Evaluation of e-Service Quality, Perceived Value on Customer Satisfaction and Customer Loyality: A Study in Indonesia

[1,2]Hanafi, [1,2]Nanna Suryana and [2]Abdul Samad bin Hasan Bashari
[1]Departerment of Information Technology, University of AMIKOM Yogyakarta, Yogyakart, Indonesia
[2]Faculty of Information and Communication Technology, Universiti Teknikal Malaysia Melaka,
Melaka, Malaysia

Abstract: Even though customer loyalty has been studied anywhere, there is lack of information to explain why online customers is reluctant to use online platform. This study observed e-Service quality effect toward customer loyalty and satisfaction. This study used Structural Equation Modelling (SEM) method with 5-items Likert rating. It consisted of chi-square, probability level, CMIN/df, CFI, RMSEA, TLI, GFI, AGFI as the indicator of model eligibility. Our study found that adequate information and informative sites will lead to customer satisfaction which representing e-Service quality in ecommerce website. A higher e-Service quality will impact to customer satisfaction to use frequently the ecommerce sites as their choice. In addition, e-Service quality impacted e-Commerce customer satisfaction and customer loyalty mediated by customer's perceived value. Our study contributed to expand information for e-Commerce practitioner to implement e-Service quality to increase their customer loyalty. However, this study does not observe the product attributes or specific ecommerce type. Future research can propose such model especially for better and accurate recommendation.

Key words: e-Commerce, e-Service quality, customer satisfaction, customer loyalty, CFI, RMSEA

INTRODUCTION

Technology has been integrated into many applications such as communication, commercial and business aspects. It is also integrated into internet and community for commercial purposes which so-called electronic commerce (e-Commerce). e-Commerce is business conducted electronically by focusing on online transactions using the internet as a medium of exchange of goods or services between two entities. There are two common e-Commerce, e.g., Business to Business (B2B) which involved institutions or organization and Business to Customer (B2C) which involved institutions with certain direct consumer (Kurnia *et al.*, 2015)

Both B2B and B2C e-Commerce are developed for business purposes to improve the online shopping activity and customer loyalty. As customer has been easier to switch to other competitor, e-Commerce vendors have considered customer loyalty as an important issue. With the high competition, the vendor especially their managers must strive to know what aspects can improve their online customer loyalty (e.g., online shoppers). In addition, the population growth is also considered important, since it contains business potential and also challenge (Table 1).

This has driven conventional retailers to shift into e-Commerce to improve their services to online mode and

Table 1: Estimates of B2B e-Commerce sales and their users in some Asian countries

Countries	2013	2014	2015	2016
China	181.62	274.57	358.59	439.72
Japan	118.59	127.06	135.54	143.13
Korean	18.52	20.24	21.92	23.71
India	16.32	20.74	25.65	30.31
Indonesia	1.79	2.60	3.56	4.89

face competition in the industry. Their business is not only sell goods or services but also to understand their online customer and know how to present their products with suitable services to gain higher customer loyalty through better service to their customers.

e-Commerce Association of Indonesia (IDEA) reported that penetration of online shoppers in Indonesian region has reached 74 million and is expected to increase by 102 million users till 2016. Many retail e-Commerce entities are very concerned to expand their business to gain such large market. However, the reality is quite enough different. There are other factors which impact the e-Commerce development such as user adoption to use the online platform and the adaptability of conventional shopping centre to the online mode.

Even though customer loyalty has been studied anywhere, there is lack of information to explain why online customers is reluctant to use online platform. There are several arguments about the cause internet users to

Corresponding Author: Hanafi, Departerment of Information Technology, University of AMIKOM Yogyakarta, Yogyakart,
Indonesia

adopt such platform such as the user difficulty to use the features and the environmental comfort of the e-Commerce websites.

Such issues has been surveyed by MarkPlus insight which showed that only 20% of respondents buying products from big players of online shop like mataharimall.com, lazada.com and online stores.com and the rest 80% conducted the shopping in forums, social networks and messenger groups. This means that the users have higher preferences to use social forums such as social networks web and messenger groups as their shopping options. Through social forums, customer can consult their preference directly through social-based shopping website, since it is more trusted and personalized. Trust and personalization are indication of service quality. It also indicates that the trust factor and personalization still become challenge for e-Commerce entities in Indonesia. Both factors are getting complex when it is combined with the ability of e-Commerce entities to provide service quality for their users.

