This is the published version of a paper presented at *17th International Conference e-Society 2019 (ES 2019), Utrecht, The Netherlands, April 11-13, 2019*.

Citation for the original published paper:


N.B. When citing this work, cite the original published paper.

Permanent link to this version:  
http://urn.kb.se/resolve?urn=urn:nbn:se:hh:diva-40374

Hossam Deraz¹ and Faisal Iddris²
¹Dr., School of Business, Engineering and Science – Halmstad University, Sweden
²Dr., Department of Management Studies, Kumasi - University of Education, Winneba, Ghana

ABSTRACT
This paper presents a systematic review of the literature of 44 research articles published customers’ satisfaction in Internet banking between (2008 and 2017). This review aims to address this gap in the literature by identifying the antecedents predicting customer satisfaction in Internet banking literature. Achieving our aims will bring together fragmented literature to serve as a foundation for research into customer satisfaction in Internet banking involving the use of Internet banking and other related digital platforms such as the mobile-banking. The results show that Asian countries recorded the highest number of publications. Also, we identified limited research from specific regions. For example, we could not identify any peer-reviewed articles from some of the European countries such as Sweden, The Netherlands, Germany, Belgium, Denmark, and Norway. Also, there are limited studies identified from the Middle East. And even countries that have well-developed e-commerce systems from the Middle East and Africa such as Egypt, the United Arab Emirates, Lebanon, Israel, and South Africa have no published papers. Secondly, the study identified SERVEQUAL & e-SERVEQUAL as the main theoretical framework. Third, the result shows that the main predictors of satisfaction in Internet banking are service quality, information quality, and product quality. Finally, this study confirmed the mediating role of customer satisfaction on customer loyalty toward those banks offering the Internet banking service. A comprehensive list of references is presented, along with an agenda for future research to cover the identified gaps.

KEYWORDS
Internet Banking, e-Commerce, e-Satisfaction, Customer Satisfaction

1. INTRODUCTION
The concept of customer satisfaction has grown in popularity in the past two decades in banking and marketing management literature. The concept has been empirically examined as a consequence and an antecedent of other marketing related variables of interest. As an antecedent, customer satisfaction has been used to predict customer loyalty, customer retention and attitude in the Internet banking literature (Amin, 2016; Khan, Rahman & Fatma, 2016; Jovović, Femić-Radosavović & Ipovina-Božović, 2017).

The use of Internet banking has placed additional responsibilities on users to transact with the service (Lassar, Manolis & Lassar, 2005). Also, due to the technological development of e-commerce, new features in Internet banking services and several challenges have emerged, e.g. trust elements, security issues, convenience, and technological challenges acceptance (Vivi & Novita, 2017; Jahan & Khan, 2018). These challenges make it essential for banks to track customers’ satisfaction to maintain and develop their websites based on their customers’ needs and expectations. Given the importance of customer satisfaction and its positive effects on customer loyalty, customer retention, and word-of-mouth behavior, researchers need to revisit definitions and conceptualization of previously identified relational antecedents in a technological context to capture changes in customer relationships and behavior (Hong & Wang, 2009). Review of literature shows that researchers have failed to provide a comprehensive overview of the concept of customer satisfaction in the context of Internet banking.

Thus, this study aims to address this gap in the literature by identifying the antecedents predicting customer satisfaction in the Internet banking literature. That will bring together fragmented literature to serve as a foundation for research into customer satisfaction in Internet banking involving the use the internet platforms from the personal computer to mobile phone. Thus, the main research questions this paper seek to address are:
1. What are the main antecedents of customers’ satisfaction in Internet banking?
2. What are the theoretical developments related to customers’ satisfaction in Internet banking?

The rest of the paper is organized as follows. First, the paper presents previous review studies on Internet banking context. After, it presents used method to collect related articles. Next, it discusses the main findings of these papers focusing on; journal and year of publication, the nationality of the research sample, the theoretical framework used, and antecedents measured and main findings. Finally, overall conclusions are drawn to present main gaps in present knowledge, with an outline for future research agenda to gain a deeper understanding of the current knowledge.

2. RELATED LITERATURE

Few studies provide a review of Internet banking. However, previous reviews focused on different aspects of that research context. For example, Goudarzi et al. (2013) provide an overview of the extent research into the relationships between trust and Internet banking adoption as perceived by banks’ customers. They covered empirical studies on the factors of trust and the adoption of Internet banking. Another review by Hanafizadeh, Keating, and Khedmatgozar (2014) focused on Internet banking adoption. Their findings revealed that interest in the topic of Internet banking adoption had grown significantly. Similarly, a systematic literature review by Keskar and Pandey (2018) identify relevant works in Internet banking between 2002 and 2016. Their findings indicate that issues such as cyber-security, trust, and web-design and their effects on customer loyalty, customer retention, and customer satisfaction have not been investigated in depth. The major limitation of the study is that the authors failed to present the antecedents of customer satisfaction in the Internet banking literature. Thus, this literature review aims to fill this gap in our current knowledge about the antecedents predicting customer satisfaction in Internet banking.

