

## Indirect Effects of Website Quality Dimensions on Customer Loyalty through Customer Satisfaction: Empirical Evidence from Indonesia's Banking Industries

Toto Sugiharto

Department of Business Management, Faculty of Economics, Gunadarma University,  
Jl. Raya Margonda, 164242 Pondokcina Depok, Indonesia

---

**Abstract:** This study empirically examines indirect impacts of web quality dimension on customer loyalty through customer satisfaction with internet banking service quality in the Indonesian banking industry. The primary data were obtained from 200 respondents of ten banks using self-administered questionnaire through personal contact. Path analysis was performed to test the proposed hypotheses. It was found that web quality dimensions which include accessibility and security, speed and facility of access, information quality, interaction facilities and contact and (design in different strengths and magnitudes significantly affect customer loyalty through customer satisfaction. Information quality or informativeness of website was identified as the most important dimension of web quality in influencing customer satisfaction and, in turn, customer loyalty.

**Key words:** Web quality dimensions, customer satisfaction, customer loyalty, interaction facilities and contacts, banking industries

---

### INTRODUCTION

Internet, based on its cost effectiveness and speed of information transmission, has been identified as the ideal medium for accomplishing banking activities (Floh and Treiblmaier, 2006). It is comprehensible, therefore, for banks to change their primary activities from traditional off line to more efficient and sophisticated online-internet banking or electronic banking (e-Banking). This change requires banks to invest a lot of money in internet infrastructure. Since, the banks invest billions in the internet infrastructure, customer satisfaction and customer loyalty are assumed as key success factors in e-Banking (Bauer, 2005). Accordingly, establishing long-term customer relationships is a prerequisite for generating positive customer value on the internet. In the mean time, the question of how to promote customer loyalty arises when the relationship between the bank and the user becomes a virtual one.

The importance of loyalty in the context of electronic business has been acknowledged and has been analyzed by a number of studies (Reichheld and Scheffer, 2000; Reichheld *et al.*, 2000; Lynch *et al.*, 2001; Bauer, 2005; Lin, 2007). Customer is defined as loyalty as a commitment that is deeply held by customers to repurchase or re-patronize a preferred product and service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching

behavior (Yee and Faziharudean, 2010; Oliver, 1999). This general definition and its related characteristics, according to Ribbink *et al.* (2004) and Yee and Faziharudean (2010) are in effect to online loyalty.

There are a variety of factors that should be taken into consideration in order to enhance internet banking customer loyalty. One of which is that websites are required to put a strong emphasis on their customers' quality demands, which are steadily changing and increasing over time due to the growing competition in the internet banking industry (Jun and Cai, 2001). On top of that, it has been identified that loyalty plays a very crucial role in improving long-term profitability. Customer loyalty of internet banking are also influenced by several factors, these include, amongst others, trust, habit, bank reputation and customer satisfaction. Satisfaction was identified as important determinant of loyalty (Floh and Treiblmaier, 2006; Yee and Faziharudean, 2010; Agaga and Nor, 2012).

With an increasing number of customers including customers of internet banking being online, the importance of websites for influencing purchasing decisions is rising steadily. Accordingly, measuring the quality of websites from a users' point of views pose a crucial role and has the potentials for companies to take corrective actions, develop an appropriate e-Banking strategy and improve their operations (Ganapathy *et al.*, 2004). For this purpose this study through a literature review, five dimensions of website quality have been

identified which include accessibility and security, speed and facility of access, information quality (informativeness), interaction facilities and contact and website design and interactivity. These dimensions are assumed to have potential impact of customers satisfaction of using internet banking (Lin, 2007; Yaghoubi *et al.*, 2011; Sadeh *et al.*, 2011).

This study is aimed at analyzing the effect of web quality dimensions (i.e., accessibility and security, speed and facility of access, information quality (informativeness), interaction facilities and contact and website design and interactivity) on customer satisfaction and in turn, on customer loyalty in Indonesia's banking sector.