Service quality has been studied anywhere (Chang *et al.*, 2016; Du and Tang, 2014; Xu *et al.*, 2013). Previous studies proposed that service quality is main measure of satisfaction (Bansal and Taylor, 2015). However, Oliver (2014) argued that service quality was difficult to be directly applied in e-Commerce, since there is differences and unique process between conventional service business and online service delivery. Adoption of new model of service quality, especially in the world of e-Commerce is a challenge for e-Commerce entities (Hsu *et al.*, 2016). It changes the form of website process into more customized with service quality aspects for online interaction. The service quality which delivered through online channel is also so-called e-Service quality to facilitate efficient and effective way to make a purchase, sale and delivery of products and services with personalized and higher trust level. Other study has referred it as website quality 3.0 which consisted web information quality, web interaction, trusted transaction processing and site design quality (Hsu *et al.*, 2016).

The better the e-Service quality, the higher customer satisfaction can be achieved. It is a combination of analysis of user consumption experience (Pizam *et al.*, 2016), customer care (George and Kumar, 2014) and product or service attributes (Orel and Kara, 2014) and online communication strategy through various social media such as facebook, twitter, blog, my space, etc., the forum and personal sites sometimes has higher credibility than advertising and also communicative and interactive result which improve audience trust (Shin *et al.*, 2015).

The message or recommendation from trusted source will improve the familiarity and reliability of the site information to other users. It impacts on the user satisfaction and loyalty and improve the perception of customer value (Hapsari *et al.*, 2017).

Customer values have been a representation of service quality and has important role in predicting purchase behaviour (Chiu *et al.*, 2014). It also contains monetary and non-monetary values that become a reason for customer to buy the offered products. Customer value of a product will shape user's perceived value when the consumers have enough information about the product. This can be different among gender, social class and lifestyle. In order to generate right value for consumers, e-Commerce entities have pay attention to the evaluation criteria of quality toward the offered products or services. However, there is lack of information about how e-Commerce entities in developed countries can understand their customers especially from their demographics (e.g., gender, social class and lifestyle) and its combination with e-Service quality (Sharma and Lijuan, 2014).

The perceived value about the needs and desires of users are different among gender and viewpoint which affecting their behavior and responses on products and services. A study (Hapsari *et al.*, 2017) has proposed that gender has positive and significant impact on customer loyalty that led to motivation to re-purchase. Some studies suggest that gender is moderation factor in which gender is important in service quality process.

Problem formulation

Problem from e-Commerce entities: There are many e-Commerce entities with various service quality and different website features as their response to competition of e-Commerce in Indonesia. They faced issues of good quality online services to increase customer satisfaction and loyalty.

Problem from literature gap: There is lack of knowledge about how to handle problems of customer satisfaction and what indicators can be a good e-Services quality model. Therefore, this study will observe website design, reliability, security and customer value and their effect on customer satisfaction and loyalty.

Issue from researcher perspective: There is an interest to determine appropriate indicator for sorting e-Service quality in order the instrument can be applicable to the corresponding website. Inaccurate strategy of

implementing service quality in e-Commerce can lead to reverse results. In addition, there is diverse perceived value thus, contributing to satisfaction and loyalty. Even satisfied customers have various perceptions to buy back in the same site. Therefore, it is important to understand their perceived value and intention to purchase/repurchase to gain best value.

Research questions:
- How e-Services quality can impact to the customer satisfaction of e-Commerce website in Indonesia?
- How far customer's perceived value has a significant effect on customer satisfaction and loyalty?

Literature review
e-Service quality: In the process of providing services, e-Commerce entities must compete in to provide better services to customers and maximize the services provided electronically via the internet. The concept is known as electronic service quality (e-Service quality). e-Service quality has an important role in creating a value for the consumer (perceived value) in the online shopping environment (Wu *et al.*, 2014; Chiu *et al.*, 2014). Consumer perceived value is an assessment which done by comparing the benefits that customer get and the ability of the entities to provide the services. Thus, e-Commerce entities need to create more value by providing superior service to consumers while understanding their preferences and creating added value with suitable e-Service quality. e-Service quality has been a factor that can influence consumer satisfaction in online shopping environment (Zhuang and Babin, 2015). However, it depends on the level of service quality rendered by the company to meet consumer expectations.

