E-Banking and Its Impact on Banks' Performance and Consumers' Behaviour

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Abstract

Financial industry is a heart of every robust economy, if it collapses so will the economy and it is absolutely evident from current recession in UK, and in turn, Information Technology has become the heart of banking sector. Investment and reliance in e-banking innovation by its providers to offer their services makes it essential to understand how various aspects of consumer behaviour affect the innovation and respond to service quality. Within this context this paper has undergone a critical literature review of previous researchers with an objective to examine the impact of e-banking on consumer's behaviour to e-service quality. To further this, since increased adoption of internet as a delivery channel contributes a gradual reduction in overhead expenses (Marketing, IT and Staff), this paper also consists of a critical review of peer reviewed, scholarly and organizational literature regarding the impact of e-banking on banks' performance to examine if banks have successfully achieved customer's satisfaction, by providing high level of quality service through online delivery channel, besides operating cost minimization and revenue maximization.

Keywords: E-Banking, Internet Banking, Bank's Performance, E-Service Quality, Consumer Behaviour

1. Introduction

In banking sector, the IT development has a significant effect on development of more flexible and user friendly banking activities/services. In this context, one of the objectives is to analyse the relevant literature to assess what previous researchers have found about banks' financial and operational performance after adoption of information technology.

Customer satisfaction is a key parameter for banks to ascertain how effectively the web furthers their objectives of customer acquisition, retention and increased share of wallet. The research on e-banking and the adoption of internet banking by consumer have been broad but few areas, with consumer perspective, are left with less exploratory debate. In order to assess the role of the online channel in meeting the needs and exceeding the expectations of customers, this paper will review the relevant literature to conclude how customer satisfaction were ascertained by previous researchers and will. The objective is to use the framework of customer satisfaction to understand and quantify the role of online banking in a bank's success.

Financial industry is a heart of every robust economy, if it collapses so will the economy and it is absolutely evident from current recession in UK. The late 20th century has witnessed the usage of Information & Communication Technology has sharpened and expanded its horizon of managing money and offering different products and services across the world. Information Systems have created a new infrastructure for the world economy to become truly global and also provided the users of new technology a competitive advantage over their rivals. Transactions worth of billions of dollars take place in seconds in the electronic circuit throughout the globe [1]. The banking and financial industry (BFI) is transforming itself in unpredictable ways [2], powered in an important way by advances in information technology [3].

Although, Information systems have revolutionized the way of living as well as conducting businesses and study of financial industry has received increased attention over the last decade, it continues to pose challenges for marketers and academic alike. Technological advancements and changing social trends such as heightened customer pro-activity and increased preferences for convenience have caused intense restructuring of the financial services sector [4].

2. Theoretical Background

To identify and describe the impact of e-banking on banks' performance and consumers' behaviour I studied various articles/journals, relevant literature and existing practices of e-banking. The significant benefit associated with e-banking, off course, lies in its availability over 24 by 7, whereas the significant drawback, on the other hand, lies in its complexity/inconvenience and security factors. Both of these aspects (benefit & drawback) have a profound impact on banks' performance and consumer's behaviour. This paper seeks to determine if the adopters (banks) of new technology have earned higher income and

offered/delivered high quality service than in traditional way. Also it examines consumers' response to the diffusion of new technology. The main issue that can prevent consumers' positive response includes the convenience aspect of the service, ease of use and its compatibility with their lifestyle.

3. Role of IT in Banking Sector

The U.S. Department of Commerce reports that Internet traffic is doubling every 100 days, and the 1997 Forrester's Business Trade and Technologies strategies research report predicted a forty-fold increase in Internet commerce from $8 billion in 1997 to about $327 billion by the year 2002 [5]. And further increase in future is imaginable. Another prediction in September 1998 calculated this number to be closer to one trillion in 2002 [6].

