2), 247-262.
- Kim, W. G., Ma, X., & Kim, D. J. (2006). Determinants of Chinese hotel customers' e-satisfaction and purchase intentions. *Tourism Management*, 27(5), 890-900.
- Kivela, J., Inbakaran, R., & Reece, J. (1999). Consumer research in the restaurant environment, Part 1: A conceptual model of dining satisfaction and return patronage. *International Journal of Contemporary Hospitality Management*, 11(5), 205-222.
- Kotler, P., Saliba, S., & Wrenn, B. (1991). *Marketing Management: Analysis, Planning, and Control: Instructor's Manual*. Prentice-Hall.
- Landrum, H., Prybutok, V., Zhang, X., & Peak, D. (2009). Measuring IS System Service Quality with SERVQUAL: Users' Perceptions of Relative

- Importance of the Five SERVPERF Dimensions. *International Journal of an Emerging Transdiscipline*, 12(3), 17-35.
- Liao, C., Palvia, P., & Lin, H. N. (2006). The roles of habit and web site quality in e-commerce. *International Journal of Information Management*, 26(6), 469-483.
- Liu, Y., Li, H., & Hu, F. (2013). Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions. *Decision Support Systems*, 55(3), 829-837.
- Liu, X., He, M., Gao, F., & Xie, P. (2008). An empirical study of online shopping customer satisfaction in China: a holistic perspective. *International Journal of Retail & Distribution Management*, 36(11), 919-940.
- Lynch Jr, J. G., & Ariely, D. (2000). Wine online: Search costs affect competition on price, quality, and distribution. *Marketing Science*, 19(1), 83-103.
- Liao, Z., & Cheung, M. T. (2002). Internet-based e-banking and consumer attitudes: an empirical study. *Information & Management*, 39(4), 283-295.
- Marcus, A., & Gould, E. W. (2000). Crosscurrents: cultural dimensions and global Web user-interface design. *Interactions*, 7(4), 32-46.
- McKinney, V., Yoon, K., & Zahedi, F. M. (2002). The measurement of web-customer satisfaction: An expectation and disconfirmation approach. *Information systems research*, 13(3), 296-315.
- McKnight, D.H., & Chervany N. L. (2001). What trust means in e-commerce customer relationships: an interdisciplinary conceptual typology. *International journal of electronic commerce*, 6(2), 35-59.
- Mittal, V., & Kamakura, W. A. (2001). Satisfaction, repurchase intent, and repurchase behavior: Investigating the moderating effect of customer characteristics. *Journal of marketing research*, 38(1), 131-142.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *The journal of marketing*, 20-38.
- Muyllé, S., Moenaert, R., & Despontin, M. (2004). The conceptualization and empirical validation of web site user satisfaction. *Information & management*, 41(5), 543-560.
- Mukherjee, A., & Nath, P. (2007). Role of electronic trust in online retailing: A re-examination of the commitment-trust theory. *European Journal of Marketing*, 41(9/10), 1173-1202.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. (3rd ed.). New York: McGraw-Hill.
- Cass, A. O. (2001). Consumer self-monitoring, materialism and involvement in fashion clothing. *Australasian Marketing Journal (AMJ)*, 9(1), 46-60.
- Oliver, R. L. Satisfaction: A Behavioral Perspective on the Consumer. 1997. McGraw-Kill, New York.
- Olsen, S. O. (2002). Comparative evaluation and the relationship between quality, satisfaction, and repurchase loyalty. *Journal of the Academy of Marketing Science*, 30(3), 240-249.
- Park, C. H., & Kim, Y. G. (2003). Identifying key factors affecting consumer purchase behavior in an online shopping context. *International Journal of Retail & Distribution Management*, 31(1), 16-29.
- Peterson, R. A., & Merino, M. C. (2003). Consumer information search behavior and the Internet. *Psychology & Marketing*, 20(2), 99-121.
- Phau, I., & Lo, C. C. (2004). Profiling fashion innovators: A study of self-concept, impulse buying and Internet purchase intent. *Journal of Fashion Marketing and Management: An International Journal*, 8(4), 399-411.
- Posselt, T., & Gerstner, E. (2005). Pre-sale vs. Post-sale e-satisfaction: Impact on repurchase intention and overall satisfaction. *Journal of Interactive Marketing*, 19(4), 35-47.
- Poon, W. C. (2007). Users' adoption of e-banking services: the Malaysian perspective. *Journal of Business & Industrial Marketing*, 23(1), 59-69.
- Parasuraman A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, 64(1), 12-40.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994). Alternative scales for measuring service quality: a comparative assessment based on psychometric and diagnostic criteria. *Journal of retailing*, 70(3), 201-230.
- Qin, H., Prybutok, V. R., & Zhao, Q. (2010). Perceived service quality in fast-food restaurants: empirical evidence from China. *International Journal of Quality & Reliability Management*, 27(4), 424-437.
- Qin, H., & Prybutok, V. R. (2009). Service quality, customer satisfaction, and behavioral intentions in fast-food restaurants. *International Journal of Quality and Service Sciences*, 1(1), 78-95.