3. RESEARCH METHOD

This review investigates customer satisfaction in Internet banking from a multidisciplinary perspective. In regrad, we selected peer-reviewed articles from 9 bibliographic databases (ACM Digital Library, Emerald, IEEE Xplore, Sage journals online, Science Direct, Scopus, Taylor & Francis online, Web of Science, and Wiley online library). Peer-reviewed journals were considered based on their knowledge validity and their highest impact on the research field (Podsakoff et al., 2005).

To ensure the relevance of the articles in the study of consumers’ satisfaction in Internet banking. We used a combination of 12 keywords. Which means, each of the selected articles is required to contain one of the following combinations of keywords in both the title and the abstract:

1. *Internet Banking* AND *Customer Satisfaction*.
2. *Internet Banking* AND *Consumer Satisfaction*.
3. *Internet Banking* AND *User Satisfaction*.
5. *Online Banking* AND *Consumer Satisfaction*.
8. *Electronic banking* AND *Consumer Satisfaction*.
11. *e-banking* AND *Consumer Satisfaction*.

Also, the search of the articles was limited to journals in the English language between 2008 and 2017. The rationale is to capture the latest change in investigating the antecedents of customer satisfaction in Internet banking. We excluded 2018 so that we can analyze the yearly trend from 2008-2017, as the research was carried out in September 2018.

The first search generated 176 articles, which were further limited to those directly focus on investigating online customer satisfaction in Internet banking, and other themes of Internet banking research such as service quality, perceived risk, and trust were excluded from this review if the since it was not related to customer satisfaction. Finally, we included 44 articles that investigated the antecedents of customer satisfaction in Internet banking.
4. DESCRIPTIVE FINDINGS OF THE STUDY

4.1 Journal and Year of Publication

The name of the journal in which each article was published is coded to provide an understanding of which journals have published more related articles (the prevalence of Internet banking-related research). Also, the year of publication of each paper is coded to determine which journals have published more related articles and how much focus has been assigned to the research focus (yearly trend). This assists in identifying the trend in publication over the years.

Figure 1 shows that the highest number of publications was recorded between 2013 and 2014, and continues to decline until 2017. The decline may be attributed to difficulties researchers face in getting into contact with the financial institutions to get approval to carry such research with their customers. Also, bank consumers are mostly refusing to disclose their related financial information as confirmed by Carignani and Gemmo (2018).

![Number of Publication Per Year 2008-2017](image)

Looking at the journal outlets (Table 1), the 44 articles were published in 33 journals. 10 articles (22.7%) of the total were journals specialized in banking, and financial institutions journals, 5 articles (11.4%) were computer and e-commerce journals, and 29 articles (65.9%) of the collected articles were published by other different management and marketing disciplines such as management science, marketing, human behavior, and life science.

Regarding the total publications for each journal, seven journals published two or more articles between 2008 and 2017, the rest published one article each (Table 1). Those journals published 2 and more articles are:

1. International Journal of Bank Marketing (6 articles).
2. Journal of banking and commerce (2 articles).
3. Industrial Management & Data System (2 articles).
5. Procedia - Social and Behavioral Sciences (2 articles).
6. Total Quality Management (2 articles).
4.2 Nationality of the Research Sample

The articles were coded according to the nationality of the research sample. This helps to identify the most dominant country in this field of research. The 44 articles were produced by research samples from 22 different nationalities (Figure 2). The findings in figure 2 show that Asian samples were the most investigated (32 articles, 72.7% of the total publications). In the Asian region, India was dominant with 9 articles, that is followed by Iran (6 articles), Taiwan and Malaysia (3 articles each), Indonesia and Pakistan (2 articles each), and Brunei Darussalam, Bangladesh, China, Hong Kong, Philippines, Sri Lanka, and Thailand (1 article each).
After the Asian countries, research samples from European countries came second with eight publications from five countries. Spain 3 articles, followed by Greece 2 articles, and finally one article each from each of Latvia, Montenegro, and Portugal. Finally, the Middle East came last with two articles, one from Kuwait and one from Saudi Arabian.