Component of e-Service quality: Most of the services offered by online retailer is only on completing the information about the merchandise offered, they only consider customer service as an additional unit of activity to support the transaction process. It does not consider the e-Service quality as core shopping experience that consumers need to reward their customer loyalty (Bilgihan *et al.*, 2016).

George and Kumar (2014) stated that many e-Commerce entities cannot differentiate conventional service quality with e-Service quality to gain customer satisfaction and loyalty. Nathan and Tisdell this is reasonable, since understanding customer expectations through online services needs deeper interaction which sometimes difficult to be implemented through website design. Generally, Bilgihan *et al.* (2016) identified five dimensions of service quality (i.e., reliability,

responsiveness, assurance, empathy and tangibles) that link the characteristics of certain services to consumer expectations and finally customer satisfaction and loyalty. The five dimensions of service quality are then completed by many scholars (Izogo and Ogba, 2015) with four other additional dimensions.

Efficiency of e-Service quality: It is customer's ability to access the website, search for the desired product and information relating to the product and leave the site in question with minimal effort (Xiao *et al.*, 2014). Efficiency has been conceptualized as main component why user chooses to use technology such as website. In the development, successful e-Commerce entities have considered efficiency as main component of customer satisfaction aspects which consisted with previous study (Subramanian *et al.*, 2014). According to Shi and Liao (2017), it further showed that efficiency in e-Commerce reflects the extent to which consumers believe that the use of the service evokes faster access, easiness and minimal effort which drive higher satisfaction. It can be conceptualized in two broad ways. When efficient e-Commerce is viewed as a faster response to the customer need, there are particular attributes of the service encounter which must be considered by e-Commerce entities such as transaction and non-transaction aspects. In the long term, efficient management of e-Commerce will lead to cumulative or overall satisfaction (Oliver, 2014).

Fulfilment of e-Service quality: It includes service appointments accuracy, availability of products and delivery of the products within the promised time (Stiglingh, 2014). Fulfillment has been regarded as one of the issues theoretically and practically the most important for e-Commerce entities in terms of accuracy and psychological states about the availability and delivery of products (Hossain, 2015). It is generated when the emotion surrounding the appointments accuracy is confirmed the expectations coupled with the feeling about the experience of promised timing. In other words, the satisfaction is resulted from expected availability of products and services within the promised time.

Website design of e-Service quality: It can be measured from its reliability, security and customer easiness to use (Lallmahamood, 2015). A good website design from marketing perspective means that the website are convenience to shop online and can save time and energy without the need to extra effort for customers to search for their goods in accordance with the category easily (Lallmahamood, 2015; Bilgihan and Bujisic, 2015).

Consumers will get more satisfaction with online shopping where the product are posed in a good website design and supplied with complete information (Vezzoli *et al.*, 2014). From service quality perspectives, it also means that consumers get the attractive experience in shopping from the website design and pleasant to see the site as tidy, quick as accessible, easy to use and saves time by providing information on how to shop online effectively with certain features.

Contact of e-Service quality: It reflects customer needs to be able to speak to a customer service online or over the phone and not communicate with the machine which form the core scale online service and scale online recovery service. It is the extent to which customer perceives the contact as reliable, accurate or factual. It also improves the vendor credibility to the online information or e-Commerce entities (Metzger and Flanagin, 2013). Previous study proposed that a key of early stage in the process of information persuasion is the recipient of credibility assessment information considered the contact quality by learning from and adopting the incoming information. Therefore, customer thinks the incoming information is credible, they will be more confident to adopt the comments from certain contact and use them to make a purchase decision. Considerable research has shown a relationship between the contact quality and credibility of information.