- Rahimnia, F., & Hassanzadeh, J. F. (2013). The impact of website content dimension and e-trust on e-marketing effectiveness: The case of Iranian commercial saffron corporations. *Information & Management*, 50(5), 240-247.
- 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), 465-473.

- Reichl, P., Tuffin, B., & Schatz, R. (2013). Logarithmic laws in service quality perception: where microeconomics meets psychophysics and quality of experience. *Telecommunication Systems*, 52(2), 587-600.
- Ribbink, D., Van Riel, A. C., Liljander, V., & Streukens, S. (2004). Comfort your online customer: quality, trust and loyalty on the internet. *Managing Service Quality: An International Journal*, 14(6), 446-456.
- Rolland, S., & Freeman, I. (2010). A new measure of e-service quality in France. *International Journal of Retail & Distribution Management*, 38(7), 497-517.
- Shankar, V., Smith, A. K., & Rangaswamy, A. (2003). Customer satisfaction and loyalty in online and offline environments. *International journal of research in marketing*, 20(2), 153-175.
- Shih, H. P. (2004). An empirical study on predicting user acceptance of e-shopping on the Web. *Information & Management*, 41(3), 351-368.
- Shih, Y. Y., & Fang, K. (2006). Effects of network quality attributes on customer adoption intentions of internet banking. *Total Quality Management & Business Excellence*, 17(1), 61-77.
- Shop. org. (2005). Online retail sales, profitability continue to climb, according to shop. org/forrester research. <http://www.prnewswire.com/news-releases/online-retail-sales-profitability-continue-climb-according-to-shoporgforrester-research-54496167.html>.
- Singh, M. (2002). E-services and their role in B2C e-commerce. *Managing Service Quality: An International Journal*, 12(6), 434-446.
- Srinivasan, S. S., Anderson, R., & Ponnawolu, K. (2002). Customer loyalty in e-commerce: an exploration of its antecedents and consequences. *Journal of retailing*, 78(1), 41-50.
- Szymanski, D. M., & Hise, R. T. (2000). E-satisfaction: an initial examination. *Journal of retailing*, 76(3), 309-322.
- Sathye, M. (1999). Adoption of Internet banking by Australian consumers: an empirical investigation. *International Journal of bank marketing*, 17(7), 324-334.
- Selnes, F. (1998). Antecedents and consequences of trust and satisfaction in buyer-seller relationships. *European Journal of marketing*, 32(3/4), 305-322.
- Steenkamp, J. B. E., & Van Trijp, H. C. (1991). The use of LISREL in validating marketing constructs. *International Journal of Research in marketing*, 8(4), 283-299.
- Tarasewich, P. (2003). Designing mobile commerce applications. *Communications of the ACM*, 46(12), 57-60.
- Tsai, H. T., & Huang, H. C. (2007). Determinants of e-repurchase intentions: An integrative model of quadruple retention drivers. *Information & Management*, 44(3), 231-239.
- Wang, Y. D., & Emurian, H. H. (2005). Trust in e-commerce: consideration of interface design factors. *Journal of Electronic Commerce in Organizations*, 3(4), 42-60.
- Wang, S., Liu, Z., Sun, Q., Zou, H., & Yang, F. (2014). Towards an accurate evaluation of quality of cloud service in service-oriented cloud computing. *Journal of Intelligent Manufacturing*, 25(2), 283-291.
- Weinberg, B. D. (2000). Don't keep your Internet customers waiting too long at the (virtual) front door. *Journal of Interactive Marketing*, 14(1), 30-39.
- Wirtz, B. W., & Lihotzky, N. (2003). Customer retention management in the B2C electronic business. *Long Range Planning*, 36(6), 517-532.
- Wind, J., & Rangaswamy, A. (2001). Customerization: The next revolution in mass customization. *Journal of interactive marketing*, 15(1), 13-32.
- Wiertz, C., De Ruyter, K., Keen, C., & Streukens, S. (2004). Cooperating for service excellence in multichannel service systems: An empirical assessment. *Journal of Business Research*, 57(4), 424-436.
- Wolfenbarger, M., & Gilly, M. C. (2003). eTailQ: dimensionalizing, measuring and predictingetail quality. *Journal of retailing*, 79(3), 183-198.
- Xu, J. D., Benbasat, I., & Cenfetelli, R. T. (2013). Integrating service quality with system and information quality: an empirical test in the e-service context. *Mis Quarterly*, 37(3), 777-794.
- Yang, Z. (2001, May). Consumer perceptions of service quality in Internet-based electronic commerce. In Proceedings of the EMAC Conference (Vol. 811).
- Yoon, S. J. (2002). The antecedents and consequences of trust in online-purchase decisions. *Journal of interactive marketing*, 16(2), 47-63.
- Yu, Y. T., & Dean, A. (2001). The contribution of emotional satisfaction to consumer loyalty. *International journal of service industry management*, 12(3), 234-250.
- Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through web sites: a critical review of extant knowledge. *Journal of the academy of marketing science*, 30(4), 362-375.