Evaluation of Service Dimensions of Traditional Banking and Digital Banking: The Case Study of Lloyds Bank, United Kingdom

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Abstract:
Banking has evolved over a period of time with the technological advancement. Customer preferences of traditional versus digital banking need to be studied in order to provide better banking experience for the customers. There are various effects of digital banking, which have been identified and discussed by reviewing literature sources. In order to collect the data, customers of Lloyds bank plc, United Kingdom were selected. Two scales are developed to measure the effects such as usefulness, accessibility, easiness to use, efficiency, availability, cost effectiveness, security, responsiveness and credibility of digital banking and traditional banking. Through the study, it was found out that security of the digital banking is the key aspect that customers prefer in the traditional banking over digital banking. Hence, recommendations are made to Lloyds bank to maintain higher level of security in the digital banking to enhance the customer satisfaction.

Keywords: Digital banking, traditional banking, usefulness, cost effectiveness, ease of use, responsiveness, credibility, accessibility, security, availability, efficiency & effectiveness, customer satisfaction, customer trust, customer retention, customer loyalty

1. Introduction
Banking has been evolving over a thousand years with significant changes to the ways of doing banking services (Sabri & Sabri-Matanagh, 2012). Technology plays a vital role in this era to shape the businesses in the world to meet the needs of customers (Osman & Mahdi, 2007). Development of banking technology has impacted traditional banking services in both positive and negative ways. Lloyds bank is a pioneer retail and commercial bank in the UK and has been operating for over 250 years on the high street, serving millions of customers (Lloyds bank, 2019). Introduction of banking technologies has changed the ways of banking and as a result, customers’ experiences and perceptions towards banking have changed.

Different service dimensions of traditional banking and digital banking have been studied by various researchers and the most relevant factors have been taken into consideration for data collection purposes. This research is based on a case study for Lloyds bank and the primary data has been collected from customers of this bank in London. After analysing the data, results may be generalized to the other banks which share similar characteristics to that of Lloyds bank.

2. Literature Review

2.1. Traditional Banking
The bank is a financial institution which assists individuals and businesses to undertake monetary transactions (DeYoung, et al., 2004). Traditionally, customers had to visit bank branches very time in order to undertake various types of these banking transactions. Counter services and lending services are considered as the two main functions in traditional banking (Sawalqa & Aliqah, 2013). Physical presence of the bank has helped to build long-term customer relationships with the bank(Shalom, 2014). On the other hand, traditional services are restricted to a certain time period and involved time consuming activities such as counting coins and notes, maintaining correct folders etc. for customers and the bank staff. Nevertheless, Kulkarni et al. (2014) have observed that physical presence of the bank still plays a vital role in banking. It is important to get support from the technology to ease the traditional services and speed up the traditional services (Rao & Weintraub, 2013).
2.2. Digital Banking

Internet plays an important role in order to use electronic or digital banking which ultimately help businesses to get competitive advantages (Gulati & Kadyan, 2015). Introduction of Automated Teller Machines (ATMs) by Barclays bank in 1967 was the starting point of the digital banking technologies (Batz-Lazo, 2013). Digital banking can be simply called as Electronic or E-banking which consists of all the banking technologies and the diagram below gives an overview of the concept of electronic banking.

![Diagram showing various types of digital banking technologies](Image)

**Figure 1**  
(Gkoutzinis, 2010)

Internet banking is the main banking technology which allows customers to access their banking accounts 24/7 in order to undertake monetary and non-monetary transactions (Aklaq & Ahmed 2013; Meera, et al. 2014). As per the above diagram, internet banking can be accessed through computers and mobile phones. If banking can be accessed through mobile phone, it is called as mobile banking and which is again accessible 24/7 similar to the internet banking (Srivastava, 2013). Furthermore, there are various types of banking machines which promote digital banking. The function of the initial ATM has evolved to introduce other types of banking machines in order to undertake multi-functions other than withdrawals including deposit of cash and cheques (Melvin, 2014). Another form of banking technology is contactless cards which use Near Field Communication (NFC) technology to process payments (Koley, et al, 2015).

2.3. Effects of Digital Banking Vs. Traditional Banking

Research studies have focused on various effects of digital banking and traditional banking that can be used to measure the service excellence of each aspect. These effects generate both positive and negative impact on the customers satisfaction and the banking services.

