

The analysis of forming dimensions of e-service quality for online travel services

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ABSTRACT

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The development of technology and information has influenced people's lifestyles in making purchases from conventional to online shopping. Research on online marketing has become an interest in academics and practitioners in recent years. Measurement for e-service quality in this study will be reconstructed based on a review on previous conceptual and empirical literature. The purpose of this research is to build customer e-service through the reconstruction of e-service quality dimensions. The research uses cross-section data with geographically dispersed location of users of online travel services in the region of Indonesia. Model testing is performed using structural equation modeling with a sample count of 262 respondents. The analysis results show that the efficiency and incentive dimensions meet the creation of the e-service quality construct.

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1. Introduction

The activity of shaping an online lifestyle in the community such as shopping activities that were once only known through physical stores can now be done online (Tsang et al., 2010; Park et al., 2007; Rowley, 2006; Pool et al., 2016). The trading process that used to require customers to meet face to face now only becomes limited to pressing the screen (click) on gadgets integrated with internet technology. Online business transactions through internet media and internet-integrated devices are included in e-commerce (Laudon & Traver, 2012). However, e-commerce in Indonesia is not without barriers. One that can inhibit the development of e-commerce in Indonesia is the fear of society to start doing transactions online (Sukma, 2012; Gaertner & Smith, 2001; Aribowo & Nugroho, 2013). The current lifestyle shifts when communities are up and down in managing their consumption spending is more focused on gaining experience than to buy goods or physical consumable material. The presence of Internet technology with various applications has made it easier for human life because of old work that is no longer needed. Important online service providers to continuously improve the quality of online services (e-service quality) that they offer to meet the needs of customers. To provide superior quality of electronic services, managers need to understand how customers view and evaluate online sales and services. Not surprisingly, the conceptualization and quality measurement of electronic services has received a lot of attention and study in online sales (Blut et al., 2015). The construction or dimensions of e-service quality are widely defined to cover all phases of customer interaction with online services and sales. Wolfenbarger and Gilly (2003) define the quality of electronic services as an act of users of online services from the beginning to the end of the transaction. including information retrieval, privacy policy, website navigation, booking process, customer service interactions, delivery, policy returns and satisfaction with the products ordered. As such, the available steps include many service attributes or online stores. such as an online appeal assortment. the convenience of ordering processes. and the quality of return policy among many other attributes. Hence, this study aims to reconstruct the dimensions of e-service quality and effectively specifically testing the dimensions of e-service quality.

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2. Literature review and hypotheses development

2.1 Ecommerce

Peter and Olson (2013) stated that electronic commerce or e-commerce is the process by which buyers and sellers perform exchange of information of money and goods through electronic means, especially on the internet. According to Kertajaya (2012), e-commerce is a business model where products are sold directly to consumers (B2C) or to other businesses (B2B). Clow and Baack (2012) state that e-commerce sites include catalogs, shopping carts, payment collection methods, and searching features of e-commerce and other internet ventures. Consumers should trust that this is a safe process and will be interested in changing their buying habits. Three things that help people change the buying pattern are financial, convenience and value added. Currently, e-commerce has taken many forms depending on the level of digitization or transformation from physical to digital from products or services sold, processes (e.g. ordering, payment, fulfillment) and shipping methods (Turban et al., 2008). Company's dimensions of product process and delivery are all physical and considered a traditional trade transaction. When a company performs operations with at least one of its digital dimensions. The company is considered to transact e-commerce. Pure electronic trading occurs in all digital dimensions. In other worlds digital products (e.g., software, e-books, music or movies), processes using digital processing (such as products or services ordered and paid online) and shipments in digital format by submitting products or services via the internet.

2.2 Online travel agencies

The spread of electronic networks has greatly changed business and consumer behavior even in the tourism industry. The online travel electronic services business has grown rapidly and has become one of the star features of this transformation. Tourism and the internet are very related in the world today (Karekar, 2014). Consequently, a new way of running a business has evolved. The tourism industry experienced a remarkable change from offline to online tourism. E-tourism has now pushed forward the surge in activities and event tours around the world including the advancement of tourism in Indonesia (Nugroho et al., 2017). Traditional forms of tourism give way to a new pattern of tourism marketing based on innovative specialized services that are widely influenced by e-tourism.

