



Digital banking services, customer experience and financial performance in UK banks

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Digital Banking Services, Customer Experience and Financial Performance in UK Banks

Cajetan Ikechukwu Mbama

A thesis submitted in partial fulfilment of the requirements of
Sheffield Hallam University
for the degree of Doctor of Philosophy

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DECLARATION

While registered as a candidate for the degree of Doctor of Philosophy, the author has not been registered for any other award with any other university or institution.

No part of the material in this thesis has been submitted for any degree or other qualification at any other institution by the author, or to the best of his knowledge and belief, by any other person. The thesis describes the author's original work.

Digital Banking Services, Customer Experience and Financial Performance in UK Banks

Cajetan Ikechukwu Mbama

ABSTRACT

Digital banking through telephone, internet and mobile is becoming important for banks' service marketing, especially with the increase in digital device usage and customer demand for financial services. The changing dynamics of banking means that banks' performance is no longer solely dependent on branch sales. Capturing and retaining customers are vital for banks, and digital banking is becoming the tool of choice; however research on how it affects customer experience and UK banks' performance is still limited. This thesis focusses on determining the impact of digital banking services on customer experience and financial performance.

The research in the thesis uses a mixed methods approach, utilising bank financial reports, interviews and questionnaires to achieve important results and contribute to knowledge in practice, and in related services, marketing and e-commerce theories. The research adopted Regression, Structural Equation Modelling and Chi-Square analyses in quantitative research, while using Content Analysis in qualitative research. The research takes a broad approach in the investigation of digital banking, customer experience and bank financial performance. It has used qualitative and quantitative analysis techniques to produce, test and triangulate results to increase robustness.

The research demonstrates how digital banking enhances banks' profitability. It found that attributes such as perceived value, convenience, functional quality, service quality and digital banking innovation are important in improving customer experience, satisfaction and loyalty, and banks' financial performance. The insights from the three research perspectives have been integrated to develop a new Digital Banking Services, Customer Experience and Financial Performance Enhancement Framework (DiBCEFPEF). The results from the thesis have the potential to assist banks in the provision of services, and improve customer experience and financial performance, such as profitable growth and economic value-adds, through digital banking.

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GLOSSARY

Anova	Analysis of Variance
B	Unstandardised Regression Coefficient
BBA	British Bankers' Association
BOE	Bank of England
BSC	Balanced Scorecard
CEM	Customer Experience Management
CFs	Conceptual Framework (s)
CFA	Confirmatory Factor Analysis
CLV	Customer Lifetime Value
CMA	Competition and Markets Authority
CRM	Customer Relationship Management
CsTK	Contribution (s) To Knowledge
DB	Digital Banking
DBSs	Digital Banking Service (s)
DiBCEFPEF	Digital Banking, Customer Experience and Financial Performance Enhancement Framework
e-banking	Electronic or Internet banking
EFA	Exploratory Factors Analysis
EMP	Employees in the Interview
FCA	Financial Conduct Authority
FP	Financial Performance
GQM	Goal Question Metrics
H	Hypothesis
HSBC	Hongkong and Shanghai Banking Corporation
ICA	Individual Current Account
IT	Information Technology
KMO	Kaiser-Meyer-Olkin
m-banking	Mobile Banking
MS Excel	Microsoft Excel
MS Word	Microsoft Word
NIM	Net Interest Margin
NPM	Net Profit Margin

NPS	Net Promoter Score
OFCOM	Office of Communications
PCA	Principal Component Analysis
PEU	Perceived Ease of Use
PhD	Doctor of Philosophy
PRA	Prudential Regulation Authority
PRQ	Principal Research Question
PU	Perceived Usefulness
r	Correlation Coefficient
R	Regression Coefficient
R^2	Regression Squared Coefficient
R&D	Research and Development
RBS	Royal Bank of Scotland
ROA	Return on Asset
ROE	Return on Equity
ROI	Return on Investment
RQs	Research Question (s)
SD	Standard Deviation
SEM	Structural Equation Model
SHU	Sheffield Hallam University
SPC	Service Profit Chain
SPSS	Statistical Package for the Social Sciences
sr_i^2	Semi-Partial (Part) Correlations
TAM	Technology Acceptance Model
t-banking	Telephone Banking
TQM	Total Quality Management
TVE	Total Variance Explained
UK	United Kingdom
t	Student t Statistic
α	Cronbach's Coefficient
β	Standardised Regression Coefficient
χ^2	Chi-Square Statistic

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CHAPTER ONE - INTRODUCTION

1.1 Overview

The offer of services through digital banking (DB) has become important in the banking sector. The development of digital banking has significant implications for banks' marketing efforts (Dootson, Peatson & Drennan, 2016), as it affects customer interfaces. Digital banking enables banks and their customers to benefit from financial services. However, the transformation towards digital banking due to changing customer behaviour presents a challenge to banks, particularly in the way services are offered. As customer expectations and bank competition increase, capturing and retaining customers and improving profitability become crucial after the financial crisis of 2008 (Monferrer-Tirado, Estrada-Guillén, Fandos-Roig, Moliner-Tena & Sánchez, 2016).

Traditionally, UK bank customers bought financial products through bank branches. The arrival of digital banking channels such as telephone (t-banking), internet (e-banking) and mobile (m-banking) banking have changed the way customers obtain services, challenging traditional banking methods. Digital banking was born from an original concept of selling services via the telephone in the late 1980s by First Direct (First Direct, 2014). It has enabled banks to offer multi-channel services, altering the way they interact with customers (Payne, Peltier & Barger, 2017; Cortiñas, Chocarro & Villanueva, 2010), and made UK banks close branches deemed unprofitable due to customer numbers dwindling (BBC, 2016; French, Leyshon & Meek, 2013). These changes in banks have made research into digital banking very compelling.

To help banks improve services, this research focusses on the effect of digital banking on customer experience and banks' financial performance, based on the opinions of UK banks documented in their financial reports, employees (senior managers) and customers. This chapter provides an introductory overview of the thesis. It starts with the UK banking setting, an explanation of the research rationale, background, questions and objectives, and strategy adopted. The significant research outcomes are presented, followed by an outline of the organisation of the thesis.

1.2 UK Banking Setting

According to Heffernan (2005), banks are financial firms, offering loan and deposit products on the market and catering to the changing liquidity needs of their borrowers and depositors. Prior to UK banking reforms, a few specialised banks dominated financial services. The changes introduced through the Building Societies Act 1986 and Banking Act 1987 enabled new banking institutions to move into the financial market (UK Government, 1986a; 1987). With these changes, building societies and banks were allowed to carry out a versatile role to accommodate customer demand for services, leading to further expansion of financial markets. Presently, UK banks are involved in services ranging from retail, insurance, commercial and investment banking, and customers can interact via digital channels, and self-service terminals, branches and call centres. The major retail banks (e.g. Lloyds, Barclays and Santander) operate on the UK high street.

Banking regulation in the 1980s, including the Financial Services Act 1986, was designed to self-regulate (UK Government, 1986b), but the UK government decided in 2001 to create an ethical code of conduct to provide greater supervision of banks to protect customers (FSA, 2002). Standards of behaviour affect banks' ability to achieve their aims and the code of conduct objectives set by the Financial Conduct Authority (FCA) (FCA, 2013a). The highest ethical standards generate significant benefits for banks, whilst unethical behaviour affects reputation, and attracts sanctions and fines (e.g. Payment Protection Insurance). Therefore, banks need to consider security and customer experience in digital banking, while creating value for shareholders.

UK banks are currently regulated by the FCA (FCA, 2015). The Financial Services Authority (FSA) functions were reviewed after the financial crisis of 2008, and the collapse of some banks worldwide. The UK government conducted a 'post-mortem' to prevent a similar event occurring, and in 2013, the FCA and the Prudential Regulation Authority (PRA) took over financial services regulation (FCA, 2013b). The FCA and PRA have shared responsibilities in regulating insurance, intermediaries and investment firms, while the FCA is responsible for regulating banks and building societies. The Bank of England (BOE) is responsible for maintaining monetary and financial stability, ensuring there is liquidity and acting as the lender of last resort (BOE, 2018). Although banks are constrained by the regulations, they have to innovate to improve customer

experience and financial performance using digital banking which has changed the way customers perform banking transactions.

1.2.1 Contextualising UK Banking Sector

The UK banking sector applies to financial institutions, from mutually owned building societies to the shareholder owned banks (Heffernan, 2005). The sector grew in the 19th century when London rose as a financial centre (Moutsianas & Kosmidou, 2016), now employing millions of people. It was transformed after the ‘Big Bang’ in 1986, when the London Stock Exchange was deregulated, allowing foreign ownership of member firms (Ekpu & Paloni, 2016), and Building Society and Banking Acts which enabled banks to carry out ‘one-stop’ financial services (UK Government, 1986a; 1987). These deregulations helped UK banks benefit from the globalisation forces and financial innovation, leading to additional liquidity, merger and acquisition, and financial market growth. They also created business opportunities for foreign banks, representing 55 percent of the UK banking sector’s assets, which account for a quarter of all European Union banking assets and were worth over £5 trillion in 2014 and 20 percent of the world’s cross-border lending (Ekpu & Paloni, 2016), highlighting its importance worldwide.

Currently, the five largest UK banks in terms of assets are Royal Bank of Scotland (RBS), Barclays, Hong Kong and Shanghai Banking Corporation (HSBC), Lloyds Group and Standard Chartered (BBC, 2013a). Although Standard Chartered is highly capitalised, it operates primarily in Asia and Africa. While Santander bank’s parent company is located in Spain, it features strongly on the UK high street, after taking over Abbey National, and Alliance and Leicester banks, and replaces Standard Chartered amongst the five UK largest retail banks (Competition & Markets Authority (CMA), 2015). There are other competing banks such as Virgin Money, Yorkshire, Tesco, Sainsbury, and more recently, post-financial crisis Atom and Metro banks have been established to challenge the dominance of the incumbent banks using digital banking.

UK banks and others around the world have gone through turbulent times after the financial crisis of 2008, affecting customer confidence and banks’ profitability. Consequently, some banks were taken over: HBOS and Northern Rock, by Lloyds and Virgin Money respectively. The UK government took large holdings in RBS and Lloyds to restore financial stability, and to prevent some weaker banks from failing (BBC,

2008). After the financial crisis, banks have sought to rebuild their balance sheets, improve their financial position, regain customers' trust and improve customer experience and shareholder value. Notably, this study is conducted in the post-financial crisis period, which may have affected banks' perceptions of financial performance and priorities, and customer demands, attitudes and experience about banking services. This research is necessary to highlight their perceptions after the financial crisis.

1.3 Rationale for Research

The relevance of digital banking services deployed over digital technology has become widely recognised. Changes in technological interfaces have enabled banks to delight customers with instant services through digital banking (Oliveira & Tam, 2017). The proliferation of ownership of digital devices like mobile phones, personal computers, tablets and laptops has spurred the demand for financial services on these devices. In recognition of the digital technology potential, the UK Government planned to connect all homes and businesses to the internet (OFCOM, 2009), opening up service opportunities, enabling banks to benefit from digital banking for service marketing. This means that banks can efficiently offer services, which customers can access through digital channels.

Many banks have struggled to make a profit after the 2008 financial crisis, forcing them to innovate and minimise costs. They have begun looking to gain from digital banking. Competition has motivated banks to embrace digital channels to automate operations and deliver better services (Alalwan, Dwivedi, Rana & Simintiras, 2016). Research in digital banking uptake argues that it offers banks alternative delivery channels through which services can be delivered more conveniently and economically (Akinci, Aksoy & Atilgan, 2003), and can be used to offer various services to customers (Koenig-Lewis, Palmer & Moll, 2010; Chong, Ooi, Lin & Tan, 2010).

The global economic crisis has made customers more demanding, thereby forcing firms to become customer oriented and invest to offer quality services and enhance their business performance (Pekovic & Rolland, 2016). Access to banking is changing quickly, and with increasing digital banking uptake, use of branches has fallen (BBC, 2016). This shift towards digital banking means that banks' marketing and financial management models are changing and customer acquisition and retention, and financial performance are no longer determined solely in the branches. This change has made the

effect of digital banking on customer experience, satisfaction, and loyalty, and how they contribute to financial performance critical for banks and an important research topic. The challenge for banks is how to meet these customer needs and make profit.

With rapid technological change, banks face the challenge of improving their customer experience and profit, following the financial uncertainty, increased FCA scrutiny and reduced customer confidence. Customers want high service quality, convenience and better experience via digital devices. However, studies into digital banking have put more emphasis on uptake (Martins, Oliveira & Popovic, 2014; Hanafizadeh, Behboudi, Koshksaray & Tabar, 2014; Chong et al., 2010), than on exploring customer experience, and the perceptions of banks and employees, who make decisions on how to offer services. Consequently, Hoehle, Scornavacca and Huff (2012) note that prior research has not identified all the issues involved in e-banking usage. Although digital banking is ubiquitous among mainstream banks, there is still a need to understand the impact on customer experience and bank financial performance, especially for different customer segments (Keisidou, Sarigiannidis, Maditinos & Thalassinou, 2013; Patsiotis, Hughes & Webber, 2012; Garg, Rahman & Qureshi, 2014). This will enable different banks to fine-tune their strategies in line with their overarching business model.

This research takes a holistic view, by looking at how banks and customers can derive value from digital banking. The research has reviewed literature on customer experience, satisfaction, loyalty and financial performance (Keisidou et al., 2013; Klaus & Maklan, 2013; Yee, Yeung & Cheng, 2010). It investigates bank financial reports, and employee and customer perspectives, to understand the links between digital banking services, improving customer experience and financial performance. This will help formulate a Digital Banking, Customer Experience and Financial Performance Enhancement Framework (DiBCEFPEF), comprising the above three perspectives. This new knowledge will provide better digital banking evaluation, helping customers and banks understand economic value-adds.

Furthermore, digital banking is new compared with other matured technologies, and banks are constantly seeking innovative ways of providing services using it. Through the researcher's professional experience, gaps in banks' ability to assess the impact of digital banking were noticed. It is therefore important that banks, managers, executives and investors, who are major research stakeholders, obtain clear information through an

efficient framework. This will add new insight into their current banking model and marketing strategy, enabling banks to manage changing customer behaviour using digital banking. The research described in this thesis aims to investigate and contribute to knowledge through integrated frameworks for determining the effectiveness of digital banking services, related customer experience and banks' financial performance.

1.4 Background of the Study

M-banking is an important strategic change to occur in banks in recent years (Oliveira & Tam, 2017). The role of digital banking in the transformation of banking services is having a significant effect in society. Teo, Anderson, Fenwick and Ying (2014) argue that businesses continuously exploit digital technologies to create new value sources and increase efficiency in customer services. Therefore, every business must transform into a digital business to survive. This suggests that banks should focus on digital banking aimed at improving customer experience, as customer needs are changing.

The internet has grown over the years, offering many applications as new ways for banks to meet customer demands and offer services (Martins et al., 2014). The effect of digital banking has been economically important, making it a strategic weapon to stay competitive, as banks face a challenging environment. The relevance of digital banking for providing services, has prompted researchers to concentrate in this research area (Jun & Palacios, 2016; Hanafizadeh et al., 2014; Xue, Hitt & Chen, 2011), as it is having a major effect on the way customers access financial services. However, Hoehle et al.'s (2012) study on digital banking utilisation states that prior research has limitations due to the study phenomenon and methods used. Therefore, this research will combine insights from a number of models and theories, including service quality, technology innovation and business performance to investigate the relationship between digital banking, improvement in customer experience and financial performance.

This research will have implications for banks, investors and policy makers. It will create new insight into digital banking, on how customer experience and financial performance are linked, which will be part of the new knowledge. This study uses an established UK bank as a case study, and information from UK banks and customers. Through interviews with employees and a questionnaire distribution to customers, awareness will be created and publications will help to disseminate the new knowledge to academics and the public.

1.5 Research Questions and Objectives

The principal research question (PRQ) is:

PRQ: How can the research results be integrated into a framework for enhancing digital banking, related customer experience and bank financial performance, in light of such metrics as profitable growth and economic value-adds?

The principal research question is broken down into three additional questions:

RQ1: What are the banks' general perceptions of digital banking services innovation in terms of customer experience and financial performance?

RQ2: How do digital banking services generally affect customer experience and bank financial performance?

RQ3: What are the employees' perceptions of digital banking innovation in the studied bank, and how effective is the bank's digital banking in enhancing customer experience and financial performance?

To address these research questions, the empirical research aims to analyse the effectiveness of digital banking with regard to customer experience and bank financial performance; it is expected that insights from these questions will yield an improved framework. Given the limited studies in the area, the findings will provide useful input into future studies.

The above research questions raise the following objectives:

Objective 1: To provide information on digital banking uptake, customer experience and financial performance through bank financial reports. It gives insight from banks and how they are serving customers with digital banking. Executives' perceptions of digital banking innovation (RQ1).

Objective 2: To provide new insights into how bank customers are adapting to digital banking regarding uptake, perceived experience, satisfaction and loyalty, and impact on financial performance. Customers' perceptions of digital banking (RQ2).

Objective 3: To provide insights into digital banking innovation, customer experience and financial performance, and evaluate areas that need more understanding from the case bank employees. Case bank employees' opinions (RQ3).

Objective 4: To integrate the research results into a DiBCEFPEF, providing a link between improvements in digital banking, customer experience and financial performance. This corresponds to the main research question (PRQ).

Table 1 shows where the questions are addressed.

Research Questions	Objectives	Addressed in Chapter
RQ1	1	5
RQ2	2	6
RQ3	3	7
PRQ	4	8

Table 1: Research Questions and Objectives

This work is suitable for PhD research because of the depth of knowledge to be gathered to explain digital banking services and customer experience impact on financial performance, and the contribution to knowledge it will make for all stakeholders. The research will highlight best practices in digital banking, value-adds and how banks can adapt their business models to provide better services. The research insight will help UK banks' management improve capabilities in their current digital banking strategies, by formulating appraisal and optimisation of position. It will help close the gap in banking services literature, providing new information on how to make digital banking more effective for banks and customers.

1.6 Research Strategy

There has been emphasis on a pedagogy of research modelling methods, which ensures that researchers have the right strategy and skills to solve real life problems, contribute practically to the targeted audience and build theory (Ezepue & Ojo, 2012). This approach is used to develop the research strategy. Robson (2002, p.80) describes a research design method as research purpose and questions, phenomenon to guide study, method of data collection and sampling strategy. Research purpose and questions are presented in this Chapter, while research theory and methods are addressed in Chapters Two to Four. The research results are presented in Chapters Five to Nine.

The research project is centred within the domain of digital banking services, marketing and computing in banks, it uses analytical techniques from a number of other academic disciplines like psychology, social sciences and business studies. Each of these utilises a variety of research methods which can be either quantitative or qualitative, or a mixture of both approaches. Quantitative methods are techniques of carrying out research, which involve some form of numerical measurement and analysis, while qualitative methods involve the textual description of a study. Although this may seem different, in practice

the two methods can be combined, and quantitative methods can be used to investigate qualitative data and vice-versa. For instance, it has become common practice in content analysis to use quantitative and qualitative methods to investigate data in a textual form (Vaismoradi, Turunen & Bondas, 2013; Hsieh & Shannon, 2005). The approach of using data from different sources increases validity, generalisability and ensures reliability of results, and is referred to as 'triangulation' (Creswell, 2003; Tashakkori & Teddlie, 2010; Duffy, 1987). This thesis uses quantitative and qualitative research methods to corroborate results.

The research study uses financial reports, questionnaire distributions from customers and interviews from employees of a UK bank. The research started by looking at literature for major attributes on uptake and experience of digital banking. It then obtained and analysed information from bank financial reports, looking for evidence of digital banking effects on customer experience and financial performance. It used evidence from the literature and analysis to construct questionnaires and interviews.

The empirical research in this thesis has not used a pure experimental design method, which involves the use of a controlled sample, manipulation of an independent variable and random allocation to groups or samples (Pedhazur & Schmelkin, 1991). Such an approach would have created ethical issues. The research has used reports, questionnaires and interview techniques popular in organisational, marketing and business research, and involves selecting respondents, asking questions, analysing data and drawing conclusions (Maxwell & Delaney, 2004, p.3). It is effective in science research where laboratory experiments are not ethically defensible (Robson, 2002, p.230). Bryman (1989, p.3) warns that a major issue in organisational research is access to information, therefore ethics and sensitivity of information should be considered.