2.3.1. Usefulness

Usefulness is one of the main effects of banking associated with other effects such as easiness, efficiency and effectiveness, accessibility etc. (Wu, et al. 2010; Al-Smadi 2012). It reaches customers in a different way. Being able to take ownership of the banking and undertake banking services by selves is an aspect of the usefulness (Hiremath, et al, 2012).

Usefulness is considered as a one main dimension of Technology Acceptance Model (TAM) (Davies, et al, 1989). It suggested that if usefulness and ease of use are positive, then customers tend to adopt particular technology into their lives. Further studies concluded that usefulness of digital banking results in customers satisfaction and finally, help retaining them for longer time (Alsamydaï et al. 2012; Kahandawa & Wijayanayake 2014).

2.3.2. Ease of Use

When accepting a technology, customers are looking at how easy it is to use it. This is the other dimension which is made of TAM (Davies, et al., 1989). Easiness to use can be measured in various ways such as friendliness, convenience, simplicity etc. User friendliness of the technology is also a one parameter to ease the transition process from traditional to digital banking (Khanna & Gupta, 2015). Research study shows that easiness of technology promotes technology adoption (Maftlo, et al., 2015) while complexity makes customers go away from the technologies (Amutha, 2016). Ultimately, easiness to use of the technology improves customer satisfaction, retention and bank's performances (Nochai&Nochai 2013; Mwatsika 2016).

2.3.3. Accessibility

Accessibility distinguishes digital banking from traditional banking. Customers can access most of the digital banking technologies 24/7 from anywhere in the world unlike traditionally set banking hours (Sharma, 2016). Also, long queues in the branches generate negative impact since customers have to wait longer to access conventional banking services (Ramachandran & Chidambaram, 2012). It was identified that accessibility issues in branch banking can be reduced by using digital banking technologies (Kumbhar, 2013).

Further studies have revealed that accessibility is positively related to customer satisfaction, trust, loyalty, retention and effectiveness of the banking system (Jham 2016; Asfour & Haddad 2014; Mwatsika 2016; Khrais 2013).
2.3.4. Efficiency and Effectiveness

Efficiency and effectiveness imply how quickly, and accurately banking services can be delivered to customers (Dhurup, et al., 2014). Digital banking is ahead in processing speed of the transaction and minimizing errors compared to traditional banking, which has slower processes and is prone to human errors (Nigudge & Pathan 2014; Ndlovu & Sigola 2013). There are number of studies which have concluded that efficiency and effectiveness of digital banking possess positive correlation to the customer satisfaction and retention (Kumbhar 2011; Asfour & Haddad 2014).

2.3.5. Cost Effectiveness

Cost can be positive or negative in different occasions for both customers and the banks. Although it is risky to invest large amounts on banking technologies without ascertaining the outcome, after a successful implementation, cost can be an effective factor (Belas, et al., 2016). This was proved in the research undertaken in Slovakia. Furthermore, research study undertaken in the US concluded that digital banking increases the profitability of the bank (Onay & Ozsoz, 2013). Cost is also a major concern for customers and it was found out that cost can be minimized through transportation, time and online offers (Gilaninia, et al. 2011; Krisnanto 2017).

2.3.6. Availability

Although availability and accessibility look similar, the two terminologies provide two different meanings in digital banking. In simple terms, in order to access banking services, particular banking technology/accessories need to be available. A research undertaken by Mwatsika (2016) with regards to ATMs, found out that availability of ATMs occurs equally in all the geographical areas, availability of the cash and availability of the functions impact customer satisfaction. However, Boateng et al. (2014) argued that there is no relationship between customer satisfaction and the availability of the cash. Further studies revealed that availability of mobile banking has relationship with customer satisfaction (Jannat & Ahmed, 2015). Having looked at all these findings, it can be concluded that availability of banking technologies when customers needed them, will generate a positive effect.

2.3.7. Credibility

Credibility implies the level of ability the banking technologies possessed in delivering certain services (Rahman, et al., 2017). Alternatively, credibility can be expressed as a function of consumer trust too. This is included in the extended Technology Acceptance Model (TAM) as a key factor for customers to accept technologies (Dalhatu, et al., 2014). Failures or issues in the technology are a key dimension of credibility. A research study found out that delivering banking services as customers requested without any technical failures has positive relationship with customer retention (Iberahim, et al., 2016). In order to build up credibility, security/privacy of technology are essential elements (Yu-Qian & Chen, 2012). Literatures agreed that being able to carry out banking transactions without technical failures enhance the credibility of the digital banking.