## MATERIALS AND METHODS

**Research model and hypothesis:** Research model which illustrates causal relationships amongst research variables, is shown in the Fig. 1. The dimensions are as follows accessibility and security (Dim\_1), speed and facility of access (Dim\_2), information quality (Dim\_3), interaction facilities and contact (Dim\_4) and website design and interactivity (Dim\_5). Based on the model depicted in the following six hypotheses were formulated:

- H<sub>1</sub>: accessibility and security positively affects customer satisfaction
- H<sub>2</sub>: speed and facility of access positively affects customer satisfaction
- H<sub>3</sub>: information quality (informativeness) positively affects customer satisfaction
- H<sub>4</sub>: interaction facilities and contact positively affects customer satisfaction
- H<sub>5</sub>: website design and interactivity positively affects customer satisfaction
- H<sub>6</sub>: Customer satisfaction positively affects customer loyalty

**Data set and analysis:** Primary data were collected from 200 respondents of ten banks (i.e., each bank was represented by 20 respondents which were randomly selected) which are listed in the Indonesia's Stock Exchange (IDX) using a set of valid and reliable questionnaires.

### List of participated banks:

- Bank Mandiri
- Bank BNI
- Bank Centra Asia
- Bank Mega
- Bank Rakyat Indonesia
- Bank Danamon Indonesia

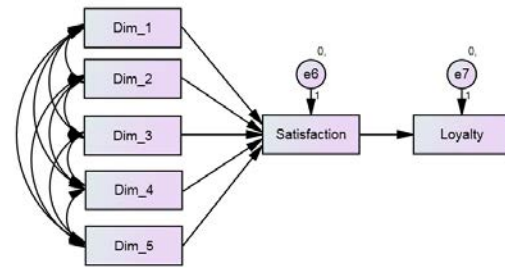


Fig. 1: Theoretical model

- Bank Tabungan Negara
- Bank Bukopin
- Bank CIMB Niaga
- Bank Internasional Indonesia

Web quality dimensions, customer satisfaction and customer loyalty questionnaires.

### Variable dimensions and questions

#### Accessibility and security:

- Website is easy to access and to navigate
- Website is always available and easy to find
- Website has adequate security system for transaction

#### Supporting facilities completeness:

- Website has adequate search facilities
- Website has valid and variety of links
- Website can be personalized

#### Information quality:

- The information available in the website is useful for me
- The information available in the website is complete and comprehensive
- The information available in the website is clearly presented and easy to understand
- The information available in the website is accurate and trustworthy

#### Supporting customer needs:

- In this website, source or contact of information that can be contacted is available (i.e., telephone number, email address, etc.)
- In this website, general information about the organization or the company owner of this website (vision, mission, organizational goals, organizational structure, etc.) is available
- In this website, information on the rights and obligations of users is provide

- In this website, information about the services that can be utilized by customers/users are provided

#### Design:

- The appearance of this website looks appealing (attractive)
- The appearance of this website is neatly arranged
- This website uses font size in a proportional manner
- This website uses color matching system

#### Customer satisfaction:

- This website is one of many similar websites that I need
- My decision to access and use this website to find information and (if necessary) the transaction is the right decision
- This website can be accessed and navigated easily without any problems
- Overall, I really like this website
- Overall, I was satisfied with all the service facilities provided by this website

#### Customer loyalty:

- I will re-visit and re-use of this website
- Of the many similar websites, I just want to use this website as a primary choice
- I would recommend this website to friends, colleagues and my family

Path analysis was performed on the collected data to empirically test the formulated and proposed hypotheses.

## RESULTS AND DISCUSSIONS

The resulted empirical models and their related attributes such as regression coefficients both unstandardized coefficients and standardized coefficients (path coefficients), determination coefficients and intercepts or constants are presented in Fig. 2.

The resulted parameters (i.e., regression coefficients, path coefficients, determination coefficients) and their statistical significance are depicted in Table 1 which follows.