Due to the nature of the research and the banking environment in which it was being carried out, ethical and legal agreements were obtained. Prior to collecting the questionnaire and interview data, ethical approval was obtained from Sheffield Hallam University's (SHU) Ethical Committee. Further confidentiality, ethical and legal approval was obtained from the case bank before interviewing the employees. To maintain the anonymity and confidentiality of data and results it was recommended not to mention the bank's name in the final thesis version. The research ethical perspectives were also incorporated in data capture. The banks, customers and employees used had

an equal opportunity, and there was no bias in making choices. Every effort was made to maintain the research ethics and integrity stipulated and agreed with SHU and the case bank used.

1.7 Research Outcomes

As a result of the investigations described in this thesis a number of important conclusions can be drawn. There are three major digital banking channels, namely telephone, internet or online and mobile banking for offering value-added services, due to the perceived values they offer. There are other ways, point-of-sale, ATM and Contactless Card, however they are used for paying in and withdrawing money, and purchases. These channels have been shown to support service development in which mutual value between customers and banks is evident. They enable banks to innovate and differentiate themselves and provide unique products, helping them to stay competitive, and improve customer experience and financial performance.

The research has shown that banks can offer different services over digital banking channels (e.g. current account, standing order, savings, mortgage, insurance, credit card, transfers, payment and account enquiries). The limit to service marketing and value banks can derive depends on their ability to invest in Research and Development (R&D) and innovate in the digital banking services that set them apart from their competitors. It identified that customers and banks want value from digital banking, however, banks need to give value in terms of improving customer experience and satisfaction to gain value, regarding customer loyalty, economic value-adds and profitability. For this to happen effectively, digital banking attributes need to be designed with certain qualities in mind.

The research has found important qualities that determine the effectiveness of digital banking in improving customer experience, satisfaction, loyalty and financial performance, with regard to profitability and economic value-adds. It has established that paying attention to factors: 'Functional Quality', 'Perceived Value', 'Service Convenience', 'DB Innovation', 'Brand Trust', 'Perceived Risk', 'Perceived Usability', 'Service Quality', 'Employee-Customer Engagement', 'Service Customisation', 'Service Speed' and 'Customer Acceptance Trend' can improve 'Customer Experience', which mediates 'Customer Satisfaction and Loyalty', and in turn improves banks' 'Financial Performance'. The research also established that 'Brand Trust' influences

‘Customer Loyalty’, and improvement in ‘Customer Satisfaction’ enhances ‘Customer Loyalty’. These results were obtained by triangulating the three research viewpoints. The studies reported in this thesis have provided empirical support for the integrated framework previously described.

The research used three data focal points and identified that while many studies of bank financial performance use financial ratios, the results from customers and employees on using digital banking to improve customer experience, satisfaction and loyalty, and financial performance via Customer Lifetime Value (CLV) are quite revealing. The research evidence shows more closeness in the employee and customer views than in the financial reports, as they provided detailed information about the effectiveness of digital banking to deliver value. This will inform future direction in research. The importance of digital banking to banks and customers has been highlighted and recommendations made to stakeholders, especially in bank branch closures, security concerns and measuring customer experience and economic value-adds. Shortcomings with respect to the design of frameworks for enhancing digital banking experience and financial performance have been identified and recommendations given, to improve future research.

1.8 Organisation of the Thesis

The materials in this thesis have been organised into nine chapters. The empirical research involves three investigations, designed to address all the research questions.

Chapter One is the introduction. It provides a background of digital banking and UK banks, the study motivation and rationale, research questions and objectives, and important outcomes.

Chapter Two provides a critical literature review of different aspects of the study. It draws on the literary, theoretical, academic and industry basis of the research. The implications of digital banking on customer experience and financial performance are reviewed. This chapter also provides background information and gaps in previous digital banking service uptake, service quality and financial performance models and the need for further research. It shows how the research questions are derived.

Chapter Three provides the research conceptual framework. It draws on further existing academic literature. It puts into context the current frameworks, models and theories for measuring digital banking, customer experience and financial performance, and new theoretical insights and knowledge this research stands to contribute. The hierarchical theoretical framework and available research methods were highlighted. The proposal and implications of a new integrated framework are discussed. It also shows how the research questions are derived.

Chapter Four introduces the research methodology and design. It presents the research methods used, and philosophical, ontological and epistemological background of the research. The research design details the data collection methods (financial report, interviews and questionnaires), and analysis techniques to show the impact of digital banking on customer experience and financial performance.

Chapter Five presents the results from content analysis of financial reports of six UK banks. It explores banks' general opinions of digital banking innovation with regard to customer experience and financial performance. It answers RQ1.

Chapter Six presents results from questionnaires distributed to UK bank customers. It assesses the customers' opinions about their uptake, experience of and satisfaction with digital banking, to investigate the links between digital banking, perceived improvements in customer experience, and financial performance. It addresses RQ2.

Chapter Seven presents results from content analysis of employee interviews of a UK bank. It explores the case bank's digital banking innovations, and investigates the effectiveness of digital banking in enhancing customer experience and financial performance. It answers RQ3.

Chapter Eight explores an integrated framework (DiBCEFPEF) based on bank financial reports, customer questionnaires and employee interviews. It shows the corroboration of results for a possible transformation of digital banking competencies. It shows how all factors investigated are related in a triangulation matrix, which is integrated into a framework for enhancing digital banking, related customer experience and financial performance, regarding profitable growth and economic value-adds. This answers PRQ, the main research question.

Chapter Nine presents the conclusion and recommendations. The first section contains the main results and highlights key findings and contributions to knowledge. The second section highlights research theoretical implications, practical suggestions, limitations and potential future directions.

CHAPTER TWO – LITERATURE REVIEW ON DIGITAL BANKING SERVICES, IMPROVING CUSTOMER EXPERIENCE AND FINANCIAL PERFORMANCE

2.1 Introduction

This chapter presents the initial research theoretical background. A research theory is a logical framework capable of explaining phenomena (Lee & Greenley, 2008). Research models of interest utilising similar theories are: Service Profit Chain (SPC), SERVQUAL, Balanced Scorecard (BSC) and Technology Acceptance Model (TAM). The areas investigated are: assessing digital banking services effectiveness and uptake using current techniques with regard to service quality, customer experience, satisfaction and loyalty, and financial performance. The critical literature review identifies knowledge gaps and information on how the main research themes are linked, using extant articles and information.

The chapter starts with digital banking development in the UK. There is information on how digital banking is making services available, and the characteristics that make it attractive for offering multi-channel services. This is followed by a review of uptake among banks and customers, and identification of areas for further research. There is a critique of customer experience and financial performance measurement theories, and a demonstration of why new research is relevant. Finally, there is a review of models to support digital banking, measuring customers' and bank employees' perceptions. In each section reviewed, an indication of justification for further research is highlighted.

2.2 Developing Digital Banking in the UK

This thesis reports the effects of digital banking on customer experience and banks' financial performance. However, it is important to acknowledge OFCOM's work to make digital banking infrastructure available for banks and customers, by the provision of internet and mobile technologies, hence promoting digital innovation (OFCOM, 2009; Mbama & Jones, 2009). But this effort will only be beneficial to innovative banks. This is crucial because digital banking is primarily associated with digital innovation (Baba, 2012), while in other countries its use in service marketing is guided by different

qualities (e.g. service and functional qualities, security (Amin, 2016; Jun & Palacios, 2016)), which need to be explored in the UK.

Digital banking created opportunities for banks to offer multi-channel services through telephone, internet and mobile. A firm is adopting a multi-channel strategy when its products get to market through two or more distribution channels (Payne et al., 2017; Coelho & Easingwood, 2008). Lee and Chung (2009, p.385) note: “*The internet revolution, [...], fundamentally changed the banking business sector in terms of the variety of financial services and how they are provided. [...] mobile banking has become accepted as part of daily life.*” Within the last decades, the availability of digital devices (e.g. computers, mobile phones, tablets and iPad) and their connectivity to the internet has resulted in customers looking to carry out financial services, rather than just e-mail, web browsing and making calls. This service offering via digital devices is increasing and competing with bank branches, however research in digital banking experience is limited.

The advent of digital technologies is making banks shift towards digital banking, which has simplified remote service access (Yousafzai, 2012). Research on e-banking uptake argues that it has had a major impact on the growth of banking services (Martins et al., 2014; Akinci et al., 2003). Similarly, Hoehle et al.’s (2012) study suggests that the proliferation of digital banking has impacted the way banks serve customers. Nevertheless, these studies are mainly on digital banking acceptance rather than the experience of it, which is a limitation. Self-service technologies have enabled banks to pursue an electronically mediated multi-channel strategy. Therefore, moving customers to e-channels is an important means of reducing operational costs. This is happening across e-commerce and internet related businesses (Piyathasanan, Mathies, Wetzels, Patterson & Ruyter, 2015), where many companies have grown quickly through marketing their products online rather than through traditional channels (e.g. advertising and word-of-mouth). For them, a digital channel offers a world marketing presence, however the service attributes that attract customers to banks need to be investigated.

Digital banking satisfies customers’ economic, personal and social needs (e.g. in social media), which predict overall perceived value (Dootson et al., 2016). It is changing service patterns and how customers interact with their banks, as different customer demographics have varying service expectations (Harrison, Onyia & Tagg, 2014).

Nowadays, customers expect similar levels of interaction in digital banking and social media. Banks can develop products, which customers can access conveniently from their devices. This convenience has precipitated the demand for services through digital devices. It also means that many customers are shifting towards digital banking channels. Consequently, the UK lost more than forty percent of its bank branches between 1989 and 2012 (BBC, 2013b; French et al., 2013). Stone and Laughlin (2016) notice that bank branch numbers are falling due to automation and advise collaborative marketing to avoid damaging customer experience and shareholder value. However, what makes a customer choose one bank's digital banking over another still needs investigating, which will help in customer capture.

Research claims that more than six hundred bank branches have closed across the UK over the past year, with rural areas worst affected (BBC, 2016). The demand for branches is falling, as more people switch to e-banking, making some branches unprofitable. This scenario shows a glimpse of digital banking's effect on existing bank models and customers. It coincides with Dootson et al.'s (2016) finding that perceived value draws customers towards services, which needs replicating in UK banks. This research suggests that banks should focus on digital banking to improve customer experience, save money and enhance financial performance. The development means that new bank models and ways of serving and maintaining customer relationships are required, hence making this research very compelling to fill the knowledge gap.

2.3 Characteristics of Digital Banking Channels

Digital banking is affected by service quality and functional characteristics (Jun & Palacios, 2016; Amin, 2016), which make it appealing to banks and customers. It enables multiple services to be introduced simultaneously, and customers to benefit from banking and other services. For instance, customers can browse the internet, chat and carry out banking concurrently. Internet banking enables banks to deliver services, offering different benefits due to more accessibility and user-friendliness of the technology from any location (Martins et al., 2014; Yiu, Grant & Edgar, 2007). It enables customers to carry out most services in the convenience of their homes (Mols, 2001). Telephone banking allows customers to conduct transactions through telephones (Sundarraaj & Wu, 2005), while mobile banking allows management of financial services through mobile devices (Oliveira & Tam, 2017). Mobile banking is growing due to customers' ability to carry out activities remotely. These digital channels offer

different customer interfaces (e.g. dial and browse methods), with telephone banking being offered first.

Digital banking studies have been fragmented, with researchers studying individual channels, which is a limitation. Amin (2016) and Raza et al. (2015) study e-banking service quality and its relationship with customer satisfaction and loyalty, while Jun and Palacios (2016) find m-banking service quality to affect customer satisfaction and loyalty in USA banks. Saleem, Zahra, Ahmad and Ismail (2016) note that social influence, market orientation and service quality relate to customer loyalty, with satisfaction as an antecedent. These studies offer advantages in certain contexts, however a comprehensive study is required to understand different views of digital banking for proper bank service marketing and theory building. Arguably, among the common things that should make digital banking appealing for customers are convenience, accessibility, service quality and value derived from them. This information will be investigated further.

The internet banking channel is classified as e-banking (Sarokolaie, Rahimipoor, Nadimi & Taheri, 2012), mobile banking as m-banking (Hanafizadeh et al., 2014; Lin, 2011) and telephone banking as t-banking (Sundarraaj & Wu, 2005). These digital channels share many characteristics with other services, with the main difference being the transmission medium, which can either be mobile or internet digital networks in digital banking. Moreover, digital services are consumed as they are produced, intangible and cannot be kept in an inventory (Hatch, 1997). The interaction between banks and customers within the service delivery process can cause variations due to service quality (Amin, 2016). Undoubtedly, customers have different service expectations and how well service providers meet those expectations determines their satisfaction. Therefore, studies into what affects customer service expectations in digital banking concerning customer experience, satisfaction and loyalty are urgently required.

With digital innovation, banks can develop new services for customers. This can prevent customers from queuing in branches and travelling to perform banking transactions. For banks, this can bring operational efficiency, as some are already reducing branch numbers. These characteristics and changes in banks have made research into its uptake very compelling (Hanafizadeh et al., 2014; Alsajjan & Dennis, 2010; Yoon, 2010). However, these studies have not considered digital banking

experience characteristics, as in this research. There are also studies aimed at increasing customers' and banks' economic values (Klaus & Maklan, 2013; Yee et al., 2010), which have not investigated digital banking.

Digital banking enables customers to perform transactions like paying bills, transferring funds and balance inquiries. It plays a central role in electronic payments to support e-commerce. Early digital banking was dominated by e-banking, but m-banking is beginning to challenge this dominance. In recent years, the proliferation of mobile phones has encouraged banks to provide m-banking applications (Jun & Palacios, 2016; Hoehle et al., 2012; Barnes & Corbitt, 2003), helping ensure their competitive survival. These characteristics of digital banking make it a strong alternative to bank branches, making it useful to study, thereby helping banks improve their understanding and capabilities. It can help banks to serve customers better, improve their experience, maintain relationships with customers and promote mutual benefit. The characteristics of digital banking make it pervasive, however customer experience could depend on the service and functional qualities (Monferrer-Tirado et al., 2016), and convenience (Keisidou et al., 2013), which need further investigation in UK banks.

2.4 Digital Banking Uptake among Banks and Customers

Competitive pressures are forcing banks to minimise costs and innovate, making digital banking an alternative way to provide services and prompting academics to explore its uptake. Similarly, customers are becoming more demanding, forcing firms to focus on service quality to enhance business performance (Pekovic & Rolland, 2016). There were early studies of the potential benefits and security aspects of digital banking, especially e-banking (Daniel, 1999; Black, Lockett, Winklhofer & McKechnie, 2002). Furthermore, Waite and Harrison (2002) study e-banking quality, focussing on identifying consumer expectations of websites. Howcroft, Hamilton and Hower (2002) investigate the motives for and barriers to using e-banking and t-banking, and conclude that customers will continue to use bank branches, but eventually digital banking will replace them. Whilst digital banking has become a challenger to bank branches (Stone & Laughlin, 2016), it has not completely replaced them, and recent research has refocussed on digital banking qualities (Alalwan et al., 2016).

E-banking knowledge is improving, however understanding customers, organisational flexibility, security, brand name, integrated marketing and good customer services are

critical for banks (Shaha & Siddiqui, 2006). Martins et al. (2014) and Lee (2009) also argue that limited research has been done to find e-banking's positive and resistance factors, even though it is a cost-efficient way of banking, while Maenpaa, Kale, Kuusela and Mesiranta (2008) advocate a shift in research towards e-banking experience. Subsequently, Piyathananan et al. (2015) argue that few guidelines exist on how to improve customers' internet experience, showing that further research is required.

Sarokolaei et al.'s (2012) study on the barriers to e-banking argues that reliability, security and customer satisfaction affect uptake, while recent research shows that brand in Israeli (Levy & Hino, 2016) and service quality in Saudi Arabian (Amin, 2016) banks, affect customer satisfaction and loyalty. This is not surprising as customer satisfaction has a financial effect on banks (Nagar & Rajan, 2005). The literature implies that further research attention should be focussed towards customer experience. This gap in research needs closing. As part of new knowledge, this research investigates security issues, brand, customer experience, satisfaction and employee perceptions of digital banking.

Some customers are reluctant to use e-banking due to perceived risk and trust (Martins et al., 2014; Kim, Tao, Shin & Kim, 2010). Featherman and Pavlou (2003) define perceived risk as the potential for loss in the pursuit of a desired outcome of using an e-service. They identify seven types of risk associated with e-banking: performance, financial, time, psychological, social, privacy and overall risks. Jun and Palacios's (2016) recent study also finds security to be an issue for customers, while Wu (2011) investigates the location convenience effect on customer satisfaction. Thus, this research investigates perceived risks and trust further, and explores other digital banking risks to see if they affect customer experience.

Other research suggests that managers need to plan and utilise digital banking efficiently, to meet changing customer service expectations (Hanafizadeh et al., 2014; Gerrard & Cunningham, 2003). Although current evidence shows that banks are accepting digital banking, improving customer experience is key to meeting their expectations, as investigated in the research. The suggestion also means that customers' and managers' opinions are important in digital banking uptake. Privacy and security were major barriers to early digital banking acceptance (Dimitriadis & Kyrezis, 2010; Howcroft et al., 2002), but research by Darwish and Hassan (2012) has identified how security can be improved. Nevertheless, privacy may still be an issue, as recent research

shows that perceived usefulness, trust, and self-efficacy are predicting factors to use telebanking in Jordanian banks (Alalwan et al., 2016). This evidence shows that digital banking has evolved, however further research is required to give clear direction. Research should address the experience factors, which make customers choose one bank's digital banking services over another, hence this research.

2.4.1 Measuring Uptake

Research suggests that e-banking can be a cost efficient delivery channel for services (Amin, 2016). Due to the interest in digital banking over the years, different uptake models have emerged. Harrison et al. (2014) survey Scottish bank customers and find that e-banking adoption depends on customers' readiness factors like prior involvement and computer and internet experience, options and benefits awareness, and willingness to embrace change; and banks' website readiness like convenience, perceived ease-of-use, security guarantee and channel costs. These are mediated by income, education and residential area. This means to improve customer experience digital banking must align with customers' requirements, making banks' and customers' views important. Pikkarainen et al. (2004) also propose an e-banking model, presented in Figure 2.1.

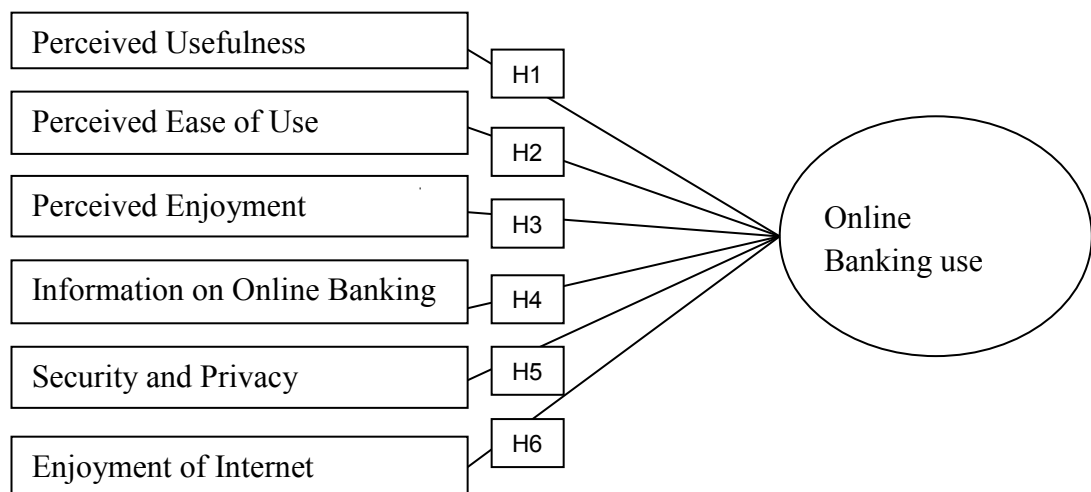


Figure 2.1: Online Banking Model (Source: Pikkarainen et al., 2004)

The model shows that perceived usefulness, ease of use and enjoyment, information, security and privacy, and enjoyment of the internet are determinants of e-banking usage. Meanwhile, Amin (2016) and Raza et al. (2015) study e-banking service quality and its relationship with customer satisfaction and loyalty, an area that requires further attention. Other similar studies find that perceived usefulness, trust and government

support influence online (Chong et al., 2010) and mobile (Deng, Deng & Zhang, 2010) banking uptake. M-banking is cost-effective for banks, convenient and easily accessible for customers (Zhou, 2012), while e-banking enables banks to develop flexible payment methods and user-friendly services (Cortiñas, 2010). However, previous digital banking studies have paid insufficient attention to employees' perceptions and customer experience, and hence not fulfilled current bank service needs, which are among the research aims. Although prior research has implications for managers as customer needs are changing, satisfying customer requirements through digital banking experience is required. This research will fill the gap in knowledge.