2.3.8. Responsiveness

Delivering digital banking services without the support of the banking staff can be referred as responsiveness of electronic banking system (Dhurup, et al., 2014). Further study suggests that being able to solve any digital form of matters through electronic system (i.e., ATMs) enhance the responsiveness of the system and impact customer satisfaction and retention respectively (Iberahim, et al., 2016). Another research found that responsiveness attribute on mobile banking technology improves customer switching from one bank to another in Bangladesh (Rahman, et al., 2017). Although self-support available in the electronic system is useful, in some cases personal touch available through online such as chatting services add extra value to the system (Alsudairi, 2012). Having looked at all the aspects, it has shown that responsiveness is an important service quality dimension.

2.3.9. Security Risk

Security of the digital banking system is considered as the key dimension in the service quality (Solanki, 2012). It is one aspect of the overall risk factor closely linked with other types of risk factors. This simply refers to threat coming to the security system through unauthorized access by third parties (Omariba, et al., 2012). These unauthorized accesses result in loss of money from targeted individuals and businesses (Curwen & Whalley, 2010). Hackers target sensitive financial information in order to get financial advantages (Yoon & Occena, 2014). It was revealed that millions of pounds are lost in the UK because of banking fraudulent activities (National Fraud Authority, 2013). Research studies show that increase of security risk reduces the customer trust, satisfaction and retention gradually (Belas et al. 2016; Hasanoudst & Saravi 2017). Further study revealed that security issues of digital banking is mostly common among elderly banking customers and which impact the retain of such customers (Dixit & Datta, 2010). Having looked at various studies, it is evident that security risks need to be minimized to get positive outcomes.

3. Methodology

The research follows deductive approach since established theories mentioned in literature review are tested. There is a good understanding of effects of digital banking through existing literatures prior to data collection process and hence, it can be called as a descriptive research. Survey research strategy has been adopted in order to collect primary data from three hundred customers of Lloyds bank plc, South London region in the United Kingdom. Since the list of all the customers of Lloyds bank is not available, there is no sampling frame attached. Sample size of this study is three hundred customers of Lloyds bank plc. In order to choose the respondents to the research purposive
A non-probability sampling technique has been selected and the researcher used their own judgment to find a suitable sample unit to carry out the data collection. The effects chosen in the study have been arranged in the form of Likert scale questions with the responses ranging from strongly agree, agree, neutral, disagree and strongly disagree. There were two Likert scales for digital and traditional banking used in the data collection.

After data collection, to analyse the data, SPSS software has been used. All the responses from survey questionnaires have been input to SPSS in order to find the statistics.

4. Data Presentation and Analysis

Although three hundred survey papers were collected, only two hundred ninety-eight were valid for data analysis process. The responses for each question have been coded as 5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree and 1 for strongly disagree. Below are the results of effects of digital banking.

4.1. Scale Development through Exploratory Factor Analysis (EFA)

In order to assess the validity of the questionnaires, EFA was used. It is generally preferable to have one hundred or more sample size to get accurate results. First step is to undertake the Kaiser-Meyer-Olkin (KMO) and Bartlett’s test to check the sample adequacy and the suitability of the data.

| KMO Measure | Sample Adequacy | 0.890 |
|-------------|-----------------|-------|
| Bartlett’s Test | Data suitability – approx. chi square | 3064.933 |
|              | Sig.            | .000  |

Table 1: The results of KMO and Bartlett’s test

Having a value of over 0.7 for KMO measure and a large chi-square on Bartlett’s test are the main requirements. Here, the results prove KMO and Bartlett’s test with 0.89 and 3064.933 with 0.000 significance which rejects null hypothesis and accept alternatives. This means the dimensions are not unique but there are significant relationships among them. This preliminary assessment allows to conduct EFA using the pattern matrix.

| Measuring Items                              | Factors |
|----------------------------------------------|---------|
| Digital banking is accessible                | -.314   |
| Digital banking is cost effective            | .020    |
| Digital banking is responsive                | .079    |
| Digital banking is efficient and effective   | -.007   |
| Digital banking is easy to use               | .370    |
| Digital banking is secured                   | .076    |
| Digital banking is easily available          | .061    |
| Digital banking is useful                    | .362    |
| Digital banking is reliable                  | .324    |
| Traditional banking is efficient and effective | .910  |
| Traditional banking is easy to use           | .883    |
| Traditional banking is useful                | .872    |
| Traditional banking is accessible            | .845    |
| Traditional banking is secured               | .842    |
| Traditional banking is cost effective        | .789    |