2.3 E-service quality

Previous studies describe the quality of service as an elusive and abstract concept. It is considered similar appraisal for an attitude as it represents the general aspect of overall assessment of a product or services (Parasuraman, Berry & Zeithaml, 1988). Unlike the quality of goods which can be measured objectively with such indicators as durability, the quality of service is abstract and difficult to understand because of the three features unique to the service i.e., intangibility, heterogeneity and inseparability of production and consumption (Parasuraman, Berry & Zeithaml, 1988). Kumar and Dash (2015) stated that the rise of internet-based services has changed the way companies and consumers interact. The importance of measuring and monitoring the dimensions of e-service quality in the virtual world has been recognized by the increasing adoption of e-service quality in the business field. The development of service quality models highlights changes in the service delivery process from conventional service to IT-based services. E-service quality is a service provided on the internet network as an extension of the ability of a site to facilitate the shopping, purchasing and distribution activities effectively and efficiently (Wu, 2011).

2.4 Efficiency as a Reconstruction of E-Service Quality Model

Various studies on e-Service quality found a wide variety of models of e-service quality forming dimensions. The most recent research conducted by Blut (2016) found that the construction of e-service quality in accordance with the model structure of factors that connect the perception of quality of online services with different dimensions and actionable with a simple model which of the 7 dimensions of the previously developed e-service quality is simplified to 4 dimensions. Four -dimensional measurement of e-service quality is website design, fulfillment, customer service and security/privacy. Blut (2016) has proposed the design dimension of website design, fulfillment, customer service, and security/privacy as the primary dimension combined with dimensional use. The novelty of dimensional measurement of e-service quality in this research by adding 2 dimensions which are efficiency and incentive as a dimensional reconstruction offer e-service quality. Sahadev and Purani (2008) stated to measure the e-service quality required is the efficiency and other dimensions of system availability, fulfillment and privacy. Sahadev and Purani (2008), Pool et al. (2016) expressed that efficiency is the ease and speed of accessing and using the site. An efficient company is a company that in production produces goods or services quickly, smoothly and at a minimum cost. In e-service quality, the use of efficiency is the ease and speed of accessing and using the site (Zeithaml et al., 2013; Nugroho et al., 2017). The indicators expressed by Sahadev and Purani (2008) are the ease of correcting the website. Information/search needs are quickly accessed and information on site is well organized.

2.5 Incentive as a reconstruction of E-Service Quality Model

Santos (2003) states incentives are encouragement given by website providers to customers to search for and use website sites including rewards for making transactions. Since website sites are highly competitive environments and incentives encourage users of online services to assess websites and are interested in engaging in online purchases/transactions, making consumers interested in participating in market research. Santos (2003) suggests that websites offering some discounts, attractive prizes or other incentives will likely make consumers to buy products online from on go shopping to the service or shop offline. Thus, incentives can be evidenced as a dimension to maintaining or making loyal customers online. Santos (2003) suggests

that the company puts more emphasis on incentive dimensions in building quality of online services. As for the indicators to measure, the effectiveness of the dimensions of the incentive through discount program offers, prizes, shopping points program and other incentive programs (Santos, 2003).

Table 1

Dimensions of E-Service Quality

| No | Dimension/Construct | Definition |
|----|---------------------|--|
| 1 | Website Design | The website interface is well designed and visually appealing. it is easy for customers to use the website (ease of use). as well as the technical functions of a good website (system availability) |
| 2 | Fulfillment | Accuracy of service appointments. including stock availability in products and delivering products in the promised time or consistency of performance and Reliance on website sites (reliability) |
| 3 | Customer Service | Effective handling of problems and refunds through the website (responsiveness). special care and attention communication is provided to customers through electronic channels (empathy) |
| 4 | Security/privacy | Website Security and customer information protection |
| 5 | Efficiency | Ease and speed of accessing and using the site |
| 6 | Incentive | The boost/bid provided by the website provider to the customer to use the website. including Promotions. discounts and Rewards for making transactions. |