Perceived value: Perceived values has been studied by many scholars (Bansal and Taylor, 2015; Bilgihan *et al.*, 2016). It is representation of customer mind about the worth and benefit toward the true cost to get the product or services. The cost can be money worth or the effort that customer wasting to get the product or service. In addition, it is also the internal feeling perceived by the customers before and after they get and use the product or service. It impact on their willingness to pay for the product. In addition, the customer mindset about the monetary value and need fulfilment to achieve several degree of satisfaction is also categorized as perceived value. Therefore, perceived value consisted for the product worth and customer effort to get the product. It is useful to be analysed for the marketing purposes.

Product with certain brand tends to offer higher level of perceived value especially with trendy features in certain market niche for example, fashion for the youth market niche. Perceived value has been used by marketer to win the competition especially for the product with lower demand. However, perceived value sometimes inversely related with the brands and money cost. Therefore, marketer can increase the perceived value

equal with the brand strategy. Perceived value sometimes unpredicted especially for luxury goods. For luxury good, the utility of the product or services sometimes does not correlated with the cost/money paid. For example the luxury service for save haven sometimes does not correlated with the utility. However, it sometimes contributes to the higher quality service.

It is also corresponding to consumer characters about the products utility combined with their feeling or affective emotions arising from the desire to consume a product (Ng and Hort, 2014). The effect can be various across different products type and gender. Martinez and Bosque (2013) argued that gender has effect on customer loyalty through the formation of emotional value and establish higher satisfaction on the purchasing behaviour. In addition, Delcourt *et al.* (2013) proposed that customer satisfaction and customer loyalty are caused by customer emotional value.

For e-Commerce entities, they also face the needs to learn their customers about what the customer wants from the points of gender, social class and lifestyle (Hsu *et al.*, 2016). Their different viewpoint can impact to their responses and led to the formation of motivation to buy back which finally impact customer emotional value.

Previous studies (Flanagin *et al.*, 2014; Chiu *et al.*, 2014) have established a positive relationship between perceived value and intention to repurchase. Perception values contribute to customer loyalty to certain e-Commerce website by reducing the need for individuals to seek alternative service providers. When the perceived value is low, customers will switch to a competitor to increase their perceived value, thus contributing to decline loyalty. For customers who are satisfied, they will find another best value for them and finally look for other e-Commerce website as effort to find a better value (Oliver, 2014; Lee *et al.*, 2015). The relationship between customer satisfaction and customer loyalty emerge stronger when customers feel they must seek other higher value than the past experience. Perceived value also the continued observation process initiated by individual awareness about the value they must gain. It is bring the customer to learn from the situation and their past experience.

Such concept is a challenge for the e-Commerce sites to implement suitable e-Service quality in their sites in order the customer will pay higher more for an item results in higher quality or longer use which sometimes not always accurate. Certain product sectors such as wine, diamonds, luxury cars, anti-aging products and designer clothing and accessories often have higher perceived values associated with the desirability of the brand (Fig. 1). However, in the websites, the perceived values sometimes unpredictable (Table 2).

Table 2: Theoretical review about antecedents of e-Service quality

| Variables/Features	Explanations	Topic
e-Service quality		
Website design	The website has a good selection	Blut
	The website saves my time	
	It has sufficient level of personalization	
	The transactions on this website take place quickly and easily	
Reliability	The products sent to my address in timely manner	Izogo and Ogba (2015)
	The products is showed and reviewed in detail on the website	
	I get the products as ordered	
Security/privacy	I feel that my privacy is protected in this website	Lallmahamood (2015)
	I feel safe in dealing with this website	
	The website has adequate security features	
Customer loyalty	The website provides various contact channels (FAQ, e-Mail, toll-free number, etc)	Delcourt *et al.* (2013)
	The website offers information about customer's policies (privacy and disputed details)	
	I can always inquire online about my order delivery	
Perceived value		
Customer perceived value	The worth after getting the product or service	Chiu *et al.* (2014)
	The need fulfillment to achieve several degree of satisfaction	
	Customer effort to get the product	
	Branded products or services contains trendy features	
Customer satisfaction		
Customer satisfaction	I am satisfied with my decision to buy from this website	Kotler; Szymanski and Hise
	For the next purchase, I feel better buying from this website	
	It is a wise choice to buy from the website	
Customer loyalty		
Customer loyalty	When needed a product, the website will be the first choice	Griffin
	I like to use this site	
	The website is the first alternative to choose	
	The website is the best retail e-Commerce sites	
	The website is my favorite retail website	
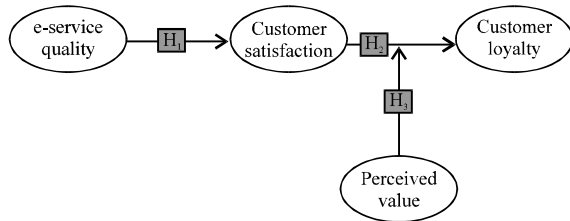
Fig. 1: Path model of e-Service quality, perceived value on custumer satisfaction and custumer loyalty