Ozdemir and Trott (2009) find that e-banking adopters and non-adopters have different perceptions, experience and socioeconomic characteristics, based on perceived usefulness, ease of use and risk. They argue that European banks are facing competitive pressure following deregulation, and technology has become a strategic weapon to ensure profitability and develop banks' market positions. Oblinger's (2008) study recommends recognising different customer age groups with different needs, customer experience, requirements and technological aptitudes. Meanwhile, Cortiñas et al. (2010) find that the internet is changing banks' interaction with different demographic groups, but do not find a relationship between age and multi-channel banking use. They find that customers are likely to conduct savings, transfers and mortgage transactions through digital channels, while Shanmugam, Wang, Bugshan and Hajli (2015) study e-banking adoption in UK banks and find that customers are satisfied, fund transfers and bill payment are the most popular services, with security being an issue of concern.

Digital banking has become a way for banks to offer good customer services and retain customers (Martins et al., 2014; Zhou, 2012). It has emerged as a better way to serve customers at their convenience (Jun & Palacios, 2016), which needs investigating. Customers' attitude towards digital banking has made researchers look at their behavioural intention. Oliveira and Tam (2017) review top journals (2002-2016), and find that perceived ease of use and usefulness are the most significant drivers of m-banking uptake. They find that adoption and behavioural intention dominate the majority of research; this insufficiently predicts customer experience. Subsequently, Bapat (2017) investigates branch and e-banking in Indian banks, and finds that perceived ease of use and branch service quality are antecedents of satisfaction, which positively affects loyalty. The author incorporates non-digital banking,

which is a limitation, and concludes that branch services should not be ignored. Lee's (2009) model in Figure 2.2, explains factors affecting e-banking behaviour.

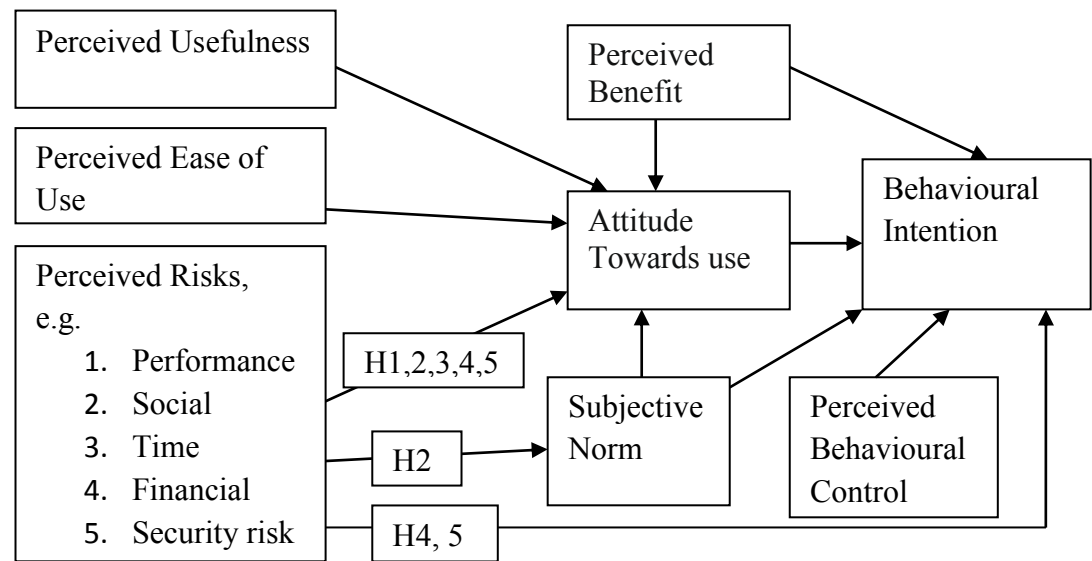


Figure 2.2: E-banking Model (Source: Lee, 2009)

Lee (2009) argues that e-banking has emerged as one of the most profitable ways of banking, while Luarn and Lin (2005) investigate the factors that can affect behavioural intention to accept m-banking and developed a model, illustrated in Figure 2.3.

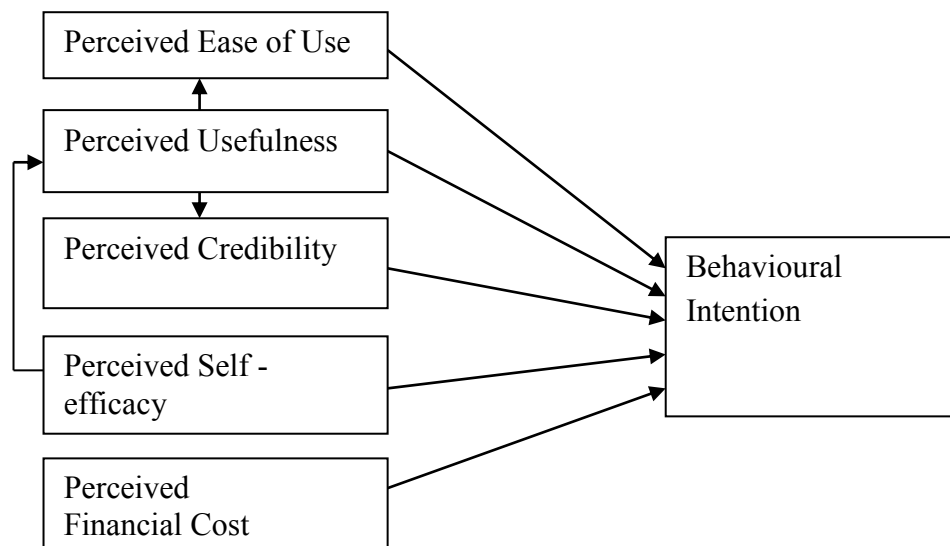


Figure 2.3: M-banking Model (Source: Luarn & Lin, 2005)

Other major digital banking empirical studies focus on the factors influencing customer uptake (Hanafizadeh et al., 2014; Luo, Li, Zhang & Shim, 2010). However, Yousafzai (2012) reviews e-banking studies and concludes that they are still inconclusive. Early

research centred on e-banking, but Schierz, Schilke and Wirtz's (2010), and Jun and Palacios' (2016) research shows that m-banking is receiving attention as an alternative way of banking. This corroborates other research that shows m-banking is increasing (Oliveira & Tam, 2017; Lin, 2011). Digital banking and customer needs are evolving; and research has struggled to create enough information to demonstrate a clear direction.

2.4.2 Expanding Digital Banking Studies

Waite and Harrison (2015), in a meta-analysis of a decade of e-banking studies, conclude that alternative research methods, theories and a wide range of data sources should be used, to push innovation boundaries. Hoehle et al. (2012) also synthesise three decades of study, and conclude that prior research has not identified all the issues involved in e-banking channel utilisation and may be limited due to fragmented findings and methods. These studies show that both early and recent research in digital banking has not solved all problems facing it. They suggest that previous studies have been faced with problems of customer usage, without balanced opinion, and banks need to make further efforts to win and retain customers, and grow business through digital banking. The limitation of existing studies justifies further research in digital banking experience, regarding service and functional qualities, which can help banks improve business. This research remedies the gap to widen digital banking knowledge.

Moreover, Oliveira and Von Hippel's (2011) study on the user-innovators role in banking service find that users frequently develop and self-provide what they need before banks offer services to meet their needs. They conduct a study of the importance of customer service innovation, focussing on banking services, and find that between 1975-2010, banks were computerising their internal processes. However most services offered, from t-banking to payroll processing, are done to save money, and maintain accuracy and speed. The change created major opportunities to build new services, promoting innovative roles for both service providers and users, making it important for banks to consider their opinions. This study will extend research, which suggests employee and customer opinions, and engagement in digital innovation. It aims to contribute to digital banking in the new customer experience area.

The majority of research looked at digital banking from the customers' perspective, regarded as an external entity. Meanwhile, the internal entity: the employees who design these services, are not generally considered, rather the research effects on this group are

demonstrated through implications, which is a limitation. The opinions of the bank executives who are responsible for investment are often not considered. Studies mentioned above show that customers and banks are accepting digital banking, therefore finding out what makes it effective, and improves customer experience and financial performance will add new knowledge to existing research. It is also important to look at digital banking from the external and internal perspectives: bank financial report, employee and customer. This will give a balanced approach to finding out if there is value for banks and customers. The research focusses on designing a framework, which will add new knowledge and hence extend the theories considered.

2.5 Customer Experience and Financial Performance of Digital Banking

Different theories for measuring customer satisfaction and financial performance have emerged like the SPC (Heskett, Jones, Loveman, Sasser & Schlesinger, 2008), SERVQUAL (Parasuraman, Zeithaml & Berry, 1988), Net Promoter Score (NPS) (Reichheld, 2003) and the BSC (Kaplan & Norton, 1996b). There is also the European Foundation for Quality Management (Doeleman, Have & Ahaus, 2014). These measures ensure that employee attributes, customer satisfaction and loyalty are measured, to understand whether they contribute to organisational profit. The SPC model establishes the relationships between service quality, employee satisfaction (employee retention and productivity), customer satisfaction and loyalty, and organisational performance (revenue growth and profitability). NPS gauges the customer satisfaction and loyalty of a firm, while SERVQUAL measures service qualities using reliability, tangibles, assurance, responsiveness and empathy without demonstrating their direct relationship to profitability, which is a limitation.

Another model acknowledging employees' roles and their impact on customer loyalty is the Servicescape (Kearney, Coughlan & Kennedy, 2013), which considers the physical environment of service, making it different from digital banking. Homburg and Stock's (2004) study, also using Servicescape, suggests that increasing employee satisfaction can impact customer satisfaction; therefore it is important to investigate the relationship between employee and customer behaviours. Yee et al. (2010) argue that these measurements are an effective means of improving organisational efficiency, which translates into profit. Their research into services supports the notion that employee and customer loyalties can improve a firm's profitability, making them the key drivers of organisational performance, that need studying.

2.5.1 Measuring Customer Experience and Financial Performance

SPC and BSC highlight the importance of delivering high service quality to satisfy customers and enhance business performance. Unlike the BSC, the SPC and SERVQUAL were developed for the service industry. However, the BSC has been applied in banking service research, showing the veracity of the model (Glaveli & Karassavidou, 2011). Studies on the SPC model have been segmented, as researchers choose which components to study, validate and extend. For example, Kanyurhi and Akonkwa (2016) find a positive relationship between internal marketing and employee satisfaction, and a positive relationship between internal marketing and perceived organisational performance, but not between employee satisfaction and perceived organisational performance in Congo banks. Other empirical studies have linked service quality, customer satisfaction and loyalty (Amin, 2016; Klaus & Maklan, 2013), and profitable growth (Keisidou et al., 2013; Bates, Bates & Johnston, 2003), using SPC, represented in Figure 2.4, as a theoretical model.

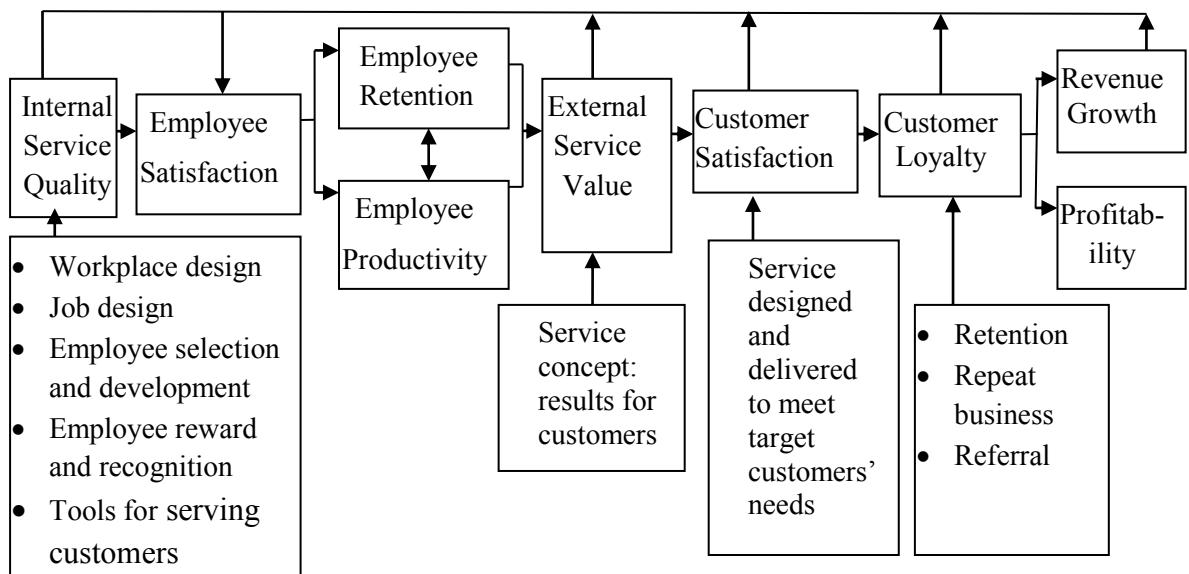


Figure 2.4: Service Profit Chain (Source: Heskett et al., 2008)

Heskett et al.'s (2008) theory underpins a shift in the service sector by putting customers and employees first, altering how companies measure success. They argue that organisations emphasise how internal service quality, driven by the employee, can create external value for customers and shareholders, regarding customer satisfaction and profitable growth. This shows that customer satisfaction has a positive effect on customer loyalty, which drives profit. Keisidou et al. (2013) also study the links between service quality, customer satisfaction and loyalty, and financial performance.

However, these studies were not conducted in digital banking, which is a limitation. This research aims to investigate a framework that can help banks offer quality digital banking services, helping improve profitability.

Bates et al.'s (2003) study finds the linkage between good service experience and profit using SPC. Kearney et al. (2013) research employee and customer satisfaction, and profitable growth, and find there are links between them, providing evidence that there are financial benefits from providing a better service to customers. However, the link is still not clearly established in digital banking, where employee contact is minimal. Instead, employees need to know during design what customers expect from digital banking to bring satisfaction. Unlike contact services, the implications of contact with digital banking experience is unclear, hence the need for this research.

Early researchers focussed on relating customer satisfaction, loyalty and firms' performance (Anderson, Fornell & Lehmann, 1994; Chi & Gursoy, 2009). Reichheld, Markey and Hopton (2000) quantify the potential for profit improvement resulting from increased customer loyalty, while service quality effects on customer satisfaction and loyalty have been established recently (Levy & Hino, 2016; Ladhari, Ladhari & Morales, 2011). However, many of these studies relate to contact services. Similarly, Parasuraman et al.'s (1988) SERVQUAL model measures customer service expectation and actual service received. Although this service quality framework and related models have had wider applications in services, digital banking requires a new framework, measuring at every touchpoint. For instance, customer priorities like courtesy and personal care could not influence loyalty with digital banking, which must have a good user interface quality (Lee & Chung, 2009; Yoon, 2010), be useful and easy to use (Lin, 2011). This means that existing models need extending to cater for digital banking experience and banks' profit, hence this research.

There are studies applying SPC to investigate links between service quality, customer satisfaction and loyalty, employee loyalty and profit (Acheampong & Asamoah, 2013; Evanschitzky, Wangenheim & Wunderlich, 2012; Theoharakis, Sajtos & Hooley, 2009), without customer experience, which is a limitation. Hays and Hill (2006) demonstrate that motivated employees would enhance service quality, customer satisfaction and loyalty, and firm's performance, while Evanschitzky, Groening, Mittal and Wunderlich (2011) investigate how owner, employee and customer satisfaction relate to one another

in a franchise outlet. They find that managers of service outlets can strongly impact the satisfaction and purchase intentions of their customers. The physical environment of the organisation is important, but is irrelevant in digital banking.

Kearney et al. (2013), applying SPC, find that fifty percent of customer satisfaction is explained by service quality, and employee satisfaction and loyalty can be affected by the Servicescape. The link between customer satisfaction and purchase intentions is stronger when employees are satisfied. However, this link can vary depending on the service type (digital or non-digital) and delivery (contact or contactless) environment, not considered in previous studies. This reduces Servicescape theory in investigating digital banking. The SPC model has been criticised for being too generic to fully understand the drivers of business success, irrespective of environmental and operational context. It does not allow for industry-specific variables, such as firm size (Silvestro & Cross, 2000). With digital banking being a different kind of service, the SPC model and related types will need validation and extension.

The NPS links customer satisfaction to loyalty, and then to profitable growth, measured by subtracting the percentage of detractor from promoter customers (Reichheld, 2003; 2006). Reichheld (2006, p.19) states that an organisation's perfect efficiency and growth engine is to turn a very high percentage of its customers into promoters. Arguably, the worst growth is turning a hundred percent of promoters into detractors. Van Doorn, Leeftang and Tijs' (2013) study finds NPS useful in predicting current gross margins and sales revenue growth. The NPS suggests that promoter customers tend to be loyal, and likely to re-purchase products. However, achieving a great number of promoters depends on a firm's service quality (Reichheld, 2003), which needs investigating in digital banking.

Jang, Kim, Lee and Kim (2013) study customer loyalty, using NPS to classify customers by score, with a strategy to increase the number of loyal customers and company profitability. Meanwhile, Van Doorn et al. (2013) find that NPS performs well in predicting company performance; the satisfaction measures are more highly correlated with sales growth and the loyalty measure is more correlated with gross margin and cash flow. Subsequently, Spiess, T'Joens, Dragnea, Spencer and Philippart (2014) integrate big data insights with automated processes related to key customer touchpoints to improve customer experience. Other studies using NPS include Klaus

and Maklan (2013). NPS suggests firms should define their core customers and accurately manage them, contributing to profitable growth (Jang et al., 2013). Therefore a strong customer relationship is an important means of proving the company has competitive edge and maximising income.

In an attempt to show customer loyalty's effect on financial performance, other researchers have used Customer Lifetime Value (CLV) - profit attributable to a customer throughout their lifetime with a firm (Schneider, Macey & Young, 2006; Valenzuela, Torres, Hidalgo & Fariás, 2014; Donkers, Verhoef & de Jong, 2007). This concept has made improvements in customer experience and customer segmentation in marketing very important. These studies have demonstrated how NPS relates to profitability through CLV, which needs demonstrating in digital banking.

Meyer and Schwager's (2007) customer experience measure is similar to NPS, which is 'Good Experience' minus 'Bad Experience'. They postulate that customer experience leads to customer satisfaction, and does not improve until a company's work processes from employees, systems, and structure change to reflect it. This also highlights customer experience attributes more in non-digital banking. Customer Experience Management (CEM) captures what a customer thinks about a company while Customer Relationship Management (CRM) captures what a company knows about a customer (Meyer & Schwager, 2007). Evidently, customer experience includes all customer care and interactions, which involves all aspects of marketing and product experience (Garg & Rahman 2010). Meanwhile, Klaus and Maklan (2013) describe customer experience as generated through a longer process of company–customer interaction across multiple channels, formed through functional and emotional clues. These need measuring in digital banking.

Another widely used framework for multi-dimensional performance evaluation is the BSC (Kaplan & Norton, 1996a; 1996b). BSC enables companies to track progress in building capability and acquiring the assets needed for financial growth. It breaks down organisational strategy into measurable targets concerning cause and effect relationships, as represented in Figure 2.5.

