



## Customer Affecting-Satisfaction Factors in Electronic Banking Systems: Three Significantly Selected Research Perspectives

**Rahmah Mohammed Salih Saeed Al Ali Khan\***

University Technical Malaysia Melaka (UTEM) Malaysia

### Abstract:

The future of the highly competitive global banking is electronic banking via internet. This trend of electronic delivery of **banking** products and services is necessitated by the customers' demanding more Internet-customized daily transaction. Hence, customer affecting-satisfaction factors need to be thoroughly investigated in order to deliver efficient electronic banking. Consequently, this paper reviewed three approaches to reach the most influential customer affecting-satisfaction factors. These customer affecting-satisfaction approaches are prioritizing based on cause and effect relationships, understanding with the use of a questionnaire survey and better communicating using e-mail and social media. The pool of customer affecting-satisfaction factors is quality of services, reliability, privacy and confidentiality, site aesthetics, ease of use, convenience, communication speed (via e-mail and social media), fulfillment, responsiveness/contact, efficient and other future emerging factors. The most important factor results from first, second and third approach is the ease of use, friendly website navigation, and communication speed respectively.

**Keywords:** Communication, Customer Satisfaction Factors, E-Banking, Internet.

### Introduction:

The rapid growth of information and communication technology leads to the emerging of the electronic banking (e-banking). The e-banking has contributed effectively to provide a variety of services at low costs, minimum time and cyber place. The services offered by a bank are evaluated and characterized by security and ease of use. The friendly usage of “e-banking systems and low-cost services may be the two major reasons for the current achievements of information technology in the banking system” [1].

The e-bank includes systems that enable customers of financial institutions, individuals and traders to access their accounts and conduct business transactions or access to products and financial services through the Internet or mobile phone or use the ATMs or smart cards. The banking industry is the fastest emerging sectors due to the advances in the technology innovation. “Demand on web-based banking products increased as a result of expanding customer focused service understanding” [2]. The e-banking may therefore define “the provision of information about a bank and its services via a sophisticated e-banking services provide customer More sophisticated e-banking services provide customer access to home page on the World Wide Web (WWW). More accounts, the ability to move their money between different accounts, and making payments or applying for loans via e-Channels” [3]. Banks have used the Internet to provide the best services to their customers and to attract others. Consequently, strong competition in the banking business to offer superior services to affectively reached up to customer satisfaction. Hence, “the efficiency of e-services will have a positive impact on customer satisfaction and loyalty” [4].

### E-Banking motivations

---

\* Email: p031720007@student.utm.edu.my

The strong and continuous competition in e-banking and financial institutions is to attract customers and maintain their loyalty [5]. That has currently been the main target of banks and financial institutions. Customer satisfaction is an interesting factor to support banks to maintain competitive advantages[6]. Customer satisfaction factors help to find acceptance, satisfaction and loyalty. Customer satisfaction is the gate to have customer loyalty that brings profitability (5). “A satisfied customer creates a strong relationship with the provider. Hence, this leads to relationship longevity (or customer retention – customer loyalty)”[7].

“Customer service is concerning about positive effects on customers. Highly-satisfied e-bankers were about 39% likely to buy extra products and bank services. For this reason, very important is knowing the factor affecting customer satisfaction with e-banking” [8]

Work is done diligently in order to know more and the most important factors affecting customer satisfaction, e.g.

- quality of services,
- reliability,
- privacy and confidentiality,
- site aesthetics,
- ease of use,
- convenience,
- communication speed (via e-mail and social media) ,
- fulfillment,
- responsiveness/contact,
- efficient
- other future emerging factors

Some factors affecting customer satisfaction include speed, ease of use, security, design, information content and customer support service have been granted, and the impacts of familiarity on the significance between these and customer satisfaction has been thoroughly investigated.

“The most important factors affecting customer satisfaction in the e-banking have been acknowledged including: efficient and reliable services, fulfillment, security / trust, site aesthetic, online responsiveness / contact, ease of use and website navigability” [8].