MATERIALS AND METHODS

Obtaining relevant data is important to collect information from participant (Chen *et al.*, 2014). This study will compare the effect of e-Service quality and customer perceived value toward customer satisfaction and loyalty in e-Commerce site context (Toufaily *et al.*, 2013). It will observe the customers who shop online by using several of e-Commerce big players in Indonesia especially for retail e-Commerce in Jakarta city. The city is selected, since it is representative region where the population is quite educated about e-Commerce service. The e-Service quality in this study was measured using a Likert scale of 1-5 items to measure customer loyalty and satisfaction. For e-Service quality subitems, it is combined

conventional service quality with e-Service quality as proposed in this study. The variable to measure the customer satisfaction is their feeling of like or dislike toward products or services and comparing with the customer expectations.

The variable of customer satisfaction in this study was measured using a Likert scale of 1-5 items with subitems of customer decision to buy, repeat purchase and buying decision on certain e-Commerce website. The customer loyalty is consisted of subitems of commitment to re-purchase or re-subscribe to the selected product or service consistently in the future. The variable of customer loyalty in this study was measured using a Likert scale of 1-5 items such as repurchase choice, website preferences and sites options.

RESULTS AND DISCUSSION

The SEM approach has been used in this study. The analysis of the data processing at the stage of full SEM Model has been conducted to test the model suitability and the statistical tests. The testing results of goodness-of-fit model are described in Table 3 and 4.

Based on the test results, the GFI values have and mostly fit values. It means that the proposed model is considered a quite good and can be accepted as

Table 3: Respondent characteristic in this study

Respondents	Total People	Percentages
Gender		
Male	111	55.5
Female	89	44.5
Occupation		
Private employees	97	48.5
Civil servants (PNS)	29	14.5
Students and college students	26	13
Entrepreneur	21	10.5
Housewives	13	6.5
Teachers/lecturers	14	7
Age		
25-30 years old	15	7.5
30-35 years old	49	24.5
35-40 years old	87	43.5
40-45 years old	25	12.5
45-50 years old	16	8
>50 years old	8	4
Educational background		
Primary/secondary	-	
SMA	9	4.5
High (D3, S1)	154	77
S2 and S3	37	18.5

Interview result

Table 4: Testing result of goodness-of-fit model

Index	Critical values	Results	Model evaluation
Chi-sqaure	0.000	416.167	Not fit
Probability level	≥0.050	0.000	Not fit
CMIN/DF	≤5.000	2.262	Fit
CFI	≥0.900	0.938	Fit
RMSEA	≤0.080	0.080	Fit
TLI	≥0.900	0.914	Fit
GFI	≥0.900	0.857	Marginal
AGFI	≥0.900	0.785	Not fit

Statistical testing results (2016)

appropriate model in this study. The result of the calculation of chi square of 416,167 with a significance probability of 0.000, so as chi-square value is not significant at a = 5% which means that there is no difference between the sample with the population. It can also be said that the difference between the sample populations were small and insignificant. RMSEA expected results for models to be accepted are ≤0.08. RMSEA value resulting from the calculation is equal to 0.000. He result is favourable because it meets the provisions of ≤0.08. AGFI can justify fit against df indices are available to test the admissibility of the model. The expected result is ≥0.90. Average count results indicate that AGFI value for 0785 is not fit for the same TLI is an alternative incremental fit index which compares a model that is tested against a base line model. The expected value is TLI≥0.90. The result of the calculation shows that the TLI for 0914 is better because it is more than 0.90. This means that chi-square, probability level, CMIN/DF, CFI, RMSEA, TLI, GFI, AGFI as the indicator of model eligibility is suitable to be used in this study.