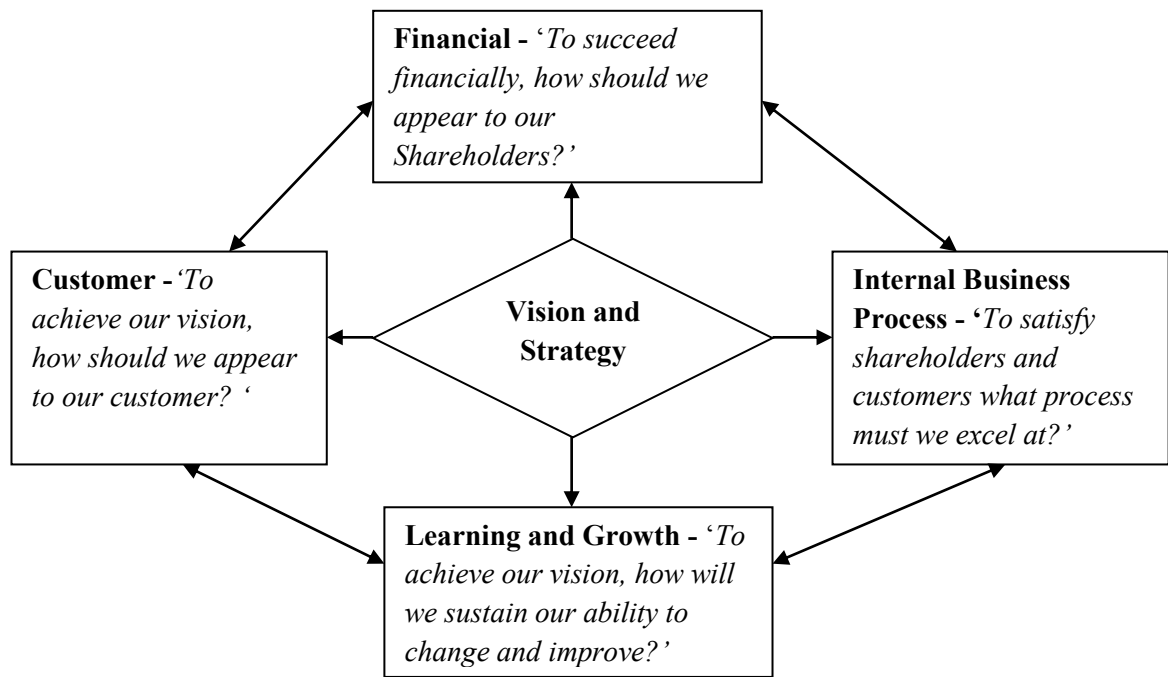


Figure 2.5: Balanced Scorecard (Source: Kaplan & Norton, 1996a; 1996b)

BSC stipulates that financial and non-financial measurements must be part of performance management, to help organisations achieve their strategy. It states that organisations link their measures clearly and identify the drivers of performance, through the following four goals:

- Financial – generating value via profitable growth (e.g. Return on Investment (ROI), Return on Capital Employed or economic value-adds).
- Customer – receiving value through customer satisfaction, retention and loyalty.
- Internal Business process – enhancing processes to improve customer satisfaction and achieve financial objectives.
- Learning and Growth – improvement in procedures, innovation and capability for delivering value to customers and stakeholders through employee training and satisfaction.

BSC provides a more holistic view of the organisation, and the model components can be selectively studied (Dechow, 2012). Its dimensions show that in banks, employees and customers are crucial to achieving business goals relating to better customer experience and profitable growth. This means that banks will benefit from having a framework for improving digital banking, and customer experience and financial performance, which are central to the BSC and the research objectives. Hoque (2014) suggests that until another tool appears, BSC will continue to provide organisations with

a valuable strategic map, and an organisational control and tool. Hoque finds that researchers use quantitative, qualitative or multi-methods in organisational performance studies. This study will explore a multi-method research. It also makes BSC suitable to be used as one of the theoretical frameworks.

Glaveli and Karassavidou (2011) use BSC to measure employee training's effect on financial performance in Greek banks. They find that employee satisfaction brings loyalty, which improves customer service quality, satisfaction and loyalty, and increases profit. Acheampong and Asamoah (2013) find similar results in Ghana banks. These studies linking service quality to a higher level of business performance can be traced to Total Quality Management (TQM) (Deming, 2000). Undoubtedly, employee and customer attributes are important in services to achieve profitable growth, however how this relates to improving digital banking services has received limited attention. Previous research has failed to capture bank employees' and customers' perceptions together. This research will study the relationship between bank executives', employees' and customers' perceptions, and perceived customer experience and financial performance relating to expected value-adds, CLV and profitable growth, to create an integrated framework (DiBCEFPEF). It investigates digital banking from a wider perspective, to close the gap identified earlier.

2.5.1.1 Measuring Bank, Employee and Customer Perceptions

Garg and Rahman (2010) find that customer experience leads to customer satisfaction, which mediates loyalty, customer retention, market growth and the firm's profitability. Certainly, customer experience is about service quality and customer satisfaction, which means to achieve service excellence, customers' and bank employees' views are crucial. Employees are also important to enhance service quality, organisational effectiveness and performance (Yee et al., 2010; Karatepe & Aga, 2016; Grace & O'Cass, 2004). Harrison et al. (2014) note that banks and customers must be ready for e-banking adoption to happen effectively. SPC, NPS and BSC have linked organisational behaviour with operational and strategic management studies, making them important tools for analysing customer and employee opinions, and banks' performance. This is among the gaps the research aims to fill through a framework (DiBCEFPEF), which will provide a mechanism for enhancing customer experience and financial performance, hence creating new knowledge and value for banks and customers.

Additionally, the link between external and internal entities, and process improvements to enhance financial performance and value for employees and customers, has resulted in different empirical research (Doom et al., 2013). For instance, Yee et al.'s (2010) model is demonstrated in Figure 2.6.

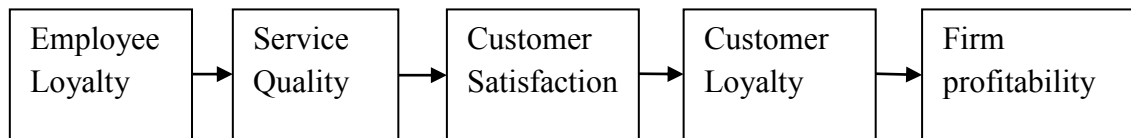


Figure 2.6: The Links in SPC as tested (Source: Yee et al., 2010)

Yee et al.'s (2010) model shows how employees contribute to offer high service quality, which leads to customer satisfaction and loyalty, and profitable growth in contact services. They also find that market competitiveness does not affect the customer relationship. These studies have not provided a full assessment of bank employee competencies, which will help them to optimise their operational efficiency, and improve customer experience and profit. However, they link the key drivers of an organisation's profitability to employee and customer loyalties, making their perceptions important.

Clearly, previous studies could throw light on digital banking uptake, theoretical methods involved and insight for new knowledge acquisition, however they are not aimed towards improving customer experience. The indirect and direct linkage between customer experience and financial performance has not been fully considered, with recent research in digital banking investigating only service quality, customer satisfaction and loyalty (Amin, 2016; Raza et al., 2015). There is a need for employee and customer engagement, to understand customer needs and experience. Digital banking should be studied from a broader perspective: an aim of the research is to achieve an integrated framework. This becomes important so that employees' views can be aligned with banks' functions and customer perceptions for the successful design of digital banking services to meet customer needs and improve banks' performance.

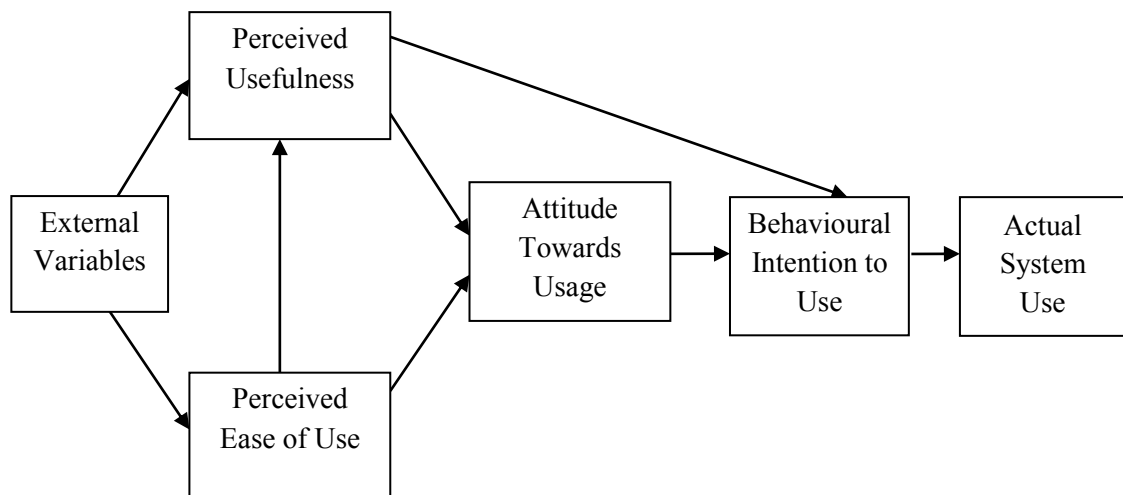
2.6 User Perception of Digital Banking Services

The perception of digital banking can vary among customers, employees and banks. The use of technology in firms' service innovation, focussing on meeting client needs, is best understood through how users perceive the service (Baba, 2012), as customers

need to use the innovation to make it valuable to both parties (Arts et al., 2011). Davis' (1989) study highlights the factors influencing users' perceptions of technology innovation, leading to the TAM. It proposes that user behavioural intention is influenced by perceived usefulness and ease of use, which in turn predicts actual technology usage (Davis, 1989; Davis, Bagozzi & Warshaw, 1989). It is a widely adopted model, validated by many researchers in digital banking (Oliveira & Tam, 2017; Hoehle et al., 2012). Table 2.1 and Figure 2.7 show the TAM components.

Construct	Explanation
Perceived Usefulness	The belief that using a particular system would enhance their job performance.
Perceived Ease of Use	The belief that using a particular system would be free from effort.
Attitude Towards Usage	User's attitude towards using a system
Behavioural Intention	User's intentions to use a system
Actual System Usage	The actual outcome

Table 2.1: The Components of the TAM



External variables Social responses Intention Behaviour

Figure 2.7: Technology Acceptance Model (Source: Davis, 1989; Davis et al., 1989)

The model proposes that perceived ease of use has a direct impact on perceived usefulness. Turner, Kitchenham, Brereton, Charters and Budgen (2010) find that TAM can predict user perception of technology, but warn that care should be taken when using it outside its context. Koenig-Lewis et al.'s (2010) study on m-banking uptake finds that compatibility, perceived usefulness and risk are significant indicators, showing the incompleteness of existing models and need for further studies.

There have been recent studies on digital banking using TAM or a combination of other theoretical frameworks, focussing on the factors influencing end-user acceptance, discussed above (Alalwan et al., 2016; Bapat, 2017; Luo et al., 2010). Gu et al.'s (2009) study identifies social influence, system quality, self-efficacy, facilitating conditions, familiarity with banks, situational normality, structural assurances, calculative-based trust, trust, perceived ease of use and usefulness affect m-banking. Zhou (2012) finds that m-banking enables users to access services conveniently, however security and trust affect usage. The author also finds that self-efficacy, information quality, service quality, system quality, structural assurance and reputation are among the factors that affect trust, which in turn influence customer behaviour towards m-banking. However, previous research is fragmented and has not investigated how these factors affect digital banking experience, which is a limitation.

Turner et al. (2010), McKechnie, Winklhofer and Ennew (2006) and Gu et al. (2009) find that TAM may be under threat due to the manner in which technology usage has been operationalised. This is important in banks, where digital banking has changed banking operations. As argued earlier, digital banking is associated with digital innovation (Baba, 2012), while intention to use it is guided by functional and service qualities (Amin, 2016; Jun & Palacios, 2016); these are major areas of interest. However, Patsiotis et al. (2012) suggest that understanding the impact of innovation on different categories of adopters and non-adopters will offer potential value to banks. Perceived usefulness, trust, and self-efficacy are predicting factors to use telebanking (Alalwan et al., 2016), however factors affecting digital banking experience is evolving, showing that current models need extending and hence this research. Existing models are not fully capable of solving banking service problems, as perceptions of digital banking have created varying experience depending on user, service and channel type. They are proving inadequate in understanding digital banking and customer experience.

Another well researched model for understanding innovation usage is the Innovation Diffusion Theory (IDT) (Rogers, 2003). Rogers describes the pioneers of a new product as 'Innovators', followed by 'Early Adopters', 'Early Majority', 'Late Majority', and finally 'Laggards'. Innovation adoption is influenced by relative advantage, compatibility, complexity, trialability and observability. Lin (2011) integrates IDT to examine the effect of innovation attributes and knowledge-based trust on m-banking user behaviour. The author finds that perceived competence, integrity, perceived ease of

use and compatibility, and relative advantage have significant effects on acceptance of m-banking, while perceived benevolence is insignificant. Lin's (2011) result also shows that behavioural intention is important in m-banking uptake, predicted jointly by innovation attributes and knowledge-based trust. Although, this does not show customer experience, it has implications for improving digital banking experience through innovation. Hence the need to provide banks with an integrated framework becomes an area of further research. Some of the factors mentioned will be investigated for digital banking experience (e.g. trust, privacy, usefulness and ease of use).

2.6.1 Towards Better User Perception

TAM predicts the intention to accept innovation while IDT describes different types of users of innovation. The models have assisted in understanding how people and organisations use technology and innovations. TAM derives from the Theories of Reasoned Action in social psychology (Davis et al., 1989), which proposes that beliefs influence attitudes which in turn lead to intentions and consequently generate behaviours. This will be important in predicting digital banking experience. According to Hoehle et al.'s (2012) longitudinal research on theoretical models for studying e-banking, TAM, followed by IDT, are the most widely used. Waite and Harrison (2015) also find TAM to be predominantly used, but limited in customer adoption setting and operationalisation. Yousafzai (2012) also notices TAM's predominance, and a limited theoretical advancement and no unanimity regarding the approaches and conceptualisations used. However, some researchers have combined theories and others used them independently. This research will consider relevant theories which will add knowledge.

Yousafzai, Foxall and Pallister (2010) find that TAM predicts e-banking uptake better than other theories. This will be considered in the choice of theoretical models for studying digital banking. Nevertheless, technology and the supporting models are evolving. For instance, Lin and Hsieh (2006) develop a model for new self-service uptake based on satisfaction, technology readiness and quality, leading to behavioural intention to adopt. Other researchers identify other variables which influence digital banking uptake, by adapting a combination of theories (Deng et al., 2010; Martins et al., 2014; Jun & Palacios, 2016). For example, Zhou (2012) adapted the Elaborate Likelihood Model to study users' initial trust in m-banking, while Luarn and Pin (2005), using TAM, find that perceived usefulness, ease of use, credibility, self-efficacy and

financial cost influence behaviour towards m-banking. Similarly, other studies suggest that e-commerce provides social and economic values, which relates to behavioural intentions (Piyathananan et al., 2015; Chang & Tseng, 2010). Evidence has been seen in the social media and digital banking usage in other countries (Dootson et al., 2016), showing that perceived value needs investigating from different perspectives.

Digital banking service perceptions can vary between customers, threatening existing models due to the operationalisation of new technologies, which means the factors that affect them are changing. Therefore, it is important to investigate if there are other factors that can influence digital banking uptake and customer experience in UK banks. Recall previously discussed studies of internet and mobile banking (Martins et al., 2014; Zhou, 2012; Alalwan et al., 2016). However, the majority have not comprehensively studied customer experience unlike this research, while more information and knowledge would have been gathered by tackling digital banking from different views.

Recent research has investigated internet and mobile banking service quality and customer satisfaction and loyalty (Amin, 2016; Saleem et al., 2016), but digital banking is not yet treated holistically in bank marketing as pursued in this research. Hoehle et al.'s (2012) and Waite and Harrison's (2015) studies provide evidence that a more balanced approach of studying digital banking is required. This suggests that researchers may learn more about digital banking by applying under-utilised methodological approaches. This research takes a comprehensive view of digital banking, relating to its uptake and effectiveness in improving customer experience and financial performance. It provides an integrated approach in digital banking understanding from banks and their customers, hence the need for further research.

While there has been extensive research on digital banking focussing on customers with management implications, there are limited studies on success and failure factors (Martins et al., 2014; Lee, 2009). Previous research has not investigated digital banking, customer experience and financial performance (e.g. Keisidou et al., 2013) from the perspectives considered in this research. Oliveira and Von Hippel (2011) advocate seeking the opinion of users in banking service innovation to avoid service providers developing products which do not reflect user needs. Although this is in non-digital banking, which is a limitation, the approach reinforces the best practice for creating innovative digital banking services that can benefit both customers and banks.

Therefore, the research seeks to develop a framework based on bank, employee and customer perceptions, as digital banking innovators, to supplement existing models discussed in the literature. It is important because banks' employees need to innovate and provide excellent experience, and value to customers and shareholders. Thus, further research is required to bring new insight.

2.7 Conclusion

Digital banking impact has been a key field of interest in recent years, but how to explore it effectively has been under review. Moreover, assessing the capabilities of digital banking in improving customer experience and financial performance has received limited attention. The evidence has been demonstrated by other literature indicated above, which claims that digital banking research is unresolved and has advised broadening the approach. This is important especially when customer behaviour is changing towards digital banking. Much previous research has used technology acceptance theory or a combination of theories. This research considers this type of theory in addition to service, organisational, marketing and strategic management theories, to get balanced views of digital banking effectiveness. Banks face 'invisible' customers, who rarely visit their branches for transactions, making them close branches. Digital banking has opened up distribution channels for services, empowering customers. Therefore customer satisfaction and experience, and how they are linked to profits should be measured differently.

The research investigates different aspects of digital banking and measurement techniques within UK banks. Banks acquiring and retaining customers through digital banking is important, making this research urgent. However, there are still limited models of digital banking service, especially research on how customer experience and financial performance are linked. There has been no comprehensive study of digital banking experience like those investigated in this research. This makes a strong case for DiBCEFPEF. The research aims to explore a digital banking, customer experience and financial performance framework, providing an in-depth analysis of UK banks using real world experiences to broaden understanding.

CHAPTER THREE – CONCEPTUAL FRAMEWORKS

3.1 Introduction

This chapter examines aspects of the theoretical framework that underpins the research. The literature critique further addresses banks' and customers' digital banking (DB) uptake, covering their motivations, taking into account the challenges and opportunities such as service quality, customer experience, satisfaction and loyalty, and financial performance improvement. The gap in knowledge about current digital banking models is established in Chapter Two. To fill this gap and contribute to knowledge, there is a need to find similar studies of Conceptual Frameworks (CFs) and extend them theoretically and practically.

While there has been research into the impact of customer satisfaction, loyalty and financial performance (Keisidou et al., 2013; Yee et al., 2010), little is known about the impact of digital banking on customer experience and financial performance. This research attempts to extend Keisidou et al. (2013), Garg et al. (2014) and Klaus and Maklan's (2013) models to incorporate digital banking's impact.

The difficulty in conceptualising digital banking has made researchers combine different theoretical perspectives (Alalwan et al., 2016; Patsiotis et al., 2012), as it involves customer behaviour, service quality, digital technology and banking. These theories contribute differently to building digital banking frameworks. This chapter outlines the CFs which underpin the study, research theoretical conceptualisation and key components involved. The key themes discussed in the CFs are: digital banking services, customer experience and financial performance. This is followed by a discussion of CFs' hierarchy and how they are linked to research questions, a summary of gaps in knowledge, components, limitations and critique of CFs, and a conclusion.

3.2 Underpinnings of the Conceptual Frameworks

CFs provide guidelines for the empirical work to be undertaken within a research environment (Van De Ven, 2007). Lesham and Trafford (2007) view CFs as the

researcher making clear decisions on what is being investigated, identifying the important features and relationships that are probably meaningful, which influence data collection and analysis methods. This shines a light on the theory, literature and methodology guiding the research, and the scope under which the research operates to make a contribution to knowledge. The researcher decides, based on their perceptions of a phenomenon, which factors to include and how they influence the phenomenon (Anderson, 1997). This research's CFs are underpinned by mixed phenomena; they represent the author's view of banks', employees' and customers' digital banking experience, the relevant aspects involved, the in-depth knowledge required and the integrated modelling relationships within this research concept.

To address the research CFs, this chapter draws on different strands of literature: service quality improvement, digital innovation, digital banking uptake and behaviour, improving customer experience and satisfaction, marketing and management, e-commerce, and organisational performance. These have been undertaken for the theoretical underpinnings and the literature critique in Chapter 2, to gain a conceptual understanding of the research themes. The theories help to understand human technology perceptions and service quality, and the impact of customer experience on banks' profitable growth.

3.2.1 Customer Experience

Many studies in customer experience explore customer perceptions (Lemke, Clark & Wilson, 2011; Holbrook, 2000), and Customer Experience Management (CEM) which strategically manages customers' overall enterprise experiences (Schmitt, 2003). The author argues that enterprises must value customer interactions and integrate different factors, during and after sales, to effectively interface with them, and create distinct experience. Similarly, Grönroos (1984) argues that developing a marketing theory requires a clear picture of what customers are looking for in their relationship with firms, shaped by intrinsic and extrinsic factors. Grönroos studies service functional qualities, and shows that expected and perceived service affect service quality, influenced by a firm's image. Customer experience is affected by customers' behaviour, but few of these factors are considered in research (Jun & Palacios, 2016; Amin, 2016), unlike here. Berry, Carbone and Haeckel (2002) suggest that CEM should define all the signs that a firm communicates to customers, to determine whether the company is meeting them.