Source: Blut (2016). Sahadev and Purani (2008) and Santos (2003)

2.6. Quality Electronic Services

The quality gap in electronic services holds the key to experiencing a better website when dealing with online businesses. Furthermore, this leads to an increase in the e-service quality, the perceived value, and the most important price and buyback. The importance of the quality of electronic services highlighted by Zeithaml, Parasuraman and Malhotra (2002) who claimed that the e-service quality gap repairs would lead to customer satisfaction resulting in improved perception, value, purchase and repurchase of e-service quality. Gap information represents the difference between the website requirements that customers want and management. Gap design represents a failure to incorporate knowledge about customer needs into the structure and functioning of the website. Gap communication constitutes promises that are inaccurate or escalated about a website made through traditional media and on the website itself and the fulfillment gaps represent the difference between the user's needs and experience. In the end, gap fulfillment comes from the cumulative effect of information and gap design. Thus, this study proposed following hypotheses:

- H₁.** *Website Design is a dimension of e-service quality.*
- H₂.** *Fulfillment is a dimension of e-service quality.*
- H₃.** *Customer Service is a dimension of e-service quality.*
- H₄.** *Security/privacy is a dimension of e-service quality.*
- H₅.** *Efficiency is a dimension of e-service quality.*
- H₆.** *Incentives are a dimension of e-service quality.*

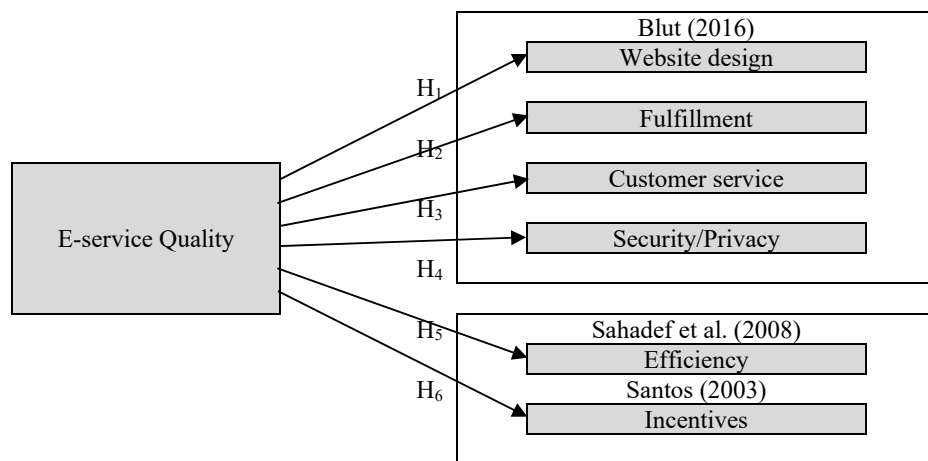


Fig. 1. Research model for analyzing the effect of E-Service Quality

3. Research method

This research uses quantitative data types. This research uses cross-sectional settings by spreading questionnaires throughout Indonesia. The population in this research is all active users of online travel agencies (OTA) in Indonesia that are scattered geographic in many regions. Thus, the magnitude of the population is not known with certainty. According to Kline in the Riadi

(2018), structural equation modeling (SEM) is a large sample measurement technique ideally $N > 200$ and the required sample size depends on researchers and model complexity. The provisions of the estimation method used are variable observed or path parameters. The online survey spread obtained a sample amount of 262 respondents. The sample selection is done using the purposive sampling method which is the sampling technique with certain considerations (Sugiyono, 2014). The recapitulation of the sample selection procedure is presented at Table 2.