e-Service quality has several sub items such as website design, reliability, web security and customer

Table 5: SEM test results

Variables/Relations	Standardized coefficients	CR
e-Service quality		
Website design	0.501	4.469
Reliability	0.507	3.308
Security	0.648	3.406
Customer service	0.390	2.755
Perceived value		
Worth of product	1.000	4.564
Need fulfilment	1.061	3.140
Customer effort	0.960	12.773
Branded trendy features	0.531	12.087
Customer satisfaction		
Website as first alternative	0.975	10.906
Website as best retail options	1.064	11.867
Website as favourite choice	1.000	11.253
Customer loyalty		
Repurchase intention	0.956	8.524
Recommendation to other	0.464	7.437
Paths		
e-Service quality toward customer satisfaction	0.680	3.121
e-Service quality toward customer loyalty	0.560	8.524
Perceived value toward customer loyalty	0.640	3.003
e-Service toward perceived value	0.860	3.681

SEM test result (2016)

service with values of 4.469, 3.308, 3.406 and 2.755, respectively. In the SEM testing result, the score ranged from 4.469-2.755 which mean that the participants in this study considered the website design as more important than customer services (Table 5).

For the perceived value (Table 3), it consisted worth of product, need fulfilment, customer effort and branded trendy features of 4.564, 3.140, 12.773 and 12.087, respectively. The participants considered the customer efforts as the most important.

Customer satisfaction represents the customer tendency to feel satisfied by using certain e-Commerce sites. Customer satisfaction in website services is indicated by customer preference toward the sites. In this study, it is consisted three subitems, e.g., the website as first alternative, the website as best retail option and the website as favourite choice with values of 10.906, 11.867 and 11.253, respectively. The analysis result showed that the participants prefers to consider that e-Commerce is used for retail purposes whereas the lowest value is the participants considered the e-Commerce sites as their first alternative in online transaction.

Finally the variables are then tested to estimate their relationship and influence. Our analysis result showed that e-Service quality influenced customer loyalty with value of 8.524. Whereas the lowest influence is the perceived value toward customer loyalty (= 3.003).

CONCLUSION

Based on the questionnaire results, it showed that the quality of e-Commerce sites as online stores is good enough. It is evidence from the participant response. This is supported by Anas that a very

good e-Commerce is indicated by their ability to provide information as customer needed. Adequate information and informative sites will lead to customer satisfaction. These results suggest that a good informative provide meaning (feedback) is positive for customer satisfaction. The participants in this study considered the website design as more important than customer services. Most participants considered that e-Service quality in e-Commerce site are represented by the website design and customer services to help the customer to find their branded products and services.

Most participants also rated that they are satisfied with their decision to purchase a product online stores on certain website. In addition, most respondents felt they will buy from the selected website as a wise selection and subsequent purchase, they feel better buying from this website. This represented their perceived value which consisted worth of product, need fulfilment, customer effort and branded trendy features. It evidence that the perceived value can influence customer satisfaction and represents the customer tendency to feel satisfied by using certain e-Commerce sites.

For customer security, it is presented by the customer feel that their privacy is protected in certain website so that, they feel safe in dealing with this website. Besides, this website has adequate security features so, they do not worry to transact on this website. In this case, customer satisfaction in website services is indicated by customer preference toward the sites. It is reasonable, since most participants use the e-Commerce sites as their first choice in retail transaction. Most participants interested in shopping online because of time constraints and the products a follows the trend. The participants has rated the products are very good and follow the trend.

Finally, e-Service quality can impact on higher satisfaction and loyalty among the participants as the participant considered that e-Service quality has been presented by website design and branded trendy features than security issues. This means that e-Commerce sites must provide favourite feature in order to improve their rating as favourite choice and recommended to other users. Customer with higher loyalty will recommended the products to other users and indicated by their intention to repurchase the product or service.