This research could offer clues on interface design, functionality, usability and service quality, from digital banking experience, areas that have received limited attention.

Klaus and Maklan (2013) define customer experience as: the customer's cognitive and affective assessment of all direct and indirect contacts with the firm relating to their purchasing behaviour. This definition relates to other studies (Verhoef, Lemon, Parasuraman, Roggeveen, Tsiros & Schlesinger, 2009; Gentile, Spiller & Noci, 2007). Meanwhile, Verhoef et al. (2009) suggest that customer experience comprises the cognitive, affective, emotional, social and physical nature of the business, which are determined by social environment, service interface, atmosphere, product range, price, alternative channel experience, and the firm brand. They note that firm location and consumer attitudes affect overall customer experience, via elements both within (e.g. service interface, environment and price) and outside (e.g. shopping purpose) their control.

The above literature refers to customer experience as the customer's response to all direct and indirect encounters with a firm. Direct contact is initiated by customers during purchase and service usage, while indirect contact involves encounters with a firm's representations, through recommendations and advertising. However, digital banking experience involves the overall assessment of customers' and banks' digital interfaces. Unlike contact services, the implications of how this interaction influences customer behaviour (e.g. in design and ease of use) requires further clarification.

Customer experience suggests that both emotional and irrational behaviours influence customers' purchase decisions, helping create mutual benefit between customers and companies (Holbrook, 2005). Similarly, customer experience originates from interactions between a customer and a company, through which mutual value is gained (Gentile et al., 2007). Companies gain value through market share, loyalty, profitability, customer and brand equities, while customers gain through utilitarian and hedonistic values. Garg et al.'s (2014) study of banks also finds value creation an important customer experience factor. Value creation between firms and customers has boosted studies on how customer experience, satisfaction, loyalty and financial performance relate to each other. Therefore, this research will accept such a model and extend it to digital banking, as part of the CFs. Table 3.1 provides key theoretical frameworks adopted in similar research.

Theoretical Framework	Supporting Literature
Linking Customer Experience Scale to satisfaction and loyalty	Klaus & Maklan (2013); Meyer & Schwager (2007); Gentile et al. (2007); Garg et al. (2014); Chahal & Dutta (2015); Piyathasanan et al. (2015); Klaus (2013)
Linking Customer satisfaction and loyalty to profitability (e.g. NPS)	Reichheld et al. (2000); Van Doorn et al. (2013); Spiess et al. (2014); Jang et al. (2013)
Linking service quality to satisfaction and loyalty (e.g. SERVQUAL)	Parasuraman et al. (1988); Jun & Palacios (2016); Klaus & Maklan (2013); Dölarslan (2014); Keisidou et al. (2013); Meyer & Schwager (2007); Grönroos (1984)
Linking Customer satisfaction to profitability through financial ratios (e.g. BSC)	Kaplan & Norton (1996b); Dechow (2012); Bates et al. (2003); Smith & Wright (2004); Hoque (2014); Glaveli & Karassavidou (2011)
Linking service quality, satisfaction to loyalty, business growth and profitability (e.g. SPC)	Heskett et al. (2008); Yee et al. (2010); Kearney et al. (2013); Evanschitzky et al. (2012); Theoharakis et al. (2009)
Linking customer loyalty to profit through CLV	Schneider et al. (2006); Reichheld (2003); Valenzuela et al. (2014); Donkers et al. (2007)

Table 3.1: Theoretical Frameworks of Customer Experience and Financial Performance
(Source: Author)

Klaus and Maklan (2013) acknowledge that most practitioners use NPS to assess their customers' experiences. They criticised this practice based on the conceptual gap and developed their own customer experience quality framework. This was originally developed in Maklan and Klaus (2011), adapting NPS and SERVQUAL theories. They also claim that service quality theories originate from TQM. Nevertheless, service quality was conceptualised as a gap between expectations and the consumers' overall service encounter assessments, leading to SERVQUAL (Parasuraman et al., 1988). When implementing the measure, researchers focus on a particular service and ask customers to assess the dimensions versus their prior expectations using a five point Likert scale (Morrison-Coulthard, 2004). However, Reichheld (2003) claims that NPS is the sole metric for measuring the effectiveness of a business from the customers' perspective and uses an 11-point Likert scale. This research will explore similar scales to measure digital banking experience.

3.2.1.1 Linking Customer Experience and Financial Performance

The link between customer experience and purchasing behaviour suggests that customer experience is mediated by marketing to improve customer satisfaction and loyalty, and their impacts on financial performance. As argued in Chapter Two, these aspects of digital banking have not received detailed attention in bank management literature, hence the research seeks to close this gap. Maklan and Klaus (2011) recommend that researchers should uncover other customer experience dimensions, so marketing resource can be directed to maximise drivers of financial performance (e.g. loyalty, satisfaction and share-of-wallet).

The relationship between customer satisfaction and positive business outcomes is well documented (Chi & Gursoy, 2009; Yee et al., 2010). Customer satisfaction refers to customers' evaluative judgement based on the total purchase and consumption experience with services over time (Anderson et al., 1994). They argue that customer satisfaction should be the fundamental indicator of a firm's performance due to its links to behavioural and economic consequences. This has generated interest, making NPS gain popularity (Reichheld, 2006). Reichheld et al. (2000) claim that improving service quality enhances customer loyalty and profit through cross-buying and recommendations, while Heskett et al. (2008) suggest that about a five percent improvement in customer satisfaction and loyalty can significantly boost profitability. This argument has linked customer loyalty to profit through CLV (Valenzuela et al., 2014; Reichheld, 2003). A similar argument was made in BSC, which states that improving customer satisfaction increases financial performance. This shows that improving service quality and customer satisfaction can increase profitability, which needs investigating in a digital banking experience framework.

3.2.1.2 Measuring Customer Experience

As the research is grounded in marketing, service quality and digital banking theories, the measurements and CFs to be extended will be the ones used in similar research. For instance, Figure 3.1 shows the model of customer experience quality (Klaus & Maklan, 2013; Maklan & Klaus, 2011).

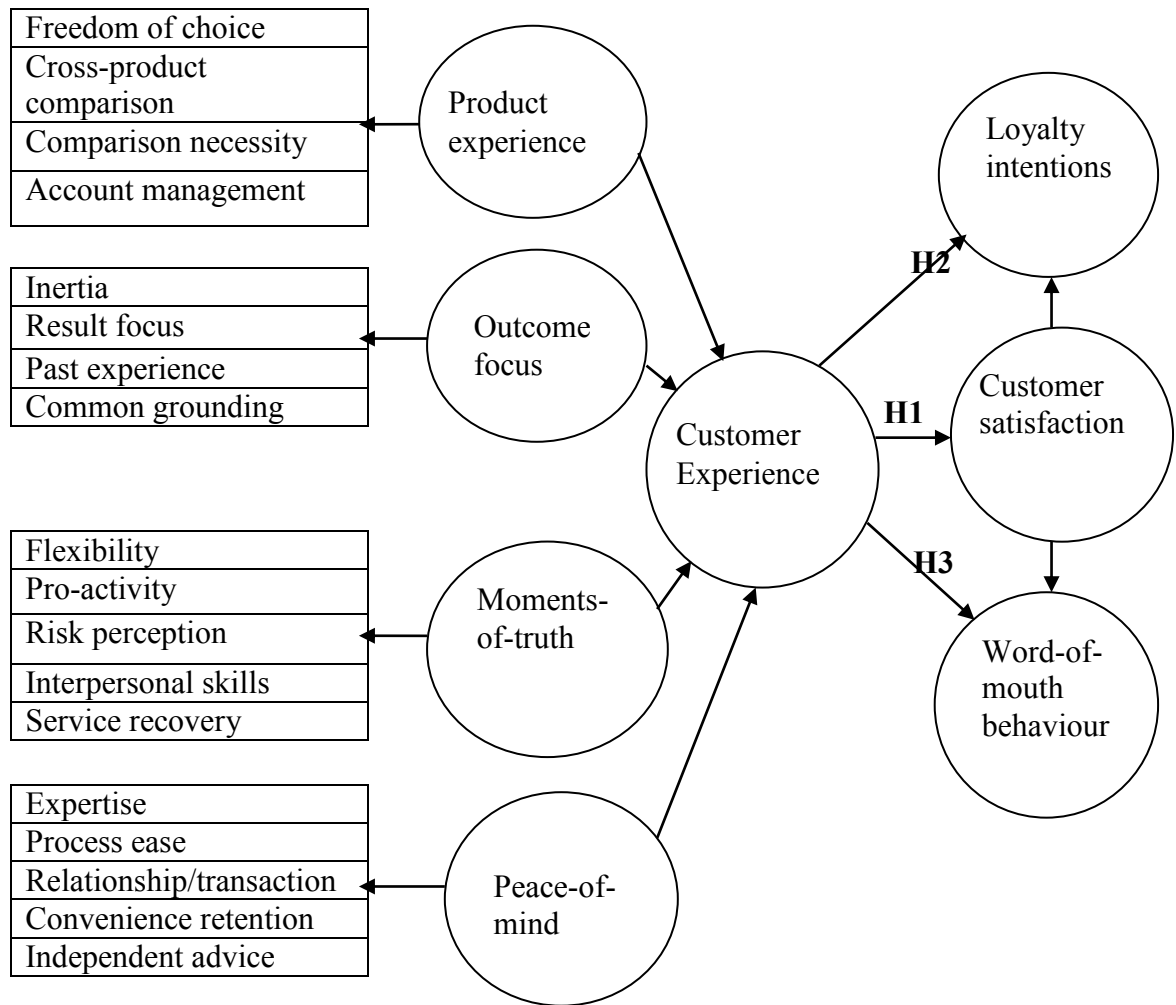


Figure 3.1: Customer Experience Quality (Source: Klaus & Maklan, 2013)

Klaus and Maklan’s (2013) model suggests that positive product experience, outcome focus, moment-of-truth and peace-of-mind dimensions lead to positive customer experience, which leads to satisfaction, loyalty intentions and word-of-mouth behaviour. However, they failed to demonstrate financial performance, which is a limitation. The research will extend a similar model for digital banking and financial performance. This is because it captures customer experience and satisfaction, uses a service quality and customer behaviour theoretical framework, making the model robust. Maklan and Klaus (2011) argue that although customer experience is part of service quality, its measurement is far more complex. This agrees with other researchers’ conceptualisation of customer experience (Verhoef et al., 2009; Gentile et al., 2007). The complexity has made these researchers call for more comprehensive studies exploring what constitutes customer experience in different contexts, which this research offers.

Meyer and Schwager (2007) advocate using NPS to capture customer experience. They conclude that customer satisfaction occurs when the gap between customers' expectations and experiences has been closed. Thus, banks should constantly seek the opinion of customers about their digital banking to improve their experience. However, Piyathananan et al.'s (2015) recent study argues that few guidelines were available on how to improve customers' virtual experience. This research aims to offer those guidelines. Piyathananan et al. (2015) find that communal and individual experiences indirectly contribute to social value, and virtual experience influences both economic and social values, hence relating customer experience to value derivation.

Knutson et al. (2007) use factors (e.g. environment, benefits, accessibility, convenience, utility, incentive and trust) to measure customer experience in the hospitality sector, while Kim, Cha, Knutson and Beck (2011) develop a consumer experience model using similar factors. However, these relate to a 14-factor model by Garg et al. (2014), which incorporates non-digital banking instruments. Chahal and Dutta's (2015) research on Indian banks, establishes a relationship model of customer experience with satisfaction, brand equity and word-of-mouth. They suggest that further efforts can focus on identifying other customer experience factors from the employees' viewpoint. For instance, access, quality information and risk factors were not examined. The impact of customers' favourable and unfavourable service experiences on value perceptions and future behaviour were also not studied. This research will attempt to fill the gap by examining the employees' viewpoint and other factors that can affect customer experience in UK banks, adopting similar research methods.

Chang and Lin (2015) develop a customer experience framework in the Taiwanese leisure sector, using experiential value which customers derive from services. However, this study incorporates perceived value in the analysis of customer perceptions of UK digital banking. Holbrook (2005) categorises experiential value as efficiency, excellence, esteem, playfulness, aesthetics, ethics, spirituality and status derived from customer experiences. The reactive value is derived from customer evaluations of and responses to the consumption of products, whereas active value results from a heightened collaboration between customers and marketing entities. Meanwhile, Klaus's (2013) model highlights psychological factors (trust, value for money and context familiarity) and functionality (usability, communication, social and product presence, and inter-activity) to influence online experience. Other customer experience studies (e.g. Chang

& Lin, 2015; Klaus & Maklan, 2013) have also combined behavioural and service quality theories, making them play a supportive role in this research.

Zeithaml, Berry and Parasuraman (1996) use various dimensions to measure behavioural intentions, including loyalty, switching intentions, willingness to pay more, external response, and internal response, while Kamakura, Mittal, de Rosa and Mazzon (2002) add behavioural elements to the SPC, based on perceptions and overall customer satisfaction in their future relationship with the service. Chang and Lin (2015) note customer experience to include physical moments and emotional participation moments, which generate value experiences and enhance customer loyalty. Other researchers have used behavioural intentions to capture digital banking uptake (Deng et al., 2010; Chong et al., 2010), which should be considered in the research.

The review of CFs in the research domain indicates that researchers have used service quality, value creation, marketing and customer behaviour theories to study customer experience, satisfaction and loyalty. These offer a very powerful predictive argument that helps researchers capture employees' and customers' feelings about a service to determine their future intentions, helping banks retain customers and improve profit. Therefore, the behavioural intention theories can support the main theories to investigate how digital banking affects customer experience and financial performance.

3.2.2 Financial Performance

Organisations pursue different goals to achieve their performance objectives (Greve, 2003; Hauser & Katz, 1998). The financial performance concept originates from organisational performance, strategic management and financial accounting studies, and measures firms' performance. In the 1980s, the use of non-financial performance indicators (e.g. efficiency ratios and loyalty) became popular, making businesses take a more balanced view to reflect modern organisation strategies. This led to other performance frameworks like BSC, NPS, and SPC, which support internal and external performance measures, adding customer and employee satisfaction to reflect how they contribute to overall financial performance. Subsequently, linking customer experience to a firm's performance has increased among researchers (Gentile et al., 2007). These measures reflect the concept of causal effects, meaning that results obtained in business performance relate to specific determinants, hence demonstrating the need to identify financial performance drivers in digital banking.

3.2.2.1 Measuring Financial Performance

BSC is a well-known organisational performance framework. It enables businesses to monitor financial performance from different perspectives using financial, customer, internal business process, and learning and innovation growth based metrics. Holistic performance measurement frameworks have made the impact of customer experience, satisfaction and loyalty on financial performance desirable, which needs investigating in digital banking.

Measuring financial performance can be complex due to different ways financial ratios are used and evaluated by banks. Keisidou et al. (2013) study customer satisfaction and loyalty's effect on financial performance, and claim researchers have measured it differently. Anderson et al. (1994), in their studies of customer satisfaction, measure financial performance using Return on Investment (ROI). Chi and Gursoy's (2009) research into the USA hospitality sector, measures financial performance by asking managers to rate theirs in comparison to three major competitors' profitability, ROI and net profit. In contrast, Keisidou et al. (2013) claim that the three widely known ratios to measure financial performance of banks are: Return on Assets (ROA) or ROI; Net Profit Margin (NPM); and Return on Equity (ROE). The above measures will be extended to customer experience.

The determinants of firms' financial performance are measures of individual relationships in models linking hypothesised causal variables to various performance measures (Smith & Wright, 2004). They measure financial performance using brand image, firm viability, product and service qualities, which were found to affect customer loyalty and in turn affect sales growth and ROA. Similarly, image describes how customers perceive a company, regarding its services and reputation, and it generates value (Fathollahzadeh, Hashemi & Kahreh, 2011). Therefore, the causal variables of financial performance describing organisational characteristics are found in management, finance, business and marketing studies.

The study of financial performance involves qualitative or quantitative elements or a mixture of both. Capon et al. (1990) find that financial performance literature, while often quite comprehensive, tends to be qualitative in nature, as quantitative comparison of results from different studies is difficult, because operationalisations and dependent variables can differ. They analyse 320 empirical studies from management literature,

identifying strategy, environmental and organisational determinants of financial performance, as shown in Figure 3.2.

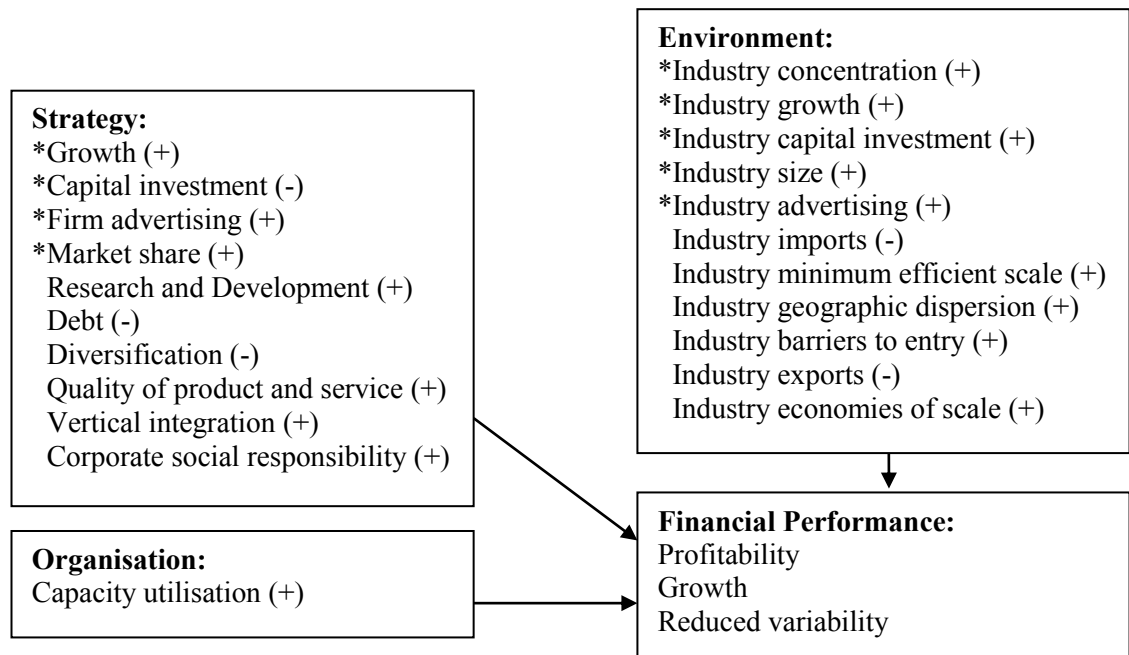


Figure 3.2: Measures of Financial Performance (Source: Capon et al., 1990)

Capon et al. (1990) find that strategic factors such as growth, capital investment, firm advertising, market share, R&D, product and service qualities, vertical integration and corporate social responsibility have positive relationships with financial performance. Although the research has not investigated customer experience, it reflects financial performance. The findings will play a part in determining whether investment in R&D and employee innovation affect customer experience and financial performance. This research adopts strategic and organisational management theory, it accepts the model's assessment and extends it to include the impact of digital banking experience and other financial performance measures (e.g. efficiency, market share, Cost-to-Income ratio and sales growth). The research also considers Keisidou et al.'s (2013) bank measures.

The research integrates customers' and employees' perceptions to conceptualise and understand how they affect banks' financial performance. This ensures a balance of views from the two perspectives, as required in the BSC framework. Organisational behaviour suggests that the organisation's engagement, training and knowledge affect employees, which in turn affect firm performance. Organisational studies incorporate organisational and economic issues, which include employee attributes as determinants of firms' financial performance (Glaveli & Karassavidou, 2011; Kearney et al., 2013).

This suggests that realities of an organisation are understood only as they are perceived by the staff, therefore customers' and employees' perceptions about digital banking experiences and how they affect financial performance will be addressed.

Venkatraman and Ramanujam (1986) develop a framework that illustrates approaches to measuring the organisational performance domain, shown in Figure 3.3. This shows that financial and operational performance are subsets of overall organisational performance. This was validated by Hult et al. (2008) who also differentiated between performance domains.