Forrester Research [7] showed that internet bankers represented 37 percent of Internet users and online banking services now attract 18 percent of all European adults. According to this research, the number of Europeans using online banking will double to reach almost 130 million users in five years - a total of 21 percent. Whereas online banking penetration in the Nordic countries and the Netherlands will jump to 60 percent of Net users in 2003, Italy and Greece, which had fewer than 5 percent of adults banking online a year before, struggled to achieve a situation with a third of Net users banking online in 2003. According to another Forrester research [8], a typical European bank has the following perspective; online, ATM, branch, other and call centre, in six years the proportion of transactions made online will rise to 40% of all transactions, while the transactions in the traditional branches will be below 10%.

Information Technology has completely re-shaped the dimensions and directions of competition in the retail banking sector. Following the introduction of PC banking, ATMs and phone banking, which are the initial milestones of e-finance, the diffusion and increased penetration of Internet has added a new distribution channel to retail banking: Internet/Online-banking for the delivery of services and products.

4. E-banking and Banks' Performance

Banks' existence depends on their ability to achieve economies of scale in minimizing asymmetry of information between savers and borrowers [9]. Within this context in the current era, the central question facing management's attention is how IT has helped banking sector to sustain the economies of scale whilst shifting from bricks and mortar banking to online banking?

Claessens et al. [10] mentioned the leapfrogging opportunities e-finance offers to emerging countries. These countries may benefit themselves by the use of latest technology at the time of building up their financial intermediation infrastructure regardless of poor and weaken financial systems and structures. They also added "Role of ICT in financial industry can allow global economies to setup a financial infrastructure/system before first establishing a fully functioning financial infrastructure instead. Since e-finance is much cheaper, it involves reduced processing costs for providers and less search and switching costs for consumers, providers can advertise financial services and products involving smaller transactions to lower-income borrowers, even in remote areas. In addition to this, government's main role will be to improve and promote the enabling environment."

Claessens et al. [11] in another research, also made their contribution to leapfrogging advantage of emerging markets by suggesting that e-finance can be beneficial for development of financial industry of emerging countries by lowering costs, increasing the span and quality and widening access to financial services.

Researches on the impact of e-banking on bank's performance, although scarce, are available for US, European and Australian market. Carlson et al. [12] and Furst et al. [13] investigate whether there is a link between offering Internet banking and bank's profitability. To this end, Furst et al. [13], find that federally chartered US banks had higher Return on Equity (ROE) by using the click-and-mortar business model, and they also observe that more profitable banks adopt internet banking after 1998 but yet they are not the first movers. These researchers concluded that e-banking was too small a factor to have affected bank profitability at that time. This result was the same as those of Egland et al. [14], who found no evidence of major differences in performance of Internet banks in the US subject to two caveats: firstly, this result may not be the case for all the banks, and secondly, such results are open to change over time as banks become more severe in the use of innovation. Sullivan [15] also found no systematic evidence that multi-channel banks in the 10th Federal Reserve District were either helped or harmed by having transactional web sites. These finding were among the previous findings of Sathye [16], for the credit unions in Australia for the years 1997 to 2001, shows that electronic banking has not proved to be a performance-enhancing tool.

DeYoung [17] analyzes the performance of brick and mortar banks versus click and mortars banks in the US market and find strong evidence of general experience effects available to all start-ups. Up till now there is little evidence that diffusion of online banking has accelerates the financial performance of Internet-only start-ups. He finds that bank profitability is lower for pure-play (internet-only) banks in the US market. However, in a later study DeYoung et al. [18]. (2007) invoke and find, for US community banks and Traditional community banks, those multi-channel banks are somewhat more profitable, mainly via increased non-interest income from deposit service charges. Movements of deposits from checking accounts to money market deposit accounts, increased use of brokered deposits, and higher average wage rates for bank employees were also observed for click and mortar banks. Whereas no change was explored in loan portfolio mix, these findings confirm Hernando and Nieto [19] that internet banking is seen as a complementary channel.