4.3 Theoretical Framework

One objective of this study is to examine the theoretical developments in the literature that investigated the Internet banking customer satisfaction. 33 articles out of the 44 articles reviewed in this study used an explicit theoretical framework to test customer satisfaction. The remaining 11 articles provided no clear theories in their study.

In determining the theories used in this reviewed articles (see Table 2), we found that (28 articles=63%) used SERVQUAL) or the extended electronic service quality approaches (e-SERVEQUAL) as the theoretical framework. Two articles used the Technology acceptance model (TAM), and the last two articles used the customer satisfaction index (CSI) and end-user computing satisfaction (EUCS). These findings show that e-SERVEQUAL is the most dominant theory in this field of research.

Table 2. Used Theoretical Frameworks

<table>
<thead>
<tr>
<th>Theoretical Framework</th>
<th>Papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology acceptance model (TAM)</td>
<td>Liao &amp; Cheung, 2008; George &amp; Kumar, 2013.</td>
</tr>
<tr>
<td>The end-user computing satisfaction (EUCS)</td>
<td>Chen, Hsiao &amp; Hwang, 2012.</td>
</tr>
</tbody>
</table>

4.4 Methods Used

With regards to the research methods, all the articles reviewed used a quantitative research approach to investigate customer satisfaction in the Internet banking sector.

4.5 Antecedents of Customer satisfaction in Internet Banking

After reviewing the 44 articles identified in this study, we found out that the researchers have investigated 77 different antecedents. 51 out of the 77 antecedents were tested once, and 16 were tested repeatedly by several researchers who indicate the relevance of the antecedents to customers’ satisfaction in Internet banking research (see table 2). Therefore, the repeated antecedents were put into three main categories: (1) service quality (2) information quality and (3) product quality. Besides, 12 articles empirically confirmed the mediating role of customer satisfaction on customer loyalty toward bank offers their Internet banking service (see table 3). Similarly, the findings confirmed the mediating role of trust in customers’ satisfaction. However, some contradictory findings were identified, for instance, Yoon, (2010) found that ease of use (EOU) had no
significant influence on customer satisfaction in Internet banking as perceived by Chinese Internet banking users. Also, George and Kumar (2014) found that efficiency and website attribute dimensions did not affect Indian customers’ satisfaction from the Internet banking service. Finally, we identified that the recent direction of studies on Internet banking is directed toward the effect of brand personality on customer satisfaction as explored by Ong, Nguyen & Alwi (2017).

Table 3. The most repeated antecedents while testing customer satisfaction in Internet banking service