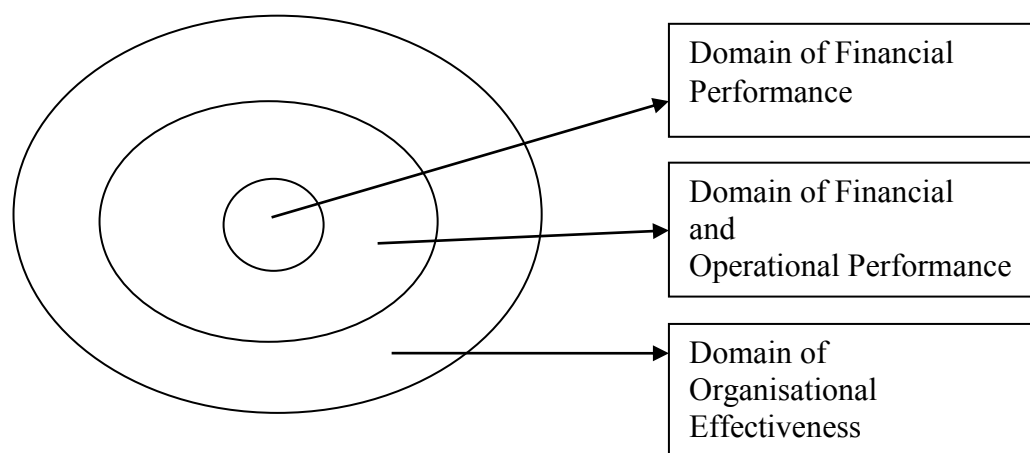


Figure 3.3: Organisational Performance (Source: Venkatraman & Ramanujam, 1986)

The 'financial performance' domain examines indicators such as sales growth, profitability, ROI, ROA, ROE and earnings per share, which reflect directly on the firm's economic objectives. Arguably, this comprises the quantitative elements usually found in strategy research. This research accepts the financial performance framework as it reflects similar measurement indicators in other studies (Keisidou et al., 2013; Chi & Gursoy, 2009).

The 'financial and operational performance' domain measure includes market-share, innovation, product quality, marketing effectiveness, product value-add, and business efficiency. This domain is important because the impact of digital banking, employee attributes, customer experience, satisfaction and loyalty on financial performance can be investigated, regarding value-adds and efficiency improvement. Hult et al. (2008) conclude that scholars should consider the primary and secondary source of data to capture the multifaceted elements of performance constructs. The research will utilise

both data sources to make a contribution, as operational performance factors affect financial performance (Venkatraman & Ramanujam, 1986), making these measures important in digital banking.

The inclusion of operational performance indicators focusses on those factors that can influence financial performance (e.g. Cost-to-Income ratio, loyalty and CLV). Different studies recognise the significance of customer satisfaction and loyalty to financial performance (Heskett et al., 2008; Liang, Wang & Farquhar, 2009; Reichheld et al., 2000). Smith and Wright (2004) argue that there should be proper measures to address potential drivers of customer satisfaction, and stakeholders need to know why customers choose one company's products over another to assess the potential impact on financial performance.

Furthermore, Kohli and Grover (2008) note that research has focussed on direct economic benefits (e.g. ROI, market share), while ignoring the indirect economic value-adds and their mediator variables (e.g. IT value, employee quality and customer satisfaction). Additionally, Chang and Tseng (2010) identify relationships among service quality, perceived risk, and customer value (functional, emotional, social, conditional and epistemic) in banks. They find that functional value is affected by reliability and service quality accuracy, and negatively affected by financial and functional risks, whereas conditional values are influenced by responsiveness of service quality. Chang and Tseng (2010) argue that: “[...], *the provision of value-added products and services is key to the survival of several organisations, since value is considered to guide customers’ retention decisions*”. This suggests that overall economic value-adds of digital banking be examined for banks’ financial performance.

Most strategic studies focus on the first two domains, due to the difficulty in measuring how the broadest performance indicator (organisational effectiveness) directly contributes to financial performance. Hult et al. (2008) note that measures of ‘organisational effectiveness’ are the firm’s survival, reputation, perceived overall performance, and achievement of goals. Arguably, measures like brand, innovation and security are part of this, so those will be investigated to see whether they indirectly affect financial performance. Fathollahzadeh et al. (2011) find that customer value is linked to image and service quality, which leads to loyalty, while Zott, Amit and Massa (2011) point out that innovation strategy helps improve business performance. All these

propositions are important, as banks attempt to use digital banking to create services, value and save money. The analysis shows that to measure banks' financial performance, marketing, strategic management and organisational studies and service quality theories are the right CFs to consider.

To measure financial performance, Hult et al. (2008) advocate using primary and secondary data. In this research, the secondary source will be banks' financial reports, while primary data will come from customers and employees. Their studies indicate that primary data sources can be more reliable than secondary data in certain contexts. However, analysis of data from two sources helps correlate results, provide support for the convergent validity of the measures, method corroboration and operationalisation of constructs. The approach has been difficult to adopt due to confidentiality and problems obtaining information. This research uses data from three sources to verify results, and extend knowledge in the measure of financial performance in UK digital banking.

Hult et al. (2008) study organisational performance measures and data sources by reviewing Management, Marketing, Business Studies, Organisation and Strategic Management journals, and summarise the commonly used indicators in Table 3.2.

	Financial Performance	Operational Performance	Overall effectiveness Performance
Firm	Sales based (44%), ROA (40%)	Market share (47%)	Reputation (30%)
Strategic business unit	Sales based (68%), ROI (47%)	Market share (46%)	Performance relative to competitors (50%), perceived overall performance (33%)
Inter-organisation unit	Sales based (62%), profitability (31%)	Productivity (44%), market share (33%), product/service quality (33%)	Perceived overall performance (71%)
Total	Sales based (52%), ROA (29%) , profitability (26%)	Market share (44%), productivity (20%)	Perceived overall performance (47%), performance relative to competitors (20%)

Table 3.2: Organisational Performance Measurement (Source: Hult et al., 2008)

Hult et al. (2008) find that for financial performance, 52% used sales based measures, 29% ROA and 26% profitability, with data coming from either secondary (financial

reports) or primary sources. In 69 studies measuring financial performance, 57.3% used primary data sources, whereas 40.6% used secondary data and only 2.1% employed both primary and secondary data sources. Amongst these studies, 67.7% investigated financial and operational performance, 32.3% financial and overall effectiveness performance, and 7.3% investigated all three measures. Their findings agree with Venkatraman and Ramanujam (1986) that effectiveness performance is not commonly measured, and there is limited research using both data sources. Additionally, Hult et al. (2008) reiterate combining measurements and data sources to assess organisational performance, which is important in this research.

Sales-based and market share were the predominant measures for financial performance and operational performance respectively, whereas perceived overall performance was used to measure overall effectiveness. Financial performance is a major focus in Hult et al.'s (2008) studies. This research will use banks' financial performance as the dependent variable and capture data from three sources, making it unique and contributing to knowledge. Table 3.3 shows different dimensions of organisational performance, impacting financial performance.

Theoretical Frameworks	Supporting Literature
Financial and Operational Performance, Overall Organisational Effectiveness using Strategy Management and Organisational theories	Hult et al. (2008); Venkatraman & Ramanujan (1986); Capon et al. (1990); Kaplan & Norton (1996b); Glaveli & Karassavidou (2011)
Customer Experience, Satisfaction, Loyalty and Financial Performance using Service Quality and Marketing theories	Keisidou et al. (2013); Evanschitzky et al. (2012); Heskett et al. (2008); Reichheld et al. (2000); Acheampong & Asamoah (2013); Yee et al. (2010); Chi & Gursoy (2009); Liang et al. (2009)

Table 3.3: Key Theoretical Frameworks of Financial Performance (Source: Author)

Hult et al. (2008) validate the organisational performance measures developed by Venkatraman and Ramanujam (1986), making them robust and acceptable financial metrics. Considering the multi-dimensionality of financial performance concept, this study adopts the three measures: financial, operational performance and organisational effectiveness, incorporating the direct and indirect effect of customer experience, satisfaction and loyalty, CLV and efficiency (Reichheld, 2003). Effectiveness can be banks' ability to react to changing customer behaviour through digital innovation. The

research also adopts the financial performance measures, especially of the financial ratios of Keisidou et al. (2013), and Chi and Gursoy (2009). In developing digital banking effectiveness, customer experience and financial performance measures, the study adopts the broad dimensions, because these components impact on financial performance, as argued in the research.

3.2.3 Digital Banking Services

Banks focus on maintaining customer loyalty through quality services, segmentation, cross-selling and long-term relationships via personal contacts, leading to increased consumer recommendation and re-purchase (Reichheld, 2003). This strategy has been altered due to digital banking service qualities (Saleem et al., 2016), where personal contact between the banks and customers no longer takes place, requiring a different framework. Undoubtedly, how digital banking affects banks' financial performance will depend on customer perceptions and expectations of the service interfaces and qualities.

Digital banking is the delivery of financial services over electronic devices (Martins et al., 2014), therefore, its conceptualisation must include technology and service frameworks. Researchers have also conceptualised e-banking frameworks from service quality, bank marketing and psychology perspectives (Levy & Hino, 2016; Harrison et al., 2014). Tomiuk and Pinsonneault's (2001) early e-banking framework uses cognitive beliefs to suggest that for communal customers, loyalty is generated based on personal touch and interaction while for exchange customers, loyalty is gained based on service efficiency and reliability. Digital banking reduces the face-to-face interaction between the customer and bank personnel, and differs from other services. The way customers' perceive service quality will be different in contact services. Therefore a multiple theoretical framework is required to ascertain the impact of digital banking on customer experience, satisfaction, loyalty and financial performance.

3.2.3.1 Linking Digital Banking to Customer Behaviour

Levy and Hino (2016) suggest that emotional brand trust influences customer loyalty in banks, while Harrison et al. (2014) study customers' and banks' e-banking adoption readiness, relating to their attitudes. These studies show cognitive-based trust's influence on purchasing behaviour in digital banking. They suggest that some customers value social benefits, while some value functional attributes and concentrate on the added value like convenience and ease of use, and thus experience increased satisfaction.

This shows how customer behaviour can influence digital banking experience. Emotionally, if a bank builds trust with a customer, a long-term relationship is established, which translates to loyalty and profitability. Other early research shows that system, information and service qualities mediate customer satisfaction, and increase net benefit, as demonstrated by DeLone and McLean (2003) in Figure 3.4.

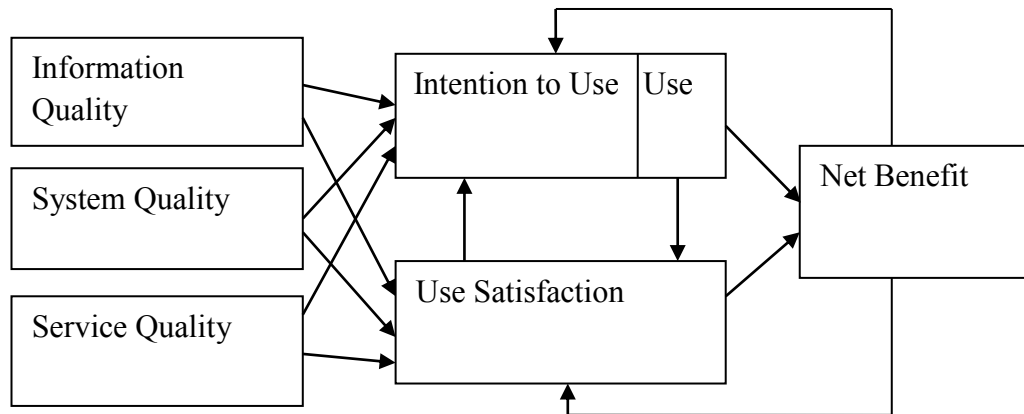


Figure 3.4: Information System Model (Source: DeLone & McLean, 2003)

This model was extended by Lee and Chung (2009), replacing service quality with interface design quality and intention to use with trust, in the study of factors affecting trust in and satisfaction with m-banking. Lee (2009) investigates the factors affecting e-banking and develops a model (shown in Chapter Two, section 2.4), another framework that investigates user intention. Similarly, in Figure 3.5, Yoon's (2010) e-banking model shows that ease of use, design, transaction speed, security, information content and customer support service are antecedents of satisfaction in China.

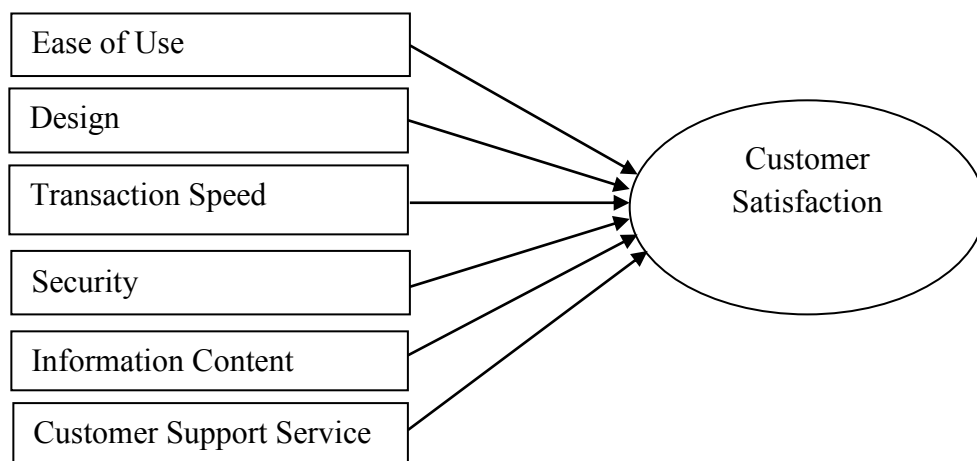


Figure 3.5: Online Banking Satisfaction Model (Source: Yoon, 2010)

In some CFs, to understand e-banking uptake, the dependent variable can be behavioural intention. Thus, Oliveira and Tam (2017) and Waite and Harrison (2015) find TAM variables the most widely used for m-banking and e-banking studies respectively. Xue et al. (2011) propose a model which relates e-banking uptake to customer demand for services, using channel availability, customer efficiency in service co-production and local penetration. They combine customer characteristics and their behaviours. This research is different as the dependent variable is financial performance, however, some factors that drive customer behaviour towards using digital banking will be useful. For instance, if a customer shows positive behaviour, most likely they are enjoying and having a good experience. Therefore, the research will utilise intention to use technology theory, incorporating social psychology, adapted in TAM, to support service quality, marketing and organisational theories to understand digital banking effects on customer experience and financial performance. They will be regarded as auxiliary theories. Table 3.4 shows some users' intention research in digital banking.

Theoretical framework	Supporting Literature
Digital banking studies using behavioural theory (e.g. TAM)	Alalwan et al. (2016); Lee (2009); Martins et al. (2014); Hanafizadeh et al. (2014); Luo et al. (2010); Chong et al. (2010); Pikkarainen et al. (2004); Harrison et al. (2014); Luarn & Lin (2005); Xue et al. (2011); Lee & Chung (2009); Yoon (2010)

Table 3.4: Research in Digital Banking (Source: Author)

3.2.3.2 Linking Digital Banking to E-Commerce

Digital banking is a type of e-commerce for banks. This research adopts an e-commerce marketing framework with a focus on digital banking as one of the main CFs. Ballon (2007) argues that online sales channels have spurred firms to devise new ways of interacting with customers, searching for more valuable models. Piyathasanan et al. (2015) find a positive relationship between value perceptions and customer loyalty in e-commerce. Digital banking shares many e-commerce characteristics in Zott et al.'s (2011) model (e.g. value creation, innovation, customer focus, profitability, internet content, differentiation and strategic control, revenue stream, and ROI for shareholders). Therefore, any framework developed must incorporate common attributes of e-commerce, such as giving value to customers and banks.

Stamoulis, Kanellis and Martakos (2002) model on e-banking suggests assessing its value along the internal view, where the channel is considered as a resource whose utilisation must be maximised for marketing; and the external view, where the channel, as an interface to bank customers, should support CRM. Meanwhile, Zott et al. (2011) describe an e-commerce model as the rationale of how firms can create, deliver and capture value. Sorescu, Frambach, Singh, Rangaswamy and Bridges (2011) add that through innovation, businesses can create value for customers (e.g. customer efficiency, effectiveness and engagement) and firms (e.g. operational efficiency and effectiveness, and customer retention). Employee resource is important as engaged employees will innovate, and improve services and firms' performance (Karatepe & Aga, 2016; Verhoef et al., 2009). This needs investigating in digital banking.

E-Commerce is about creating value for customers and firms through innovation (Amit & Zott, 2001, 2012; Sorescu et al., 2011; West & Bogers, 2014). In a Resources-Based View, firms apply various resources to improve profit (Barney, 1991). In banks, employee attributes are important especially for employee-customer engagement and innovation, which will be investigated. The way firms innovate in their strategy affects the value generated and financial performance (Aspara, Hietanen & Tikkanen, 2010; Teece, 2010). Through innovation, banks can extract more value from their employees, helping improve customer experience. This argument helps make strategic marketing one of the important theoretical CFs.

A common CF for this research topic is still at an early stage. Different research has used service quality, bank marketing and behavioural intention to derive their underpinning CF. Teece (2010) emphasises capturing value from technology innovation through knowledge assets. Although this is embedded in BSC, one of the primary CFs, other researchers have made innovations prominent in marketing, as a way to create value and increase profitability (Aspara et al., 2010; Amit & Zott, 2012). Banks can develop better services through innovation, making innovation theories an auxiliary CF. Digital infrastructure is available for UK banks, to develop digital banking services, which also justifies this.

3.2.3.3 Linking Digital Banking, Customer Experience and Financial Performance

Service quality is a key intangible organisational resource, and an important factor for customer satisfaction and a firm's financial performance (Pekovic & Rolland, 2016;

Cho & Pucik, 2005), however conceptualising the research themes is still a new phenomenon. Early research on customer satisfaction by Fornell, Johnson, Anderson, Cha and Bryant (1996) incorporates antecedents (expectations, perceived quality and value) and consequences (voice and loyalty) of overall customer satisfaction. However, Keisidou et al. (2013) attempt to predict bank services effect on customer satisfaction, loyalty, and financial performance, depicted in Figure 3.6. They use Greek banks' annual financial data and claim their study is amongst the little research that has combined customer satisfaction, loyalty and financial performance, as dependent variables.

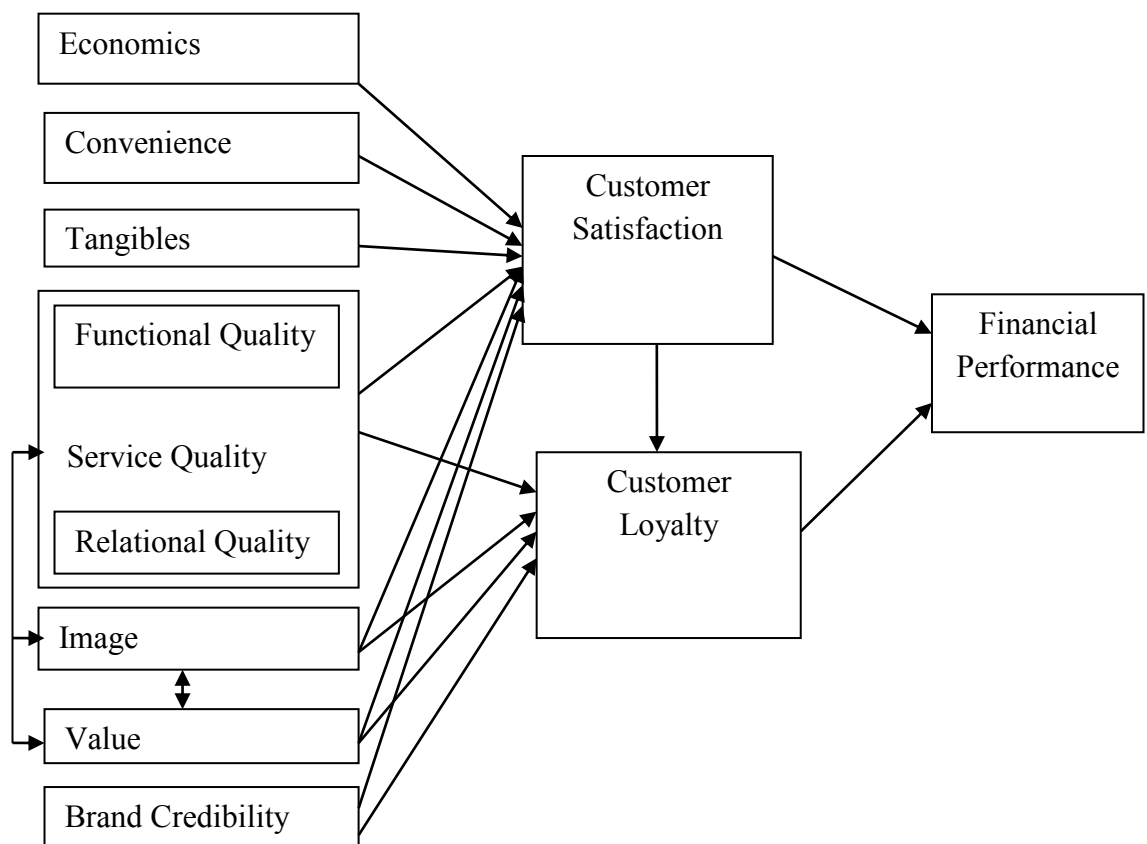


Figure 3.6: Services and Financial Performance Model (Source: Keisidou et al., 2013)

Keisidou et al. (2013) adopt service quality theory to study economies, convenience, tangibles, functional quality, service quality, relational quality, image, value and brand credibility, and their relationship to customer satisfaction and loyalty, and financial performance. They find customer satisfaction and customer loyalty not to be significantly related to financial performance, contrary to findings of other studies (Chi & Gursoy, 2009; Bernhardt, Donthu & Kennett, 2000). Keisidou et al. (2013) attribute the findings to the financial losses of banks at the time, and advise that the model should

be tested with multiple users in other countries. This research incorporates digital banking and customer experience in UK banks, which makes it different.