#### **Prioritizing Customer Affecting -Satisfaction Factors**

“The key factors have been investigated that affecting customer satisfaction in internet banking system by prioritizing based on cause and effect relationships” [9].

The researchers used seven main factors in addition to their components. “Seven main factors were identified as most important factors affecting customer satisfaction in e- banking which totally include 27 measurement items, namely, efficient and reliable service, fulfillment, security / trust, site aesthetic, online responsiveness / contact, ease of use and website navigability.

To evaluating the cause and effect relationships of all main factors and their measurement items, an online questionnaire was designed”.

The results of the survey were analyzed according to the Grey-based DEMATEL method as in Table-1.

“First expert opinions of grey numbers are converted to crisp numbers and all opinions are unified into a single view. Then the crisp numbers normalized in DEMATEL and total matrix of each factor is calculated”. Accordingly, the factors with their members were divided into seven totals represented by values R, D, R+D and R-D. Where, R is the effectiveness variables that indicate effectiveness of a factor on other factors according to the result. “Ease of use” has the highest impact on other groups. Efficient and reliable services take value D. The value of D for each factor reflects the impact of other factors on it (influence of variables).

“Horizontal axis vector (R+D) shows the importance of the criterion. The group of Ease of use factor has the most interaction with the other. For R-D the groups Site aesthetic, Ease of use and Website navigability are causal factors (positive). The groups Efficient and reliable services, Fulfillment, Security/trust, Site aesthetic, and Online responsiveness/contact are negatively affecting factors”.

“Vertical axis (R-D) categorizes criteria into a cause group and an effect group. When (R-D) is positive, the criterion will be assigned to the cause group, and when negative, the effect group [10]. Thus, all the matrix factors of the seven groups are evaluated. The most important benefit of applying this method according to researchers is the cause and effect. This cause and effect relationship analysis would be the

planning to advance the goals and division of duties and obligations in e-banking system to boost the customer satisfaction”.

**Table 1-**The Grey-based DEMATEL results (9)

Factors	R	Rank	D	Rank	R+D	Rank	R-D
Efficient and reliable services	6.95168537	4	7.77754563	1	14.729231	4	-0.82586025
Fulfilment	7.22714181	3	7.60711535	2	14.8342572	3	-0.37997354
Security/trust	6.78090191	6	7.09983856	4	13.8807405	6	-0.31893665
Site aesthetic	5.75580119	7	5.29978402	7	11.0555852	7	0.45601717
Online Responsiveness/contact	6.8266369	5	7.08110504	5	13.9077419	5	-0.25446814
Ease of use	7.98162415	1	7.60593719	3	15.5875613	1	0.37568696
Website navigability	7.9070029	2	6.95946845	6	14.8664714	2	0.94753445

### Understanding Customer Affecting -Satisfaction Factors

The understanding approach [6] proposed five factors that have been identified for influencing customer satisfaction in e-banking. These factors included service quality, “web design and content, security and privacy, convenience and speed. With the use of a questionnaire survey, 200 working adults participated. Researchers utilized several statistical methods to analyze data collected such as descriptive analysis, reliability analysis and multiple linear regression analysis”. A reliability test was performed with the Cronbach’s alpha value for all the variables as in Table-2. According to the results, “web design and content, convenience and speed are the most impacted factors on Customer satisfaction .While according to the research, service quality variable and security and privacy variables do not have a relationship with customer satisfaction”.

### Better communication for Customer Affecting –Satisfaction Factors

A strong “relationship between communication management and customer satisfaction” has been approved [11]. Consequently, “Electronic Communication (e-Communication) has been considered a crucial variable on customer satisfaction”. The research focused on communication channels of collaborative projects, blogs, content communities, social network sites, “virtual game world, web-sites and electronic mails”. Social Media were also considered.