Centeno [20], in his study of Analyzing the Acceding and Candidate Countries' (ACCs) adoption of e-banking, classified e-banking adoption factors in two categories (1) access technology and infrastructure related factors and (2) sector specific retail banking factors. The first category involves internet penetration rates, skill of consumers in using internet and related technologies, attitude towards technology, security and privacy concerns. The second

category includes trust in banking sector, banking culture, e-banking culture and Internet banking push. In his research Centeno [20] also stated that lack of PC and internet penetration is still an entry barrier for internet banking development both in EU15 and ACCs. The cost of access services is a main issue for the PC and Internet penetration especially in Central and Eastern Europe countries. On the other hand, there has been a lack of confidence in the banking sector in ACCs due to past turbulent periods. These concerns are further aggravated with privacy concerns. Magnitude of banking service usage and e-banking culture are also weaker in ACCs compared to EU-15. Gurau [21], come up to similar conclusions to Centeno [20], that successful implementation and development of online banking is upon many interrelated factors. In light of this kind of results I aim at leapfrogging these aspects as in the current age in UK these factors have been dealt and overcome by the people. Now a day's skills of using internet and cost of accessing the technology, being at home, do not seem to be a barrier towards the adoption of innovation from the consumer perspective.

E-banking is motivated largely by the prospects of operating costs minimization and operating revenues maximization [22]. An evaluation of online banking in developed and emerging markets reveal that in developed markets lower costs and higher revenues are more noticeable. While Sullivan [15] finds no systematic evidence of a benefit of internet banking in US click and mortar banks. Jayawardhena and Foley [23] stated that internet banking results in cost and efficiency gains for banks yet very few banks are using it and only a little more than half a million customers are online in U.K.

5. Economic Rationale of E-Banking

Innovation in Technology has distorted the traditional retail banking business model by making it possible for banks to break their traditional value creation chain so as to allow the production and distribution of financial services to be separated into different businesses. Thus, for example, primarily Internet banks distribute insurance and securities as well as banking products, but not all the products they distribute are produced by their group [24].

However, the main economic argument for diffusion of adopting the Internet as a delivery channel is based on the expected reduction in overhead expenses made possible by reducing and ultimately eliminating physical branches and their associated costs (e.g. staff, marketing and rent). This specifically applies to and relevant in the Spanish banking system, which is one of the most "overbranched" in Europe. As stated by DeYoung [17], and Delgado et al. [25], the Internet delivery channel may generate scale economies in excess of those available to traditional distribution channels.

Besides them, Haq [9] also states that bank exists because of their ability to achieve economies of scale in minimizing asymmetry of information between savers and borrowers. The unit costs of Internet banking fall more rapidly than those of traditional banks as output increases as a result of balance sheet growth. In this context, DeYoung, Lang and Nolle [18] refer to the Internet banking as a "process innovation that functions mainly as a substitute for physical branches for delivering banking services". In the case of the Spanish banks, there is some undependable evidence that shows that the Internet distribution channel has lower unit transaction costs than the two other distribution channels (branch and telephone) for a given type of transaction (money transfer, mortgage loan, brokerage or demand deposits).

6. Consumers' Behaviour

A survey carried out by KPMG [26] suggests that progression of e-banking can be examined through a five-stage theoretical framework, where the level of e-banking services, being offered, start from a promotional stage and expand to transaction-enabled business innovation stage where organizations redecorate their value-chain and offer highly customized products and services.

Analyzing the consumer side, Birch and Young [27] show that consumers seek convenience, transactional efficiency, a choice of core banking products and non-core products, and access to competitive returns and prices. The concept of internet has raised customer's sensitivity to fast customer service. Cox and Dale [28] categorise four factors in delivering quality service through web site that are:

1. Ease of use
2. Customer's confidence
3. Online resources
4. Relationship services.

Each class relates to a different part of the website experience and serves to improve and exceed customer satisfaction. Ease of use is associated with all factors relating to the design of website. The key site seeks to, during the course of customer navigation, reduce customers' frustration. The fundamental nature of website means that communication with the customer has to be enabled through the use of text, graphics and animation. All these factors relate to design of the web site and if the design is poor and not user friendly it can not then achieve customers' expectation.

The spread of Internet banking should also benefit consumers by reducing the time and inconvenience of banking transactions and, in very small communities, by providing access to banking services that might otherwise be unavailable [29].

Over the last decade, the Internet has played a critical and vital role in providing online services and giving rise to a completely new channel. In the Internet age, the extension of commercial banking to the cyberspace is an inevitable development [30]. Both researchers and practitioners in the BFI have highlighted the need for banks to broaden their branch-based delivery channels by embracing electronic banking (e-banking).