Liang et al. (2009) study the influence of customer service perceptions on financial performance in Taiwanese banks and suggest that managers should partner with customers in service development. They propose that service attributes impact on functional, symbolic and experiential benefits, which influence customer satisfaction, commitment/trust, loyalty, and financial performance. However, this research investigates the importance of the employee and customer partnership in digital banking. Although their research is different, they use financial performance as a dependent variable, and service quality and relationship marketing theories, which are important.

Fathollahzadeh et al. (2011) study online and offline effects of satisfaction, co-operation, trust, commitment, service quality, complaint handling, image and communication in Iranian banks and find that all eight factors have a significant relationship with customer satisfaction, which leads to customer loyalty. In banks, loyalty is characterised as the customer's repeated patronage and recommendation to others (Ladhari et al., 2011; Akhter, Abbasi, Ali & Afzal, 2011). Smith and Wright's (2004) model establishes that product market value mediates customer loyalty, which consequently drives financial performance. This means that higher customer loyalty improves sales growth and ROA, as margin improves. Subsequently, enhancing customer satisfaction and loyalty increases a firm's financial performance (Heskett et al. 2008; Akhter et al., 2011), which needs investigating in digital banking experience.

Employee attributes influence innovation (Hult et al., 2004) and customer satisfaction and profitability (Yee et al., 2010; Baker & Sinkula, 1999). The impact of digital banking will depend on the employees' ability to innovate and add value to customer services, and how banks strategically adopt it. Thus, firms compete based on their customer value dimensions, like product features, experience, image and brand, which can increase profit (Akhter et al., 2011; Porter, 1980). Fathollahzadeh et al. (2011) state that value reflects customers' quality perceptions of the delivered services relative to price and not what a company desires to provide. Customers also recognise and value remarkable services when offered, improving loyalty behaviours (Chi & Gursoy, 2009; Keisidou et al., 2013). However, firms use technology to create value for themselves

and customers (Chang & Tseng, 2010), showing that digital banking experience must create value, which should be part of the research conceptualisation.

Pitta, Franzak and Fowler's (2006) online loyalty framework categorises customers into four tiers to indicate expected levels of profit from them. Platinum and Gold tiers are more valued while the Iron and Lead tiers are less attractive. Similarly, the NPS categorises customers as Detractors, Passives and Promoters (Reichheld, 2003). Their studies of customer service quality show that the majority of firms' profit comes from the minority of loyal customers (Platinum and Promoter tiers). These frameworks mean that once customers are classified into profitability tiers, firms attempt to build relationships to enhance customer loyalty and profitability. The frameworks emphasise the CLV to increase profitability. This type of measure will play a part in the CFs.

Pitta et al. (2006) suggest that online customers are attracted by the ease of finding products, information and various choices offered, and loyalty is based on trust, perceived value and positive customer emotional attachment (e.g. with brand). They use marketing theories while integrating literature supporting CLV to find that customer value is an important strategy for generating profitable loyalty. Similarly, Dölarslan's (2014) model suggests that customer satisfaction and perceived value lead to repurchase intention, positive word-of-mouth communication and willingness to pay more, which mediate loyalty behaviours in services. Building trust in contact services could be through 'word-of-mouth' and courtesy, while in digital banking experience it is about the interface, ease of use, reliability and convenience, which need investigating.

Schlosser, White and Lloyd (2006) find the vendor's ability to deliver, benevolence and integrity, as distinct measures of trust. They add that effective web site design boosts trustworthiness and online purchase intentions, while Harrison et al.'s (2014) study suggests that this determines customers' e-banking adoption. The elements (e.g. web and functional design, brand) can also influence customer value and aid in relationship building in digital banking. Meanwhile, Hastings (2012) adds that customers can effect changes in the marketing relationship with firms based on shared values, mutual understanding and sustainability. Perceived value is a customer's overall evaluation of the service benefits (e.g. product prices, services received, time and effort involved) versus the costs of marketing context (Pitta et al., 2006). Customer satisfaction and

value are antecedents of loyalty (Dölarslan, 2014; Jun & Palacios, 2016), making perceived value and value-adds important components in the research theory and CFs.

Previous studies highlight the customer loyalty role as an operational indicator via CLV, efficiency and Cost-to-Income ratio, which can contribute to overall financial performance. Cost efficiency measures operational performance of technology utilisation which can affect profitability. Keisidou et al. (2013) use financial indicators (ROA/ROI, NPM and ROE) to investigate the relationship between customer satisfaction, loyalty and financial performance, while Chi and Gursoy (2009) find that satisfied customers turn into loyal ones, which leads to higher sales and financial returns. Hence, banks that offer high quality and value-added services outperform their competitors in customer loyalty and financial performance (Van Doorn et al., 2013; Jang et al., 2013; Glaveli & Karassavidou, 2011). Therefore measuring customer experience, satisfaction and loyalty will be key in determining digital banking effectiveness on banks' overall financial performance. The research investigates and makes a contribution from the following three standpoints theoretically and the CF is shown in Figure 3.7.

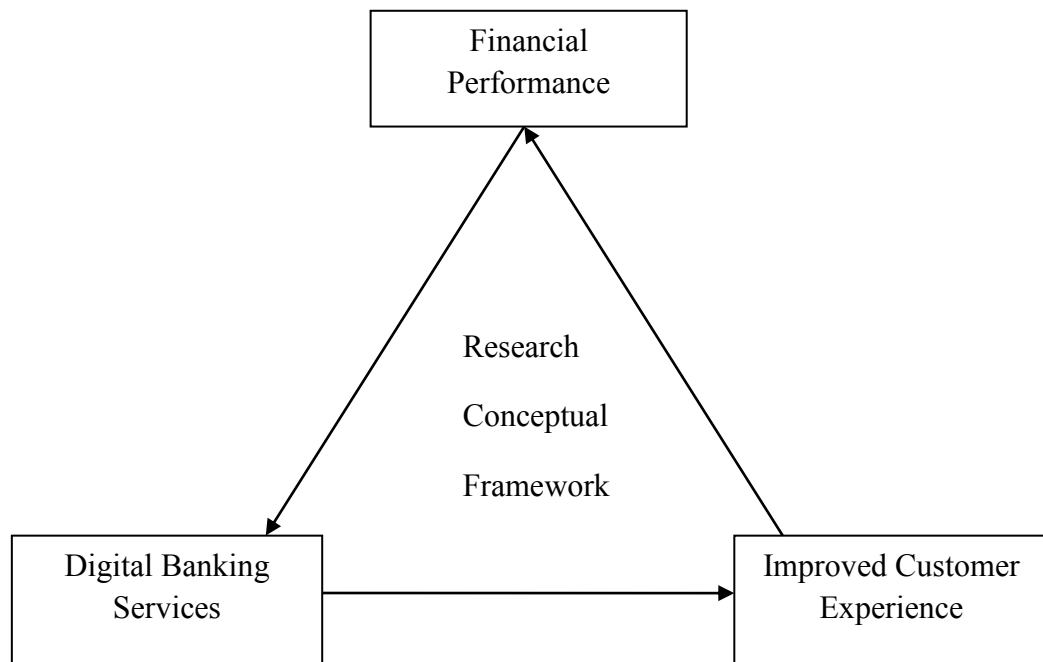


Figure 3.7: Key Theoretical Frameworks of Digital Banking (Source: Author)

3.3 Hierarchy of the Research Conceptual Frameworks

Different models have been investigated to bring insight into the research theoretical conceptualisation. The research looked at theoretical frameworks from technology acceptance behaviour, service quality improvement, innovation, strategic and organisational performance, marketing, customer experience and satisfaction and financial performance. It is therefore important to rank the theories in a hierarchy to identify the primary and auxiliary ones in the CFs.

This multidisciplinary study touched on elements of digital technology, business and profitable growth. To investigate these interrelated phenomena, the research considered various theories, and settled on ones using service quality, strategic, e-commerce (digital banking) and marketing frameworks such as: SPC, for analysing the impact of services to profit; NPS, for measuring customer experience and satisfaction; BSC, for looking at employee attributes, customer expectations and improving financial performance; TAM, for uptake and customer behaviour, and innovation in digital banking. Digital banking uses technology to offer services, therefore the CFs are supported by a major technology uptake model. The theories used are wide in scope when compared to studies that investigate a single phenomenon, however, they play different roles to investigate the research thoroughly.

Although these theories and frameworks are used as lenses to bring different insights, they have not contributed equally, some have played a greater role than others. The ones that have a minimal impact are placed lower in the hierarchy; they are auxiliary theories. Hierarchically, service quality, performance management, e-commerce and marketing theories will be at the top, while the technology and behavioural, and innovation theories are supporting them to bring further input. Table 3.5 shows the various theories involved, their main theoretical foci and some literature, helping clarify which perspectives are primarily used in the research CFs.

CFs	Theoretical Frameworks	Main Focus	Supporting Literature
Primary CFs	E-Commerce Marketing	DB; systems quality; online loyalty; consumer behaviour and satisfaction; value creation; customer capture.	Amin (2016); Jun & Palacios (2016); Lee & Chung (2009); Alalwan et al. (2016); Xue et al. (2011); Chong et al. (2010); Yoon (2010); Pikkarainen et al. (2004); Harrison et al. (2014); Sundarraj & Wu (2005)
	Service Quality Improvement	Improving service quality; customer services; organisation capabilities; employee competencies leading to financial performance.	Heskett et al. (2008); Bates et al. (2003); Keisidou et al. (2013); Amin (2016); Yee et al. (2010); Jun & Palacios (2016); Kearney et al. (2013); Evanschitzky et al. (2012); Parasuraman et al. (1988)
	Marketing - Customer Experience & Satisfaction	Customer services, advocacy, experience, satisfaction, behaviour, loyalty, retention and acquisition; value creation; experience relationship and marketing; strategic marketing, leading to financial performance.	Klaus & Maklan (2013); Lemke et al. (2011); Amin (2016); Reichheld (2003); Chang & Lin (2015); Verhoef et al. (2009); Gentile et al. (2007); Keisidou et al. (2013); Garg et al. (2014); Dölarslan (2014); Jang et al. (2013); Garg & Rahman (2010); Liang et al. (2009)
	Organisational Studies and Performance Management	Financial and operational performance; organisational effectiveness; strategic management and marketing; financial and efficiency ratios; market share, revenue, sales and profit growth.	Kaplan & Norton (1992; 1996b); Capon et al. (1990); Venkatraman & Ramanujam (1986); Hult et al. (2008); Keisidou et al. (2013); Dechow (2012); Bates et al. (2003); Smith & Wright (2004); Hoque (2014); Glaveli & Karassavidou (2011)
	Integrated Modelling of DB, Customer Experience, Satisfaction,	Value creation, customer experience and financial performance; through customer loyalty and efficiency.	Kaplan & Norton (1996b); Heskett et al. (2008); Keisidou et al. (2013); Maklan & Klaus (2011); Garg et al. (2014); Klaus & Maklan (2013); Yee et al. (2010); Chang & Tseng

	Loyalty and Financial Performance		(2010); Theoharakis et al. (2009); Smith & Wright (2004)
Auxiliary CFs	Customer Relationship Management (CRM)	Linking Customer loyalty with profit via CLV; retention rate; segmentation; marketing mix.	Schneider et al. (2006); Donkers et al. (2007); Valenzuela et al. (2014); Reichheld et al. (2000); Pitta et al. (2006)
	Intention to use technology	Customer uptake of DB; customer behaviour and intention.	Davis (1989); Lee (2009); Luarn & Lin (2005); Oliveira & Tam (2017); Martins et al. (2014); Deng et al. (2010)
	Business Improvement through Innovation	Technology driven innovation; R&D; delivering value through innovation.	Rogers (2003); Dootson et al. (2016); Hult et al. (2004); Baba (2012); Zott et al. (2011); Teece (2010); Aspara et al. (2010); Patsiotis et al. (2012)

Table 3.5: The Hierarchy of Conceptual Frameworks of the Research (Source: Author)

The reason for this choice is that digital banking is one focus of the research, therefore it uses e-commerce marketing related theories. Improving digital banking services, customer experience, customer satisfaction and loyalty is part of improving service quality and marketing strategy, which uses a similar framework to SPC, NPS and SERVQUAL, and is a primary research aim. Strategic organisational and performance management studies like BSC touch all the research areas: financial performance, customer satisfaction, employee attributes, and innovation. This makes such theories major research components. NPS and CLV are tools for measuring two components of BSC such as financial performance and customer experience and satisfaction, which are important. The BSC plays a supporting role to SPC, considering the research themes investigated. The main research aim is to produce an integrated framework using CFs' inputs, making modelling a primary component.

CRM theories (e.g. CLV) are supporting other financial performance measures. To measure these, banks need customer spending and loyalty information. The human behaviour and technology theory TAM, is a lens to investigate digital banking uptake, supporting the understanding of customer behaviour. The innovation theory is used to understand digital banking's innovation effect. The research classifies some frameworks as auxiliary, meaning that although it is interested in the contribution they bring, they

are not the primary aim. Based on this information, the research investigates if further contributions can be made to these theoretical frameworks, by extending knowledge in them to comply with digital banking challenges. The nature of the research, knowledge and audience likely to benefit from the study have made it cover a range of frameworks.

3.4 Linking Conceptual Frameworks to Research Questions

This section links the research questions and their Contributions to Knowledge (CsTK) in various theoretical frameworks. It also shows the relationship between the primary and auxiliary CFs with the research questions. The research is expected to make CsTK by considering how the findings and results close out any gaps identified in the literature review in Chapter Two and this chapter, for the particular sets of CFs associated with the research questions. Table 3.6 helps clarify the range of conceptual and theoretical maps associated with the research questions and where contributions are likely to surface. This conceptual map will inform the anticipated discussion on the research findings in light of the critical literature review to identify the CsTK.

RQ	Key Concepts involved	Nature of CFs involved
RQ1	Bank Executives Perceptions	Service quality, organisational and strategic management, marketing studies and e-banking models (Primary). Financial Report to get an understanding of how UK banks are using DB innovation and its impact on customer experience and financial performance. Digital innovation (Auxiliary). CRM using DB for marketing strategy (e.g. CLV) (Auxiliary).
RQ2	Customer Perceptions	Service quality, organisational and strategic management, marketing studies and e-banking models (Primary). Questionnaire method to ask customers about their experience, satisfaction, loyalty about DB and how they impact on financial performance. This validates and tests financial report information, NPS and literature. Intention to use technology – customer behaviour about DB (Auxiliary). CRM using DB for marketing strategy (Auxiliary).
RQ3	Employee Perceptions	Service quality, organisational and strategic management, marketing and e-banking models (Primary). Interview method to get an in-depth understanding of bank employee perceptions and how their actions on DB innovation contribute to customer experience and financial performance. This corroborates and tests financial report information and

		customer questionnaires. Digital Innovation (Auxiliary). Intention to use technology – Behavioural attributes of employees (Auxiliary). CRM using DB for marketing strategy (Auxiliary).
PRQ	Integrated Framework	Service quality, organisational and strategic management, marketing studies and e-banking modelling (Primary). Triangulation of all methods – creating a matrix that encompasses the three research results. Linking employee, customer and banks’ perspectives to create an integrated framework for enhancing customer experience and financial performance. Modelling service quality, value creation, marketing strategy, customer experience and financial performance (Primary). CRM using DB for marketing strategy (Auxiliary). Intention to use technology – User behaviour about DB (Auxiliary). Digital Innovation (Auxiliary).
Research Methodology / Epistemology Strategy		
The research explores different methodological and philosophical approaches to make CsTK. A mixed research methodology and philosophy for understanding the research concepts. Philosophy includes using any of the positivist, constructivist, post-positivist, critical realist and other mixed methodological (e.g. pragmatic) approaches to successfully conduct the study, examined in the next chapter.		

Table 3.6: Linking the CFs to the Research Questions (Source: Author)

3.5 Components of Conceptual Frameworks Related to the Research Model

From the CFs’ point of view, service quality models of e-commerce marketing focussing on digital banking, customer experience and satisfaction, strategy marketing, organisational performance and management theoretical models are retained in the research. Limited studies in the research topic make it difficult to adopt an integrated CF which gives an overall picture of DiBCEFPEF. One commonality between customers and banks is the desire to achieve value from digital banking. Much e-commerce marketing has emphasised creating customer value to improve profit (Zott et al., 2011; Aspara et al., 2010), reflecting arguments in management and organisational performance studies (Kaplan & Norton, 1996b). Mutual value creation is one key point existing models have not fully clarified in digital banking. For instance, Klaus and Maklan (2013) and Garg et al. (2014) analyse customer experience and loyalty without linking it to financial performance, while Keisidou et al. (2013) analyse only customer satisfaction and loyalty with a link to financial performance, which are limitations.

In modern banking realities, perceived value in service is linking banks and customers. Therefore, any building block for DiBCEFPEF must consider this. Keisidou et al. (2013) and Klaus and Maklan (2013) serve as the basic foundation for the integrated research framework. Digital banking service provision is the major concept added to make banks understand what they gain for improving customer experience. This is part of the contribution the research stands to make to existing models. This research attempts to identify those values customers and banks can gain through their service interaction, and surface them to form a scholarly opinion of digital banking. Figure 3.8 summarises the strategic map for developing an integrated framework.