Table 2: The Pattern Matrix

It is required to have over 0.4 for the components to load a factor. The above results show that two factors are loaded, first one is with all the effects of traditional banking and second factor is with all the digital banking components. This assures that there is no need to remove any dimension from the scale. Hence, nine dimensions of the digital banking scale and six dimensions of traditional banking scale can be used for further analysis of the data.

| Digital Banking Scale                    | Mean |
|-----------------------------------------|------|
| Digital banking is accessible           | 3.81 |
| Digital banking is cost effective       | 3.67 |
| Digital banking is responsive           | 3.46 |
| Digital banking is efficient and effective | 3.99 |
| Digital banking is easy to use          | 4.19 |
| Digital banking is secured              | 1.91 |
| Digital banking is easily available     | 3.97 |
| Digital banking is useful               | 4.23 |
| Digital banking is reliable             | 3.68 |

Table 3: Digital Banking Scale
The above table shows that the mean figures of the eight dimensions are deviated from the neutral (which is = 3) towards the strongly agree while one dimension (security aspect) goes towards strongly disagree direction. This means that the scale includes both positive and negative effects of the digital banking which statistically validates the developed digital banking scale.

| Traditional Banking Scale                                  | Mean |
|------------------------------------------------------------|------|
| Traditional banking is efficient and effective             | 4.10 |
| Traditional banking is easy to use                          | 4.28 |
| Traditional banking is useful                               | 4.24 |
| Traditional banking is accessible                           | 4.13 |
| Traditional banking is secured                              | 4.17 |
| Traditional banking is cost effective                       | 4.03 |

Table 4: Traditional Banking Scale

The above traditional banking figures show that mean figures of all the elements are from 'agree' (which is = 4) towards strongly agree direction. It seems all the effects are positive with regard to the current research.

5. Discussion

The quantitative analysis results show that all the effects of traditional banking have higher satisfactory rating than digital banking. There is a significant variance in the findings of security aspect of digital banking and traditional banking. Customers experience that the security of the traditional banking is higher than the digital banking. Though, the other effects are in favour of traditional banking, the variance of figures is not that significant compared to security aspect. The research findings agree with those of Belas et al. (2016) and Hasandoust & Saravi (2017) that security risk of the digital banking is significant and it may impact customer satisfaction. Furthermore, it shows that traditional customers less satisfied about cost effectiveness of traditional banking compared to other four effects. The findings disagree with those of Gilaninia, et al. (2011) and Krisnanto (2017) that customers have more cost effectiveness through digital banking compared to traditional banking. Although Sharma (2016) and Ramachandran & Chidambaram (2012) suggested that accessibility of digital banking is higher than the traditional banking, this study shows most of the customers experience high accessibility in the traditional banking. It may be due to other factors such as less availability of the technology, technical failures, less responsiveness etc. Ease of use and usefulness possess high positive ratings in both digital and traditional banking. It indirectly proves TAM, that usefulness and easiness to use are key to accept banking technologies by the customers.

Although there are nine main effects of digital banking and six of them of traditional banking were considered separately, some of them are interlinked with each other when customers experience is considered.

6. Recommendations

If Lloyds bank want customers to move towards electronic banking, it is important to maintain a high level of security to protect customers’ and bank’s money. It was understood through findings that customers perceive traditional banking as secure in comparison with the digital banking. Some customers are vulnerable and can easily be victims of frauds. Hence, they prefer traditional banking services to have the personal touch. Therefore, it is important for Lloyds bank to maintain both traditional and digital banking services for all types of customers.

It is not advisable to expect a complete transition from traditional to digital banking as customers still perceive and experience more of the positive effects of traditional banking compared to electronic mode of it. Hence, Lloyds bank should provide informed choices for customers to choose the type of banking they need. Also, banks can introduce a strategy called seamless transition for customers to slowly experience the positive side of the digital banking and adapt themselves for the digital side accordingly.

7. Conclusion

This study aimed to understand the difference between traditional banking and digital banking through existing literatures and through the case study of Lloyds bank. Different effects of digital banking were identified by examining the literatures and studied them in the case of Lloyds bank. Two scales were developed through the results of the EFA. It is clear that security aspect plays a vital role in both traditional and electronic banking. However, customers of Lloyds bank show more positive perceptions towards traditional services compared to digital services. Importantly, the right balance between both conventional and electronic banking is needed for a bank to sustain in the market in the long run.

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