<table>
<thead>
<tr>
<th>Tested Antecedents</th>
<th>Description</th>
<th>Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Quality Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessibility/Ease of use/ Usability/ Website navigability/ Availability/ Procedural fairness</td>
<td>Refers to user-friendliness while using the IB services. Also, to all those factors related to the ability to get on the site easily and moving quickly back and forth through the Web-page when needed (Krishnamurthy, 2005)</td>
<td>Liao &amp; Cheung, 2008; Khurana, 2009; Yoon, 2010; Sadeghi &amp; Hanzae, 2010; Ahmad &amp; Al-Zubri, 2011; Seyed &amp; Rahim, 2011; Rullis &amp; Stoka, 2011; Honore Petjai Yaya, Marimon &amp; Casadesus, 2011; Chen, Hsiao &amp; Hwang, 2012; Zavareha et al., 2012; Rajpara &amp; Mistry, 2012; Hasan et al., 2013; George &amp; Kumar, 2013; Liébana-Cabanillas, Muñoz-Leiva, &amp; Rejón-Guardia, 2013; Marakarkandy &amp; Yajnik, 2013; Petjai Yaya, Marimon &amp; Casadesus, 2013; Mojares, 2014; George &amp; Kumar, 2015; Sikdar, Kumar &amp; Makkad, 2015; Asad, Mohajerani &amp; Noursereh, 2016.</td>
</tr>
<tr>
<td>Fulfillment</td>
<td>It is the extent to which the IB promise about order delivery and item availability are fulfilled (Parasuraman et al. 2005).</td>
<td>Rahimi, Bidmeshk &amp; Mirzaalian, 2012; Zavareha et al., 2012; Zakruan &amp; Ismail, 2013; George &amp; Kumar, 2014; Ariff, Yun, Amin, 2016; Asad, Mohajerani &amp; Noursereh, 2016.</td>
</tr>
<tr>
<td>Reliability of the service</td>
<td>Referring to the consistency of performance, including punctuality and precision concerning information and invoicing procedures, and doing what the organization promised to do (Bergman and Klefsjo, 2010).</td>
<td>Liao &amp; Cheung, 2008; Khurana, 2009; Santouridis, Rivellas &amp; Reklitis, 2009; Rullis &amp; Stoka, 2011; Rahimi, Bidmeshk &amp; Mirzaalian, 2012; Rajpara &amp; Mistry, 2012; Zavareha et al., 2012; Heidari, Mousakhani &amp; Rashidi, 2014; Kampakaki &amp; Paphathanasiou, 2014; Roche, 2014; George &amp; Kumar, 2014; Raza, Jawaid &amp; Hassan, 2015; Asad, Mohajerani &amp; Noursereh, 2016.</td>
</tr>
<tr>
<td>Responsiveness/ Contact responsiveness/ Complaint management/ Assistance/ Communication/ Support/ Problem handling</td>
<td>Refers to the willingness and ability of the service provider to meet and adapt to customer needs, for example, a service provider may be willing to deliver outside of normal delivery times and perhaps may have systems for responding to customer complaints on the same day (Lancaster &amp; Massingham, 2011).</td>
<td>Liao &amp; Cheung, 2008; Khurana, 2009; Santouridis, Rivellas &amp; Reklitis, 2009; Yoon, 2010; Rajpara &amp; Mistry, 2012; Ariff, Yun, Zakruan &amp; Ismail, 2013; Hasan et al., 2013; Honore Petjai Yaya, Marimon &amp; Casadesus, 2013; George &amp; Kumar, 2014; Heidari, Mousakhani &amp; Rashidi, 2014; Kampakaki &amp; Paphathanasiou, 2014; Lourierio, Kaufmann &amp; Rabino, 2014; Roche, 2014; Unyathanakorn &amp; Romphio, 2014; Raza, Jawaid &amp; Hassan, 2015; Asad, Mohajerani &amp; Noursereh, 2016;</td>
</tr>
<tr>
<td>Tangibles</td>
<td>In service quality, it refers to the appearance of physical facilities, equipment, personnel and communicational equipment (Parasuraman, 1988).</td>
<td>Heidari, Mousakhani &amp; Rashidi, 2014; Kampakaki &amp; Paphathanasiou, 2014.</td>
</tr>
<tr>
<td>Usefulness</td>
<td>It is the degree to which the Internet banking users believe that using Internet banking would enhance his or her performance (Sadeghi &amp; Hanzaee, 2010)</td>
<td>Liao &amp; Cheung, 2008; Sadeghi &amp; Hanzaee, 2010; George &amp; Kumar, 2013; Liébana-Cabanillas, Muñoz-Leiva, &amp; Rejón-Guardia, 2013; Maria Correia Loureiro, Rüdiger Kaufmann &amp; Rabino, 2014.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Appearance/ Site organization/ Design/Layout/ Structure/ Site aesthetics/ Format</td>
<td>Refers to aesthetics features and content as well as the structure of the website. Which are visually appealing, fascinating, and pleasing to the eye (Kassim &amp; Abdullah, 2010)</td>
<td>Sadeghi &amp; Hanzaee, 2010; Yoon, 2010; Ahmad &amp; Al-Zubi, 2011; Seyed &amp; Rahim, 2011; Chen, Hsiao &amp; Hwang, 2012; Zavareha et al., 2012; Ariff, Yun, Zakruan &amp; Ismail, 2013; Hasan et al., 2013; Marakarkandy &amp; Yajnik, 2013; Amin, 2016; Asad, Mohajerani &amp; Nourseresh, 2016; Ling, Ferna, Boona &amp; Huat, 2016.</td>
</tr>
<tr>
<td>Timelines</td>
<td>It indicates that the web-bank system provides a quick response and up-to-date information (Chen, Hsiao &amp; Hwang, 2012)</td>
<td>Riquelme, Mekkaoui &amp; Rios, 2009; Seyed &amp; Rahim, 2011; Chen, Hsiao &amp; Hwang, 2012; Marakarkandy &amp; Yajnik, 2013.</td>
</tr>
<tr>
<td>Product Quality Variables</td>
<td>Convenience</td>
<td>It involves conducting transactions more easily and efficiently through the bank website (Ling et al., 2016)</td>
</tr>
<tr>
<td></td>
<td>The efficiency of the website</td>
<td>It involves the speed and functionality of the bank website all the time (Kurhara, 2009)</td>
</tr>
<tr>
<td>Security /Privacy/ System integrity</td>
<td>That involves the confidence that the customer feels toward the IB and the associated infrastructure ability to protect their personal information during transaction and storage (Kautonen &amp; Karjaluoto, 2008).</td>
<td>Liao &amp; Cheung, 2008; Khurana, 2009; Sadeghi &amp; Hanzaee, 2010; Yoon, 2010; Ahmad &amp; Al-Zubi, 2011; Honore Petnji Yaya, Marimon &amp; Casadesus, 2011; Rajpara &amp; Mistry, 2012; Rahimi, Bulmashk &amp; Mirzaalian, 2012; Zavareha et al., 2012; Ariff, Yun, Zakruan &amp; Ismail, 2013; Hasan et al., 2013; Petnji Yaya, Marimon &amp; Casadesus, 2013; George &amp; Kumar, 2014; Mojares, 2014; Roche, 2014; Asad, Mohajerani &amp; Nourseresh, 2016; Ling, Ferna, Boona &amp; Huat, 2016.</td>
</tr>
<tr>
<td>Outcomes of Satisfaction</td>
<td>Loyalty</td>
<td>A deeply held commitment to re-buy or re-patronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior (Oliver, 1999)</td>
</tr>
</tbody>
</table>
5. CONCLUSIONS AND RESEARCH AGENDA