This study has measured the participant's perceived value and their loyalty as indicated by their intention to recommend the e-Commerce site to others. However, this study does not observed the product attributes or the e-Commerce type and their strategy model to survive in competition. Therefore, future research can propose such model especially for recommendation and their system especially from the price, brand or online store information to influence customers. In addition, it also does not evaluated the impact of customer-to-customer online know-how and how the e-Commerce sites can do exchange with their competitor in order to improve customer value and loyalty. Future study can combine marketing information on buying intention and also the utilization of e-Commerce which expanded to social networks to shape satisfaction process in retail setting.

Since, study of customer service quality also related to intelligence generation and predicted value added for customers, therefore, consumer opinion platforms can give benefits to e-Commerce entities to articulate their brand on the internet. Such effort can improve the entities credibility, responsiveness and affective responses to understand more their perceived customer value in e-Commerce.

REFERENCES

Bansal, H.S. and S. Taylor, 2015. Investigating the relationship between service quality, satisfaction and switching intentions. In: Proceedings of the 1997 Academy of Marketing Science (AMS) Annual Conference, Wilson E.J. and J.F. Hair (Eds.). Springer, Cham, ISBN:978-3-319-13140-5, pp: 304-313.

Bilgihan, A. and M. Bujisic, 2015. The effect of website features in online relationship marketing: A case of online hotel booking. Electron. Commerce Res. Appl., 14: 222-232.

Bilgihan, A., J. Kandampully and T. Zhang, 2016. Towards a unified customer experience in online shopping environments: Antecedents and outcomes. Intl. J. Qual. Serv. Sci., 8: 102-119.

Chang, S.F., J.C. Chang, K.H. Lin, B. Yu and Y.C. Lee *et al.*, 2016. Measuring the Service Quality of e-Commerce and Competitive Strategies. In: Web-Based Services: Concepts, Methodologies, Tools and Applications, Chang, S.F., J.C. Chang, K.H. Lin, B. Yu and Y.C. Lee *et al.* (Eds.). IGI Global, Dauphin County, Pennsylvania, pp: 431-450.

Chen, H., D. Hailey, N. Wang and P. Yu, 2014. A review of data quality assessment methods for public health information systems. Intl. J. Environ. Res. Publ. Health, 11: 5170-5207.

Chiu, C.M., E.T. Wang, Y.H. Fang and H.Y. Huang, 2014. Understanding customer's repeat purchase intentions in B2C e-Commerce: The roles of utilitarian value, hedonic value and perceived risk. Inf. Syst. J., 24: 85-114.

Delcourt, C., D.D. Gremler, A.C.V. Riel and M.V. Birgelen, 2013. Effects of perceived employee emotional competence on customer satisfaction and loyalty: The mediating role of rapport. J. Serv. Manage., 24: 5-24.

Du, Y. and Y. Tang, 2014. Study on the development of O2O e-Commerce platform of China from the perspective of offline service quality. Intl. J. Electron. Commerce Res., 14: 1-23.

Flanagin, A.J., M.J. Metzger, R. Pure, A. Markov and E. Hartsell, 2014. Mitigating risk in e-Commerce transactions: Perceptions of information credibility and the role of user-generated ratings in product quality and purchase intention. Electron. Commerce Res., 14: 1-23.

George, A. and G.G. Kumar, 2014. Impact of service quality dimensions in internet banking on customer satisfaction. Decis., 41: 73-85.

Hapsari, R., R. Hapsari, M.D. Clemes, M.D. Clemes and D. Dean *et al.*, 2017. The impact of service quality, customer engagement and selected marketing constructs on airline passenger loyalty. Intl. J. Qual. Serv. Sci., 9: 21-40.

Hossain, M., 2015. e-Commerce in consumer to consumer. Master Thesis, East West University, Chicago, Illinois.

Hsu, C.L., M.C. Chen and V. Kumar, 2016. How social shopping retains customers? Capturing the essence of website quality and relationship quality. Total Qual. Manage. Bus. Excellence, 1: 1-24.

Izogo, E.E. and I.E. Ogba, 2015. Service quality, customer satisfaction and loyalty in automobile repair services sector. Intl. J. Qual. Reliab. Manage., 32: 250-269.

Kurnia, S., R.J. Karnali and M.M. Rahim, 2015. A qualitative study of business-to-business electronic commerce adoption within the Indonesian grocery industry: A multi-theory perspective. Inf. Manage., 52: 518-536.