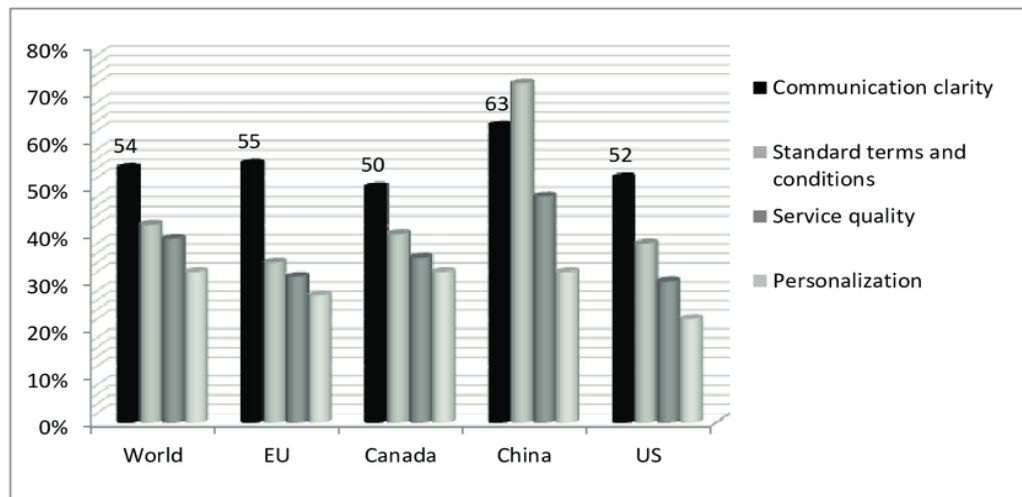
The researchers’ attention was concentrated on understanding customer characteristics. “To understand customers’ characteristics, banking management may create a well-established customer relationship.

Customer Relationship Management (CRM) became a managerial approach”.

The researchers confirmed that the research exploited “information from several sources, but mainly a lot of data from Global Consumer Banking Survey 2012” [12] is the project source. Figure-1 “presents the main ways for satisfaction improvement”.

**Table 2-**“the Cronbach’s alpha value for all the variables” (6)

Variable	Cronbach’s Alpha
Service Quality	0.909
Web design and Content	0.916
Security and Privacy	0.924
Convenience	0.871
Speed	0.875
Customer Satisfaction	0.828



**Figure 1**-Customer Satisfaction Improvement (12).

The researchers noted the importance of using e-mail and social media.

“E-mail has more importance for e-banking activities”. E-mail is connected with security as well because “many banks have linked the e-mail with on-line” transactions. Social Media is a powerful tool for gaining customer and for communicating with potential and existing customer. Virtual world applications may be utilized by business unites for advertising, communication, sales of e-product and services and marketing research. Virtual world allows “banks to reach end-consumers at comparably low cost and higher level of efficiency than may be achieved with more traditional communication tools”. The researcher also stressed that the virtual world is a wide world advantage. Social media is a large source and an important tool for communication. Thus, Social media has a big impact on today business world.

### Discussion

Customer satisfaction requires banks to provide excellent quality services because the quality of services leads to customer satisfaction and then loyalty. Three different approaches have been presented in evaluating the most important factors influencing customer satisfaction.

First approach of prioritizing Customer affecting-Satisfaction Factors using the Grey-based DEMATEL analysis to prioritizing the factors and determining cause and effect factors. The entrance data are in the range of uncertain numbers. In this approach, the ease of use factor was the most influential factor. Ease of use encourages the customer to use the site repeatedly because it saves time and the cost of re-learning usage compared to other sites. Hugely satisfied customers would have incurred considerable “sunk costs” in learning, dealing, and using the current products/services. The researchers evaluated the effect of other factors and grouped using the Grey-based DEMATEL analysis of cause and effect. The most important result that may be derived from this cause and effect relationship analysis would be the planning to advance the targets and division of duties and obligations in e-banking system to boost the customer satisfaction.