Table 2

Sample Selection Procedure Table

| Sample selection criteria | |
|---------------------------|--|
| 1. | Active users of travel services or Online Travel Agencies (OTA) in Indonesia at least the last 6 months. |
| 2. | Users of travel services or Online Travel Agencies (OTA) are willing to fill out a questionnaire online. |
| 3. | Over 17 years old. |

This research uses e-service quality which indicator is entirely adapted from the results of the study of Blut (2016) which was then developed by adding efficiency and incentive variables based on the results of different research as model development. Website Design (WD) represented by 9 indicators, fulfillment (FL) represented by 3 indicators. Customer Service (CS) represented by 2 indicators, security/privacy (SC) represented by 2 indicators. Efficiency (EFF) represented by 3 indicators and incentive (IN) represented by 3 indicators.

4. Results and discussion

4.1. Reliability test with Construct Reliability

Zikmund et al. (2013) suggests that a study is said to be true if there is a reliable test for measuring internal consistency. Consistency is key to understanding reliability. Sizes are reliable when different attempts at measuring something unite on the same result. Zikmund et al. (2013) states that the concept of reliability is internal consistency. The statement indicates that the reliability test is an index indicating the extent to which the measurement tool is trustworthy or reliable. It means that with the reliability test the consistency of measurements from time to time can be seen from the statistical test with significant gains from the value of p -value < 0.5 and also the value of $C.R > 1.96$. The table below shows the results of an e-service quality-forming dimension reliability test with construct reliability.

Table 3

Regression Weights incentive forming E-service Quality

| Relationship | C.R | p | Std. Est | Results |
|--------------|--------|-----|----------|----------|
| WD4 ← WD | 11.507 | *** | .843 | Reliable |
| WD5 ← WD | 10.777 | *** | .770 | Reliable |
| WD6 ← WD | 9.858 | *** | .692 | Reliable |
| WD7 ← WD | 11.420 | *** | .840 | Reliable |
| WD8 ← WD | 11.516 | *** | .858 | Reliable |
| WD9 ← WD | 8.999 | *** | .631 | Reliable |
| WD10 ← WD | 10.608 | *** | .760 | Reliable |
| WD11 ← WD | 10.082 | *** | .564 | Reliable |
| WD12 ← WD | | | .643 | Reliable |
| FL1 ← FL | | | .830 | Reliable |
| FL2 ← FL | 12.864 | *** | .713 | Reliable |
| FL3 ← FL | 15.585 | *** | .814 | Reliable |
| FLa1 ← FLa | | | .769 | Reliable |
| FLa2 ← FLa | 14.148 | *** | .812 | Reliable |
| FLa3 ← FLa | 12.656 | *** | .741 | Reliable |
| CS3 ← CS | | | .560 | Reliable |
| CS2 ← CS | 8.783 | *** | .725 | Reliable |
| CS1 ← CS | 8.824 | *** | .636 | Reliable |
| CSa2 ← CSa | 9.643 | *** | .949 | Reliable |
| CSa1 ← CSa | 9.134 | *** | .775 | Reliable |
| CSa3 ← CSa | | | .560 | Reliable |
| SC1 ← SC | | | .914 | Reliable |
| SC2 ← SC | 21.096 | *** | .873 | Reliable |
| SC3 ← SC | 18.517 | *** | .824 | Reliable |
| SCa 1 ← SCa | | | .407 | Reliable |
| SCa 2 ← SCa | 10.696 | *** | .544 | Reliable |
| SCa 3 ← SCa | 7.472 | *** | .559 | Reliable |
| EFF1 ← EFF | | | .782 | Reliable |
| EFF2 ← EFF | 9.523 | *** | .817 | Reliable |
| EFF3 ← EFF | 8.952 | *** | .628 | Reliable |
| INS1 ← INS | | | .826 | Reliable |
| INS2 ← INS | 13.287 | *** | .908 | Reliable |
| INS3 ← INS | 11.429 | *** | .677 | Reliable |

The result showed the reliability (CR) value > 1.96 while Sig < 0.05. Thus, all existing statement items are valid to be used as e-Servqual measurements.

4.2 Hypothesis testing

Test results conducted as in table 4 showed that there is a statistically significant positive relationship between website design, fulfillment, customer service, security/privacy, efficiency and incentives with the measurement dimensions of e-service quality.