Lallmahamood, M., 2015. An examination of individualâ s perceived security and privacy of the internet in Malaysia and the influence of this on their intention to use e-Commerce: Using an extension of the technology acceptance model. J. Internet Banking Commerce, 12: 1-26.

Lee, M.K., R. Verma and A. Roth, 2015. Understanding customer value in technology-enabled services: A numerical taxonomy based on usage and utility. Serv. Sci., 7: 227-248.

Martinez, P. and D.I.R. Bosque, 2013. CSR and customer loyalty: The roles of trust, customer identification with the company and satisfaction. Int. J. Hospitality Manage., 35: 89-99.

Metzger, M.J. and A.J. Flanagin, 2013. Credibility and trust of information in online environments: The use of cognitive heuristics. J. Pragmatics, 59: 210-220.

Ng, M. and J. Hort, 2014. Insights into Measuring Emotional Response in Sensory and Consumer Research. In: Rapid Sensory Profiling Techniques: Applications in New Product Development and Consumer Research, Delarue, J., J.B. Lawlor and M. Rogeaux (Eds.). Elsevier, Amsterdam, Netherlands, ISBN:9781782422488, pp:71-90.

Oliver, R.L., 2014. Satisfaction: A Behavioral Perspective on the Consumer. Routledge, Abingdon, UK.,.

Orel, F.D. and A. Kara, 2014. Supermarket self-checkout service quality, customer satisfaction and loyalty: Empirical evidence from an emerging market. J. Retailing Consum. Serv., 21: 118-129.

Pizam, A., A. Pizam, V. Shapoval, V. Shapoval and T. Ellis *et al.*, 2016. Customer satisfaction and its measurement in hospitality enterprises: A revisit and update. Intl. J. Contemp. Hospitality Manage., 28: 2-35.

Sharma, G. and W. Lijuan, 2014. Ethical perspectives on e-Commerce: An empirical investigation. Int. Res., 24: 414-435.

Shi, X. and Z. Liao, 2017. Online consumer review and group-buying participation: The mediating effects of consumer beliefs. Telematics Inf., 34: 605-617.

Shin, W., A. Pang and H.J. Kim, 2015. Building relationships through integrated online media: Global organization's use of brand web sites, Facebook and Twitter. J. Bus. Tech. Commun., 29: 184-220.

Stiglingh, M., 2014. A measuring instrument to evaluate e-Service quality in a revenue authority setting. Publ. Relat. Rev., 40: 216-225.

Subramanian, N., A. Gunasekaran, J. Yu, J. Cheng and K. Ning, 2014. Customer satisfaction and competitiveness in the Chinese E-retailing: Structural Equation Modeling (SEM) approach to identify the role of quality factors. Expert Syst. Appl., 41: 69-80.

Toufaily, E., N. Souiden and R. Ladhari, 2013. Consumer trust toward retail websites: Comparison between pure click and click-and-brick retailers. J. Retailing Consum. Serv., 20: 538-548.

Vezzoli, C., C. Kohtala, A. Srinivasan, L. Xin and M. Fusakul *et al.*, 2014. Product-Service System Design for Sustainability. Greenleaf Publishing, New York, USA.,.

Wu, L.Y., K.Y. Chen, P.Y. Chen and S.L. Cheng, 2014. Perceived value, transaction cost and repurchase-intention in online shopping: A relational exchange perspective. J. Bus. Res., 67: 2768-2776.

Xiao, N., R. Sharman, H.R. Rao and S. Upadhyaya, 2014. Factors influencing online health information search: An empirical analysis of a national cancer-related survey. Decis. Support Syst., 57: 417-427.

Xu, J.D., I. Benbasat and R.T. Cenfetelli, 2013. Integrating service quality with system and information quality: An empirical test in the e-Service context. MIS. Q., 37: 777-794.

Zhuang, W. and B.J. Babin, 2015. The Influence of e-Service-Quality on Customer Value Perception and Satisfaction: The Case of Third-Party Web Sites. In: Marketing Dynamism and Sustainability: Things Change, Things Stay the Same, Robinson, L. (Ed.). Springer, Cham., ISBN:978-3-319-10911-4, pp: 114-117.