Second approach of understanding Customer Affecting -Satisfaction Factors by creatively developing web content, convenience and speed to strengthening relationship with customer satisfaction towards e-banking. Web design factor may affect customer satisfaction . The most important result from this understanding approach is the service quality, security and privacy factors do not have a relationship with customer satisfaction.

Third approach of better communication for customer affecting– satisfaction factors has been focused on customer relationship management through Internet communication channels, especially e-mail and social media. This communication management approach need to “make use one of the most powerful electronic communication” tools: emails and Social media. These two e-communications have a big impact on today business world. Thus e-banking “management needs to identify ways to make profitable” use of e-mail and social media.

The output results of these three approaches have been emphasized the importance of electronic banking development, depending especially on the point of view of the customer as the pillars of e-banking and financial institutions and trade.

## Conclusion

Three different approaches for selecting the most influential customer affecting–satisfaction factors have been thoroughly investigated, analyzed and evaluated. These approaches are Prioritizing, Understanding and Better-communicating for the mining of customer affecting–satisfaction factors.

## References

1. Niazi, Z. **2013**. “Evaluation of websites of Iran public universities through two methods: QEM website and Web Site Evaluation Index and comparison of their results”, master thesis, Al Zahra University, Tehran.
2. Bahar, S. and Elif, H. **2015**. Development of Internet Banking as the Innovative Distribution Channel and Turkey Example. *Social and Behavioral Sciences*, **195**: 343 – 352.
3. Shah, M. and Clarke, S. **2009**. *E-Banking Management: Issues, Solutions and Strategies*. www.dbebooks.com – Free Books & magazines.
4. Rostami, A., Khani, A. H. A. and Soltani, G. **2016**. The Impact of E-service Quality on the Improvement of the Level of Communication with Customers of Bank Melli Branches in South - ran Affairs Office. *Procedia Economics and Finance*, **36**: 455-448 ,
5. Ozatac, N., Saner, T. and Suzmen Sen, Z. **2016**. Customer Satisfaction in the Banking Sector : The Case of North Cyprus. *Procedia Economics and Finance*, **39**: 870 – 878.
6. Ling, G. M., Fern, Y. S., Lim, K. B. and Tan, S. H. **2016**. Understanding Customer Satisfaction of Internet Banking: A Case S . Study In Malacca. *Procedia Economics and Finance* ,**37**: 80 – 85
7. Storbacka, K., Strandvik, T. and Grönroos, C. **1994**. . Managing customer relationship for profit: The dynamics of relationship quality. *International Journal of Service, Industry Management*, **5**(5): 21-38.
8. Yoon, CH. **2010**. Antecedents of customer satisfaction with online banking in China: The effects of experience. *Computers in Human Behavior*, **26**: 1296–1304.
9. Asad, M. M., Mohajerani, N. S. and Nourseresh, M. 2016. Prioritizing Factors Affecting Customer Satisfaction in the Internet Banking System Based on Cause and Effect Relationships. *Procedia Economics and Finance*, **36**: 210 – 219.
10. Hung, S. J. **2011**. Activity-based divergent supply chain planning for competitive advantage in the risky global environment: A Dematelanp fuzzy goal programming approach. *Expert Systems with Applications*. **38**: 9053-9062.
11. Kirakosyan, K. and Danaiata, D. **2014**. Communication management in electronic banking Better communication for better relationship. *Procedia – Social and Behavioral Sciences* , **124**: 361 – 370
12. Ernst and Young **2012**. *Global Consumer Banking Survey 2012. The customer takes control*. Retrievedfrom[http://www.ey.com/Publication/vwLUAssets/Global\\_Consumer\\_Banking\\_Survey\\_2012\\_The\\_customer\\_takes\\_control/\\$FILE/Global\\_Co nsumer\\_Banking\\_Survey\\_2012.pdf](http://www.ey.com/Publication/vwLUAssets/Global_Consumer_Banking_Survey_2012_The_customer_takes_control/$FILE/Global_Co nsumer_Banking_Survey_2012.pdf).