Table 4

Shaping dimension of e-service quality

| Hypothesis | Std. Est | C.R | p |
|---|----------|--------|-----|
| H ₁ : Website design is a dimensional forming of e-Service quality measurement | .934 | 22.658 | *** |
| H ₂ : Fulfillment is a dimensional forming of e-Service quality measurement | .882 | 21.134 | *** |
| H ₃ : Customer service is a dimensional forming of e-Service quality measurement | .860 | 19.471 | *** |
| H ₄ : Security/privacy is the dimension forming measurement e-Service quality | .827 | 18.233 | *** |
| H ₅ : Efficiency is a dimensional forming of e-Service quality measurement | .800 | 14.955 | *** |
| H ₆ : incentive is a dimensional forming of e-Service quality measurement | .722 | 22.658 | *** |

*** p-value = Sig<0.05; CR > 1.96

The result of testing of e-service forming dimensions obtained construct reliability (C.R) value > 1.96 while Sig< 0.05. The above six dimensions have been demonstrated through the testing of the measurement model as a new measuring dimension forming in e-service quality. Thus, the construction model creation corresponds to the first hypothesis until the sixth meets the dimension of e-Service quality. Thus, all hypotheses were accepted. The findings of this research empirically explain the dimensions of website design, fulfillment. customer service, security/privacy, efficiency and incentives as a measurement forming of e-service quality. The presentation model of the formation of e-service quality is as in Fig. 2.

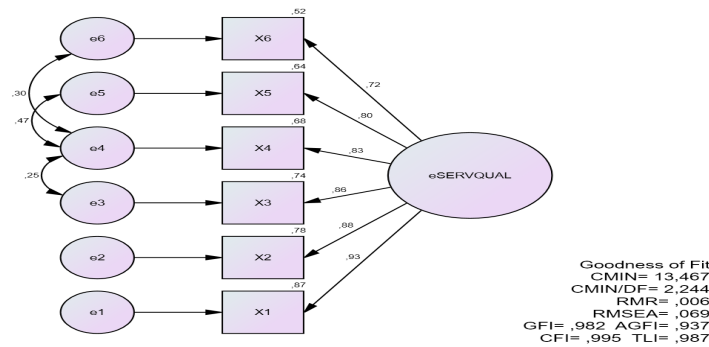


Fig. 2. Reconstruction of dimensions of E-Service Quality

The results highlight that improving efficiency is one of the things that is always a target in every company. A company with high efficiency reflects its ability to accomplish every job as per the set target. Sahadev and Purani (2008) stated that efficiency will impact on increased customer confidence and can be a valuable experience for the next year. Moreover, the more efficient the company, the more profitable companies can be distributed to employees such as salary increase, bonus and so on. Santos (2003) found that websites offering some incentives, discounts, attractive prizes, or other incentives make consumers likely to buy products online from on go shopping to the service or offline shop. Thus, incentives can be evidenced as a dimension to maintaining or making loyal customers online. Santos (2003) suggests that the company puts more emphasis on incentive dimensions in building quality of online services.

5. Conclusion

The rise of internet-based services has changed the way companies and consumers interact. The importance of measuring and monitoring the dimensions of e-service quality in the virtual world has been recognised by the increasing adoption of e-service quality in the business field. The development of service quality models highlights changes in the service delivery process from conventional service to it-based services. This development of technology and information has influenced people's lifestyles in making purchases from conventional to online shopping. This makes research on online marketing become an interest for academics and practitioners in recent years. Measurement for e-service quality in this study will be reconstructed based on review on conceptual and empirical previous literature. The results showed that website design is the dimensional forming of e-service quality measurement. Fulfillment is also empirically proven to be a dimension forming measurement of e-service

quality. Next findings also showed that customer service, security /privacy, efficiency and incentives are also the dimensions of e-service quality measurement.