E-banking creates unprecedented opportunities for the banks in the ways they organize financial product development, delivery, and marketing via the Internet. While it offers new opportunities to banks, it also brings many challenges such as the innovation of IT applications, the blurring of market boundaries, the breaching of industrial barriers, the entrance of new competitors, and the appearance of new business models [31, 30]. New technology brings benefits and risks and new challenges

for human governance of the developments [32]. Now, the speed and scale of the challenge are rapidly increasing with the pervasiveness of the Internet and the extension of information economy [3].

However, to successfully cope with the challenge of the e-banking innovation, the incumbent banks must understand the nature of the change and capability barriers that it presents [33]. Without this understanding, attempts to migrate to e-banking may be doomed to failure. Banks that are equipped with a good grasp of the e-banking phenomenon will be more able to make informed decisions on how to transform them into e-banks and to exploit the e-banking to survive in the new economy [33]. Given the e-banking is a financial innovation [30], the change may render the organizational capabilities of the traditional banks obsolete. From the resource-based view by Grant [34] and Mahoney & Pandian [35], in such a context, the banks must constantly reconfigure, renew, or gain organizational capabilities and resources to meet the demands of the dynamic environment of BFI. Establishing core capabilities can help the banks reorganize their resources and renew their competences to sustain competitive advantages and to achieve congruence whilst shifting from traditional banking to electronic banking.

Web based Customer Service Level and the nature of participation by customer; they should be integrated with the web site design to be intact and leading to enhance the customer service. In order to ascertain how website should be designed for enhancing customer service in internet banking, the theories of Cai and Jun [36] and also from Joseph et al. [37] are deemed appropriate for this study. They have described their study in the way of following guidelines for the environment of a website.

- **Trustworthiness** [36]
  Security, Trust/Risk, Privacy
- **Communication** [36]
  Communication Tool, FAQ's, Information Updated, Information understandable
- **Convenience/accuracy** [37]
  Convenient, Accurate, Easy to use.
- **Feedback/complaint management** [37]
  Feed Back, Friendly Environment, Complaint Management
- **Efficiency** [36]
  Menu Options, Demo, Exchange Rate Conversion, Calculators
- **Accessibility and Customization** [37]
  Connectivity, Special service for disables, Language Options, Personalized Service

7. Conclusions

The Banking and Financial Industry (BFI) has encountered three significant changes; the Combined strength of the industry, the diffusion of internet banking and the increased freedom to combine banking with other financial services especially through internet. Within this context the change it has adopted enormously is the adoption of internet technology but parallel to this it has faced many challenges such as Significant high cost of installing and maintenance of IT and its infrastructure, skilled work force, issues of increasing demand to meet customer expectation for service quality, trustworthiness of the information system and ability to achieve economies of scale within IT structure.

In light of all these considerable factors and from the discussion whilst reviewing literature many researchers did not find the internet channel, for the delivery of services and products, somewhat profitable for banks' financial performance. But a few other studies showed it to be profitable with a time lag of two years by using the concept of ROA (Return on Assets) and ROE (Margin) and by using an implementation method of Activity Based Costing technique in banking sector and found electronic channel helps reduce the cost of both banks and their clients [38]. So there has been a conflict among these findings for a profitability perspective. Some also found this e-banking channel making profitable impact on the banks that are only internet start-ups than brick and mortar banks transforming into click and mortar.

On the consumer side, many researchers examine consumers' behaviour towards innovation differently. Some studies showed that due to perceived security risk, lack of comfort with computer technology, either due to lack of awareness or age factor, and a host of other reasons the internet channel did not appear to be significantly viable or accepted warmly or quickly by consumers. Other researchers also found that despite all these factors banks, themselves, have been unable to have provided high e-service quality because of which the clients who were even ready to adopt this delivery channel did not turn up again to innovation, and banks couldn't successfully build the required contents of e-banking environment for consumers. More research needs carrying out my research to confirm or refute the previous findings by collecting the primary data to come up to a conclusion for an impact that internet banking has on performance of the banks and behaviour of the consumers.

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