As clearly shown in Fig. 2 and Table 1, website quality dimensions including accessibility and security, speed and facility of access, information quality (informativeness), interaction facilities and contact and website design and interactivity are found to have simultaneous significant and positive effect on customer satisfaction. These web quality dimensions simultaneously affect customer satisfaction; their contribution to customer satisfaction is no less than 73 % which means that approximately 73% of variability in customer satisfaction can be explained or are controlled by these variables. Partially, their impact on customer satisfaction are varied both in term of magnitude (i.e., regression and or path coefficients) and strengths (i.e., statistical significance: 1. 5 or 10 % of alpha). Information quality or informativeness of the website (i.e., Dim\_3), in the mean time, is found as the most important website quality dimension in affecting customer satisfaction. This is indicated by its both regression and path coefficients (i.e., 0.399 and 0.403, respectively).

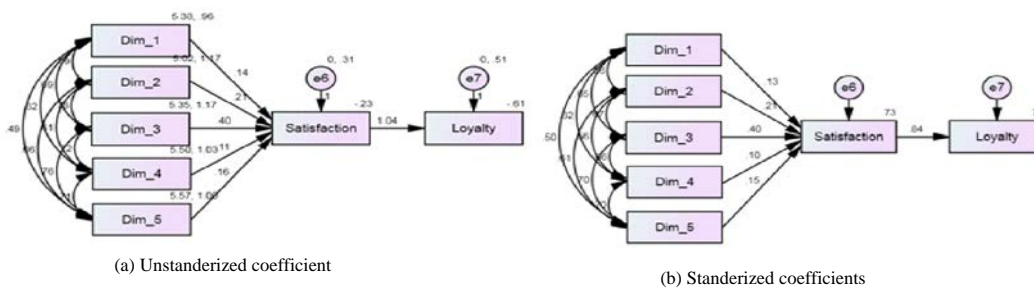


Fig. 2: The resulted empirical model

Table 1: Statistical significance of regression, path and determination coefficients

Effect of coefficients

IV	On	DV	Regression	Path	Sig.	CD	Sig.
Dim_1	→	Satisfaction	0.144	0.132	0.014***	0.731	0.000***
Dim_2	→	Satisfaction	0.207	0.209	0.000***	-	-
Dim_3	→	Satisfaction	0.399	0.403	0.000***	-	-
Dim_4	→	Satisfaction	0.110	0.104	0.078***	-	-
Dim_5	→	Satisfaction	0.160	0.150	0.013***	-	-
Satisfaction	→	Loyalty	1.036	0.841	0.000***	0.707	0.000***

Dim\_1: accessibility and security, Sig.: statistical significance; Dim\_2: speed and facility of access; \*\*\*significant at alpha 1%; Dim\_3: information quality (informativeness); \*\*\*significant at alpha 5%; Dim\_4: interaction facilities and contact; \*\*\*significant at alpha 10%; Dim\_5: website design and interactivity; CD: Coefficient of Determination

In general, these findings are not different from previous similar studies such as Floh and Treiblmaier (2006), Bauer (2005), Reichheld and Scheffer (2000), Reichheld *et al.* (2000), Lynch *et al.* (2001), Srinivasan *et al.* (2002) and Yee and Faziharudean (2010). Their studies regarding the relationship between website quality dimensions and customer satisfaction in various business sectors or industries are in line with this study's finding where webquality is of importance to customer satisfaction. It was found by Bauer (2005) that there are three generic service categories which were categorized as the basic demands of portal users and form the core service category. These include core services, additional services and problem-solving services. Through their research, Reichheld and Scheffer (2000), remind us that website quality and its related facilities should be considered in order to increase customer satisfaction and loyalty. In their study in twelve countries, Lynch *et al.* (2001) recognized that website quality, trust and firm reputation play important roles in influencing customer purchase intentions and loyalty. It was also found by Yee and Faziharudean (2010) that in Malaysia, service quality, perceived value, trust, habit and reputation of the bank are important variables in influencing customer satisfaction and loyalty.