References

- Aribowo J. P. D., & Nugroho A. M. (2013). Influence of Trust and Perceived of Risk to the intention to transact using E-Commerce. *Nominal Journal* 2(1).
- Blut, M. (2016). E-service quality: development of a hierarchical model. *Journal of Retailing*, 92(4), 500-517.
- Blut, M., Chowdhry, N., Mittal, V., & Brock, C. (2015). E-service quality: A meta-analytic review. *Journal of Retailing*, 91(4), 679-700.
- Clow, K. E., & Baack, D. (2012). *Integrated Advertising, Promotion and Marketing Communication*, Pearson.
- Fu Tsang, N. K., Lai, M. T., & Law, R. (2010). Measuring e-service quality for online travel agencies. *Journal of Travel & Tourism Marketing*, 27(3), 306-323.
- Gaertner, N., & Smith, M. (2001). E-commerce in a Web-based environment: auditing relative advantages in the Australian health sector. *Managerial Auditing Journal*, 16(6), 347-365.
- Karekar, S. A. (2014). Factor Analytic Study on Service Quality Perceptions and Satisfaction in the E-Tourism. *IRJA Indian Research Journal* 1(2).
- Kertajaya, H. (2012). *Creative-Based Tourism in Jawa Barat*.
- Kumar, A., & Dash, M. K. (2015). Effectiveness of electronic service dimensions on consumers' electronic buying behaviour and exploration of different groups. *International Journal of Business Innovation and Research*, 9(1), 81-99.
- Laudon, K. C., & Traver, C. G. (2016). *E-commerce: business, technology, society*. Global Edition. New York
- Lee, F. H., & Wu, W. Y. (2011). Moderating effects of technology acceptance perspectives on e-service quality formation: Evidence from airline websites in Taiwan. *Expert Systems with Applications*, 38(6), 7766-7773.
- Nugroho, A. H., Bakar, A., & Ali, A. (2017). Analysis of technology acceptance model: Case study of Traveloka. *Arthatama: Journal of Business Management and Accounting*, 1(1), 32-37.
- Park, Y. A., Gretzel, U., & Sirakaya-Turk, E. (2007). Measuring web site quality for online travel agencies. *Journal of Travel & Tourism Marketing*, 23(1), 15-30.
- Peter, J. P., Olson, J. C., & Grunert, K. G. (1999). *Consumer behaviour and marketing strategy* (pp. 329-48). London: McGraw-Hill.
- Pool, J. K., Dehghan, A., Jamkhaneh, H. B., Jaber, A., & Sharifkhani, M. (2018). The effect of e-service quality on football fan satisfaction and fan loyalty toward the websites of their favorable football teams. In *Sports Media, Marketing, and Management: Breakthroughs in Research and Practice* (pp. 470-485). IGI Global.
- Riadi. (2018). *SEM Statistics: Structural equation modeling with lisrel*. Yogyakarta: Andi Offset
- Rowley, J. (2006). An analysis of the e-service literature: towards a research agenda. *Internet research*, 16(3), 339-359.
- Sahadev, S., & Purani, K. (2008). Modelling the consequences of e-service quality. *Marketing Intelligence & Planning*, 26(6), 605-620.
- Santos, J. (2003). E-service quality: a model of virtual service quality dimensions. *Managing Service Quality: An International Journal*, 13(3), 233-246.
- Sugiyono. (2014). *Quantitative, qualitative, and R & D. research method*. Bandung: Alfabeta.
- Sukma, A. A. (2012). Analisis faktor-faktor yang mempengaruhi keputusan pembelian melalui social networking websites. publication.gunadarma.ac.id
- Turban, E., Lee, J., King, D. and Viehland, D. (2006). *E-commerce: A Managerial Perspective*. Prentice Hall
- Wolfenbarger, M., & Gilly, M. C. (2003). eTailQ: dimensionalizing, measuring and predicting retail quality. *Journal of retailing*, 79(3), 183-198.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1988). Communication and control processes in the delivery of service quality. *Journal of marketing*, 52(2), 35-48.
- Zeithaml, V. A., Bitner, M. J., Gremler, D. D., & Pandit, A. (2006). *Services marketing: Integrating customer focus across the firm*. New York: McGraw Hill.
- 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.