This study aims to provide a review of the antecedents of customer satisfaction in the Internet banking context. The study identified and grouped the repeated antecedents into three categories: service quality, information quality, and product quality (Figure 3) categories.

The nationalities of the research samples of the articles reviewed in this study indicate that most of the articles were from the Asian region. We identified limited research from some of the European countries such as Sweden, The Netherlands, Germany, Belgium, Denmark, and Norway. Besides, there are no studies identified from some countries from the Middle East and African region that have well-developed e-commerce systems. Countries such as the United Arab Emirates, Lebanon, Egypt, Israel, and South Africa have no identified publication to retrieve for the present study.

Focusing on the used theory, researchers mainly used SERVEQUAL & e-SERVEQUAL framework. However, the CSI that is well adapted in organizational and national levels were not adopted in testing the customer satisfaction of Internet banking except for one study from Asia, which aimed at exploring factors affecting customer satisfaction in online banking service in Thailand (Unyathanakorn & Rompho, 2014). According to European Organization for Quality (EOQ) and European Foundation for Quality Management (EFQM), the Extended Performance Satisfaction Index (EPSI), which is known formally as the European Customer Satisfaction Index (ECSI) is an essential tool to test organization performance and the level of customer satisfaction to the offered service (Willemsen, 2010).

Finally, with regards to the research methods, all the research papers reviewed used a quantitative research approach to investigate customer satisfaction in the Internet banking sector. Thus there is a need for qualitative research to acquire deeper knowledge in this field. According to Creswell et al. (2007), the qualitative research approach leads to unearthing useful and interesting findings that may help to develop knowledge regarding the investigated research context.
5.1 Further Research

Research design: In stressing the need for qualitative research, more research should use unstructured interviews to investigate customer satisfaction in Internet banking usage. Combinations of quantitative and qualitative approaches also might effectively enhance the tested of the variables. The recommendation is based on the fact that all the studies used quantitative research approach.

Geographical distribution: Future researchers should conduct more research on customer satisfaction in Internet banking in Africa, the Middle East, and North America and the European countries. That may lead to a global understanding of the predictive factors of customer satisfaction.

Theoretical development: According to the use-diffusion model presented by Shih and Venkatesh (2004), diffusion in adopting new technology will lead to a change in consumers’ use-diffusion patterns. That change in use-diffusion patterns will, in turn, change outcomes in the form of perceived impact of the used technology, satisfaction with technology, and more interest in future technologies. Considering the importance of Internet banking, there is a need for researchers to applied different theoretical perspectives such as uses and gratification theory to better explain the elements of customer satisfaction based on their gratifications. With the current development of the Internet banking system around the world, and the users’ recent experience in using the Internet banking system. Thus, this study suggests that additional theoretical perspective such as the uses and gratifications theory can enhance our knowledge regarding the main antecedents predicting the customers’ satisfaction in Internet banking.

Testing of the conceptual model: Another critical issue in the theoretical framework (Figure 3) developed in this review, future researchers should empirically investigate the influence of the antecedents of customer loyalty through the mediation of satisfaction.

5.2 Limitations of the Study

The focus of this review was on satisfaction in Internet banking. A significant body of literature on service quality, perceived risk, and trust, customer retention, customer convention, customer loyalty was ignored. Some articles on the broader topic of Internet banking were excluded from this study. It must be stressed that Internet banking is only one form of electronic banking, which includes mobile banking and other digital banking platforms. Further research could consider expanding by including other forms of electronic banking.

REFERENCES