It was also recognized that customer satisfaction significantly and positively affects customer loyalty. Customer satisfaction as can be seen in both Fig. 2a and b and Table 1, contributes to customer loyalty by approximately 71%. Customer satisfaction is identified as the important path through which website quality dimensions affect customer loyalty. This finding is in line with Floh and Treiblmaier (2006) who emphasized that the importance of customer satisfaction in improving customer loyalty. In a little bit different way, findings of this research were supported by Srinivasan *et al.* (2002) whose study arrived at an interesting conclusion where customization, contact interactivity, cultivation, care, community, choice, convenience and character significantly affect e-Loyalty.

## CONCLUSION

Website quality is of importance to banks that have intensively change their primary activities from traditional off line to sophisticated and cost-effective online-internet banking. Website quality dimensions which include include accessibility and security, speed and facility of access, information quality (informativeness), interaction facilities and contact and website design and interactivity both simultaneously and partially in different strenghts

and magnitudes significantly affect customer satisfaction and customer loyalty. Information quality or informativeness of website is found as the most important dimension in affecting customer satisfaction and, in turn, customer loyalty.

It implies that in order to improve their customer satisfaction and in turn, customer loyalty, management of bank should take into account their website quality (i.e., all five webquality dimensions) especially information quality or informativeness dimension. This dimension, as discussed previously is found as the most important website quality dimension.

## ACKNOWLEDGEMENTS

This study was partly funded by Gunadarma University through and administered by Gunadarma University Research Center.

## REFERENCES

- Agaga, A.M.A. and K.M. Nor, 2012. Factors that influence E-loyalty of internet banking users. *Int. J. Electr. Commerce Stud.*, 3: 297-304.
- Bauer, K., 2005. Measuring the quality of e-banking portals. *Int. J. Bank Market.*, 23: 153-175.
- Floh, A. and H. Treiblmaier, 2006. What keeps the e-banking customer loyal? A multigroup analysis of the moderating role of consumer characteristics on e-loyalty in the financial service industry. *J. Electron. Commerce Res.*, 7: 97-110.
- Ganapathy, S., C. Ranganathan and B. Sankaranarayanan, 2004. Visualization strategies and tools for enhancing customer relationship management. *Commun. ACM.*, 47: 92-99.
- Jun, M. and S. Cai, 2001. The key determinants of internet banking service quality: A content analysis. *Int. J. Bank Market.*, 19: 276-291.
- Lin, H.F., 2007. The impact of website quality dimensions on customer satisfaction in the B2C E-commerce context. *Total Qual. Manage. Bus. Excellence*, 18: 363-378.
- Lynch, P.D., R.J. Kent and S.S. Srinivasan, 2001. The global internet shopper: Evidence from shopping tasks in twelve countries. *J. Advertising Res.*, 41: 15-23.
- Oliver, R.L., 1999. Whence customer loyalty?. *J. Marketing*, 63: 33-44.
- Reichheld, F., R. Markey Jr. and C. Hopton, 2000. E-customer loyalty-applying the traditional rules of business for online success. *Eur. Bus. J.*, 12: 173-179.

- Reichheld, F.F. and P. Schefter, 2000. E-loyalty: Your secret weapon on the web. *Harvard Bus. Rev.*, 78: 105-113.
- Ribbink, D., A.C.R. van Riel, V. Liljander and S. Streukens, 2004. Comfort your online customer: Quality, trust and loyalty on the internet. *Managing Serv. Qual.*, 14: 446-456.
- Sadeh, S., E. Sadeh, L. Mousavi and F. Asgari, 2011. The Effects of website quality dimensions on customer satisfaction in E-retailing system. *Middle East J. Scientific Res.*, 10: 366-369.
- Srinivasan, S.S., R. Anderson and K. Ponnnavolu, 2002. Customer loyalty in e-commerce: An exploration of its antecedents and consequences. *J. Retail.*, 78: 41-50.
- Yaghoubi, N.M., H. Armesh, R. Azadavar, H. Nasrabadi and H. Khajooei, 2011. Internet bookstore quality assessment: Iranian evidence. *Afr. J. Bus. Manage.*, 5: 12031-12039.
- Yee, B.Y. and T.M. Faziharudean, 2010. Factors affecting customer loyalty of using internet banking in Malaysia. *J. Electr. Banking Syst.*, 2010: 1-21.