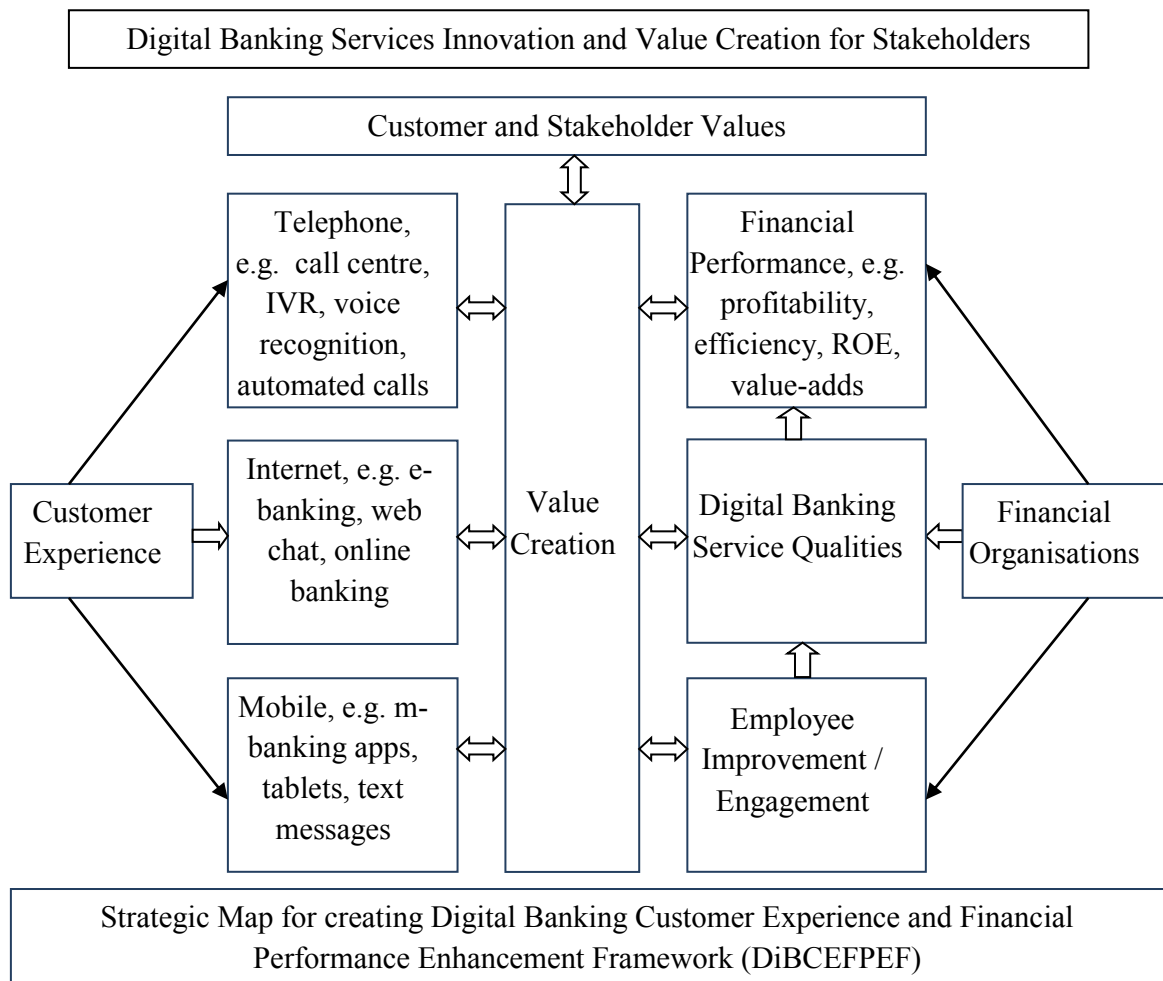


Figure 3.8: Strategic Map for developing DiBCEFPEF (Source: Author)

Figure 3.8 shows the research conceptualisation from the author's view point, it is one of the CFs related to the DiBCEFPEF. The figure will be deconstructed further in the research and complemented with other customer experience and satisfaction models once the field work and testing are completed. The components are as follows:

Customer Experience – focusses on the interaction between customers and banks, and how it impacts on satisfaction, loyalty and financial performance (Klaus & Maklan, 2013; Garg et al., 2014; Keisidou et al., 2013).

Digital Banking Service Qualities – focusses on the attributes of the interaction between customers and banks (e.g. service quality; convenience; interface design and functional quality; trust; brand; digital innovation; perceived usability; value and risks) (Klaus & Maklan, 2013; Keisidou et al., 2013; Verhoef et al., 2009; Knutson et al., 2007; Hult et al., 2004; Jun & Palacios, 2016; Alalwan et al., 2016). Customer and employee behaviours are gauged to see how they perceive technology uptake (Davis, 1989; Chang & Lin, 2015).

Financial Organisations – banks offering services via digital banking and branches, regulated by the FCA and PRA (FCA, 2013b).

Digital Banking Channels – focusses on banking services via the telephone, internet and mobile channels (Deng et al., 2010; Lee, 2009).

Employee and Customer Engagement – focusses on the internal competencies of employees (e.g. knowledge, feedback, training and innovation) and their ability to improve customer experience (Heskett et al., 2008; Karatepe & Aga, 2016; Yee et al., 2010; Glaveli & Karassavidou, 2011). This also comprises factors like capturing value from technology innovation (Teece, 2010).

Value Creation – focusses on what banks and customers gain through mutual interaction. In this case, customers expect improved service quality, customer experience and satisfaction, while banks expect improved loyalty and financial performance. In strategic marketing, these values are tested using service quality and how satisfied and loyal customers are (Klaus & Maklan, 2013; Keisidou et al., 2013; Reichheld, 2003; Chang & Tseng, 2010). Some researchers regard perceived value as the ultimate goal of e-commerce (Piyathananan et al., 2015; Zott et al., 2011), which can be created via innovation (Aspara et al., 2010). These values will be tested.

Financial Performance – includes financial (Keisidou et al., 2013; Chi & Gursoy, 2009; Hult et al., 2008) and non-financial measures' (Valenzuela et al., 2014; Liang et

al. 2009; Reichheld, 2003) impact on financial performance. These measures include profitability, ROI, ROE, ROA, Net Interest Margin (NIM), Cost-to-Income ratios, CLV, sales and revenue growth and efficiency ratios. Banks' financial performance is ascertained using financial reports and customer data as well as assessed using employee interviews. Figure 3.9 shows an early Conceptual Framework for DiBCEFPEF, hypothesised after the literature review, which will be tested.

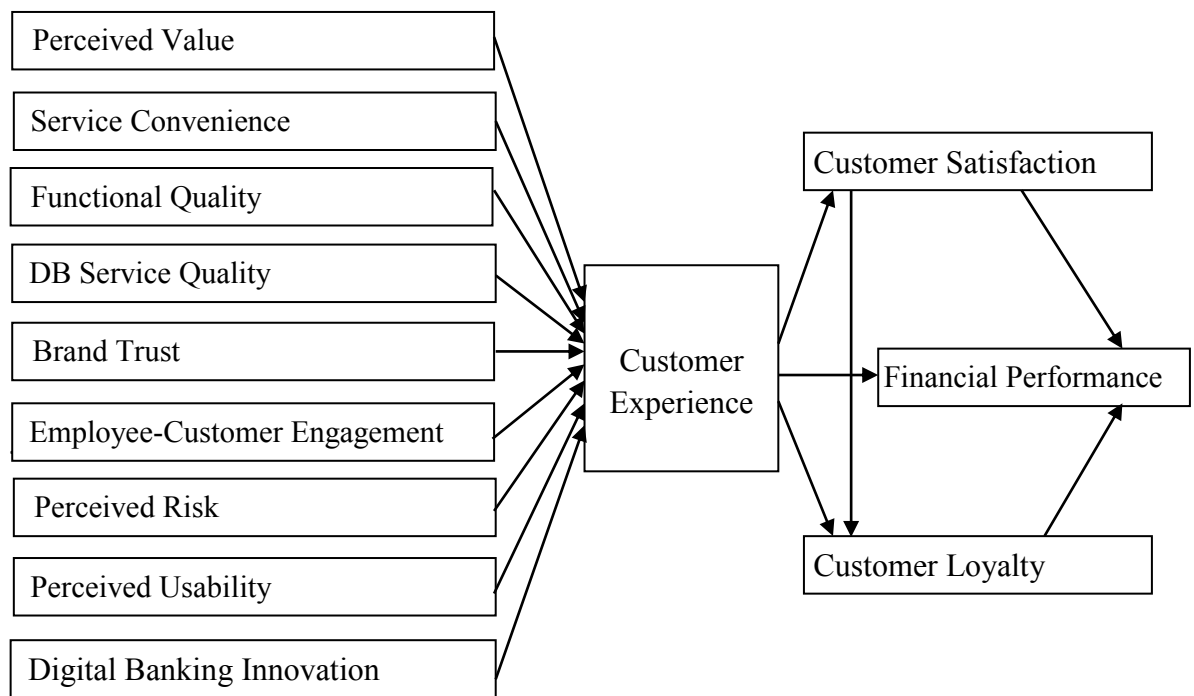


Figure 3.9: Conceptual Framework for DiBCEFPEF (Source: Author)

The research hypotheses development, showing how these factors surfaced from critical literature review is included in Appendix A, while the related literature evidence, factor definitions and attributes are summarised in Appendix B. The research will critique similar models for further gaps in knowledge and additional CsTK. Table 3.7 shows elements of this research model design.

Research Model Design Elements	Chapter
Case analysis <ul style="list-style-type: none"> • In-depth analysis to cover all the important themes captured in bank financial reports and literature review chapters 2 and 3. • Content analysis of the financial reports using a research method (Hsieh & Shannon, 2005; Krippendorff, 2004). • Report findings. • Develop first model. 	Five
Quantitative analysis <ul style="list-style-type: none"> • Coding and analysis of questionnaire from customers using literature information from chapters 2 and 3. • Report findings. • Develop second model using methods (Keisidou et al., 2013; Klaus & Maklan, 2013). 	Six
Case analysis <ul style="list-style-type: none"> • In-depth analysis of crucial themes captured in the interviews and literature review chapters 2 and 3. • Content analysis of interviews from Bank employees. • Report findings. • Develop third model. 	Seven
Developing DiBCEFPEF by triangulating financial report, customer questionnaire and employee interview results. <ul style="list-style-type: none"> • Triangulation matrix from the three research viewpoints. • Structuring the components of the DiBCEFPEF and related studies, based on the CFs (Keisidou et al., 2013; Klaus & Maklan, 2013; Garg et al., 2014). • Adapting the Model to the banking sector and value creation. • Recommendations on how the models could be adapted. 	Eight
First Phase: Findings and discussion <ul style="list-style-type: none"> • Relating the findings to the CFs and explaining how they answer specific research questions, by closing related gaps in knowledge, thereby making meaningful CsTK. Second Phase: Conclusions and Recommendations <ul style="list-style-type: none"> • Main results of the research by research questions. • Practical and theoretical contributions of the research to knowledge. • Implications for banks, academics, policies and practice. • Suggestions for further work. 	Nine

Table 3.7: Research Model Design Elements

3.6 Choice of Conceptual Frameworks

The section presents arguments for the choice of preferred CFs, other competing ones (Van De Ven, 2007), and why they were not primarily considered, in helping to explore the research questions. Their theoretical underpinnings and components investigated were taken into consideration in choosing primary CFs, and Klaus and Maklan, (2013), Keisidou et al. (2013) and Garg et al.'s (2014) models were used as the basis for the research CFs as well as the modifications made to them. However, where auxiliary CFs bring specific additional insight, it will be clarified. In this way, they serve as auxiliary lenses through which a more robust understanding of the research questions is achieved to produce better research findings.

The SERVQUAL framework employs gap analysis between customer service expectation and the actual service received to evaluate service quality (Parasuraman et al., 1988). This framework and other similar models discussed in the literature critique use service theories, which are useful in the research, however some of the components are better suited to contact services. Another framework is the Servicescape (Kearney et al., 2013), that believes service quality is affected by the environment, which would not affect digital banking. Similar components are not used.

In Chapter Two, section 2.4, the model by Lee (2009) linked various factors and attitudes to intention to accept e-banking. Although this type of model, similar to Luarn and Lin (2005) and Martins et al. (2014), which explain only some important information about digital banking uptake was considered, it was not primarily used. This research will show how similar components impact on customer experience and financial performance.

Garg et al. (2014) study customer experience and find convenience to be the most important factor, followed by customer interaction, employees, speed, Servicescape, core service, online functional elements, presence of other customers, value addition, service process and online aesthetics, while the marketing-mix, customisation and online hedonic factors are moderately significant. These findings relate to prior studies (Jain & Bagdare, 2009; Walter, Edvardsson & Ostrom, 2010; Karatepe et al., 2005), and Al-Eisa and Alhemoud (2009) that focussed on measuring customer satisfaction in Kuwait banks. Figure 3.10 shows Garg et al.'s (2014) model of customer experience.

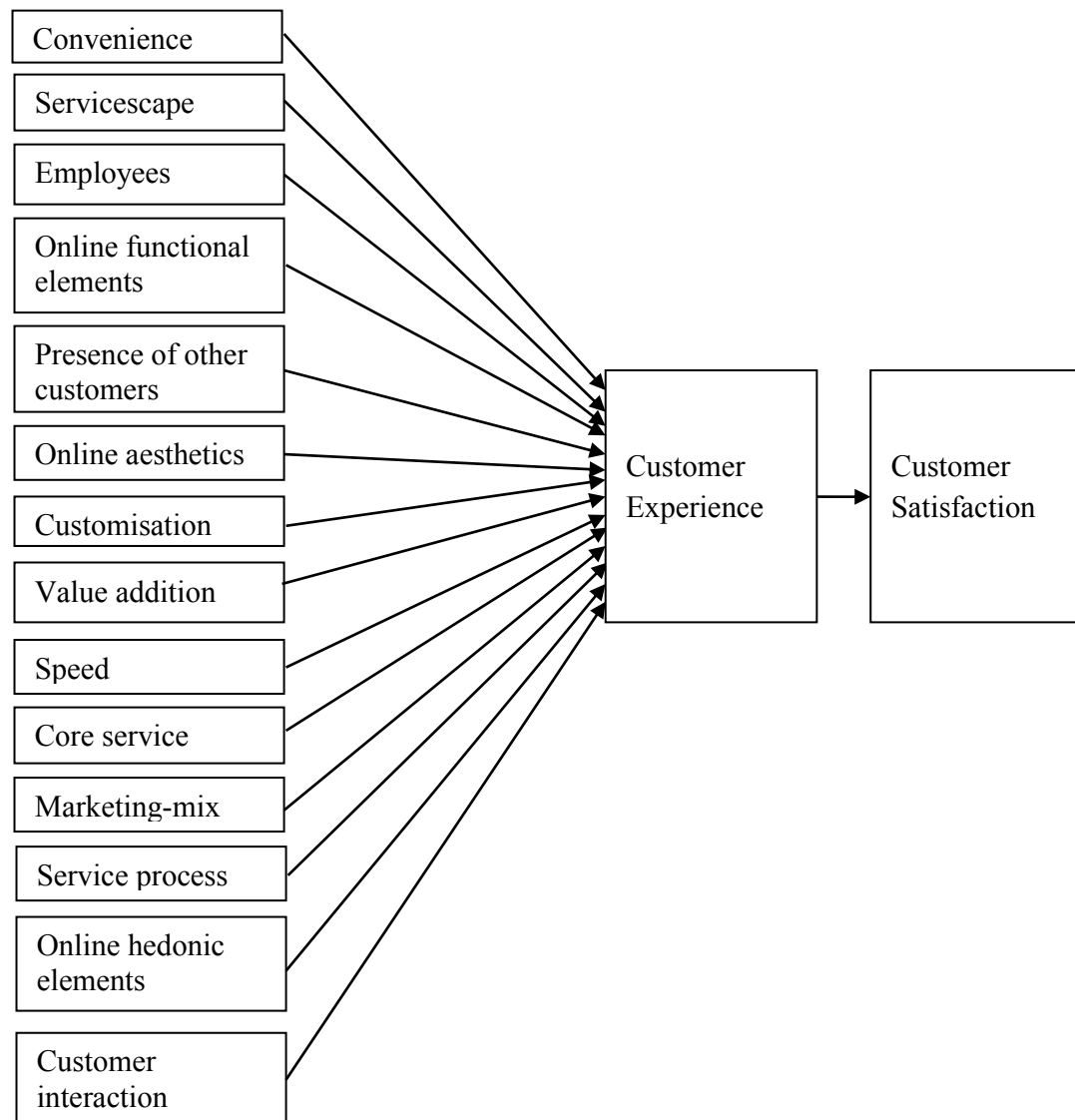


Figure 3.10: Customer Experience Model (Source: Garg et al., 2014)

Garg et al.'s (2014) model shows the link between customer experience and satisfaction in Indian banks, but fails to show financial performance. They consider both online and offline activities (e.g. Servicescape), while digital banking involves direct customer interaction through the online interface, making the model incomplete. This research will extend their model and other models critically reviewed in this chapter to show customer experience relationship with financial performance.

3.7 Summary of Gaps in Knowledge from Literature Review and Conceptual Frameworks

As shown in Chapter Two and this chapter, many studies have been conducted on different aspects of digital banking, service quality, marketing and strategic management studies. However, there has been limited integrative research which underpins the development of DiBCEFPEF CFs. The lack of research in this area is apparent. UK banks are adopting digital banking, and yet there is limited published empirical research on its experience, effectiveness and efficiency strategies. There is no integrated study, involving bank reports, and employee and customer perceptions. In spite of new emerging literature, there have not been enough studies focussing on how customers and employees are reacting to the impact of digital banking. Most studies have paid attention to digital banking adoption, with little attention to customer experience, helping banks to re-strategise, innovate and market their products better and meet customers' needs. This research will provide a transferable guide and new insight on how the envisaged DiBCEFPEF could be adapted in banks to achieve better customer experience and financial performance.

In Chapter Two, potential gaps in knowledge and related CsTK were identified, which this research will close. This chapter summarises the key gaps in knowledge and how they relate to subsequent chapters. Those key points mentioned will be critically analysed and used to develop a more robust DiBCEFPEF. Chapter Two also shows the summaries on how the gaps in knowledge directly inform the research questions. In this chapter, the research shows how the research questions relate to the selected hierarchy of primary and auxiliary CFs. The mapping prepares the ground for using the research findings later to make the expected CsTK.

In Chapters Two and Three, it is also shown that different gaps in knowledge of integrated modelling for DiBCEFPEF require a combination of perspectives: organisational performance and management, research modelling, e-commerce, service quality and marketing strategy, value creation, innovation, financial and non-financial indicators of business performance. One important gap in knowledge is the need for the DiBCEFPEF to consider the bank, employee and customer factors in digital banking experience and financial performance strategy. This will make the findings a more versatile integrated model than the existing ones. The research focusses on UK banks to close the identified gap in knowledge. The study will produce a robust and critically

informed model that is cognisant of deeper contextual issues facing the successful development of better digital banking experience.

Practically, the gap in knowledge is the absence of digital banking studies that considers these different stakeholders and perspectives, which this research remedies. The DiBCEFPEF will directly serve the interests of academics, stakeholders, researchers, management and policy makers in banks.

Methodologically, this research will provide a model of engaged scholarship (Van De Ven, 2007), that elicits responses from different stakeholders. The research gathers evidence from different sources, helping in problem formulation, theory building, research design, and problem solving, that underpin research model development. The research adopts a pragmatic approach to data collection and analysis which will effectively explore each set of research questions and objectives, and triangulate the findings across information sources and methods used. The data involves financial reports, interviews and questionnaires, which will require both quantitative and qualitative analyses, using related software. These are the steps for implementing a pragmatic post-positivist research philosophy. The research will disseminate the new knowledge through methods that will develop a better capacity of banks and other stakeholders, to achieve the research objectives, improve banks economically, and bring innovation and new thinking to banks. This methodology can be adapted by future researchers working on similar topics or scholars in other key economic sectors.

Theoretically, there is a need to produce an updated model that combines theories and perspectives of digital banking (Hoehle et al., 2012; Yousafzai, 2012). This research fills that requirement. It uses a deeper set of data triangulation approaches – an improvement to the approach used in Klaus and Maklan (2013). The interviews, questionnaires and financial reports are used within defined theoretical paradigms guided by key references in research method. This provides an overall philosophical underpinning of the methodology, which justifies the key choices involved, namely mixed methods, post-positivist and pragmatic critical realism. It is envisaged that the use of visual thinking as discussed in Meier (2000) will be among the useful contributions from the research.

Finally, in other emerging countries in Africa like Nigeria, digital banking is still struggling to take off due to digital infrastructure issues. This is considered as part of the future work recommendations and CsTK. New knowledge from the research will help to persuade emerging economies to improve their digital technology infrastructure, as was done in countries like the UK and USA. The research will recommend that the expected new knowledge and model developed be tested in other sectors.

3.8 Summary of Conceptual Frameworks and link to Research Questions

The CFs for the research topic have been developed based on preferred frameworks with similar theoretical underpinnings, covering three main areas:

- digital banking services (focussing on the attributes that affect customer experience and financial performance, and the impact of digital innovation from employees).
- customer experience (focussing on how digital banking attributes can improve customer experience, satisfaction, loyalty and financial performance).
- financial performance (focussing on performance indicators that respond to improvement in customer experience, satisfaction and loyalty).

The CFs provide insight into banks' opinions of digital banking innovation through their financial reports and how they are impacting on customer experience and financial performance (RQ1). The information from customers will give insight into the customer experience, satisfaction, loyalty and financial performance via NPS, CLV and financial ratios (RQ2). The CFs also provide insight into employee perceptions of digital banking and how they are impacting on customer experience and financial performance (RQ3). The CFs holistically give insight into the DiBCEFPEF (PRQ).

3.9 Limitation of Conceptual Frameworks

The CFs define the starting point to understanding the scope of the research using extant literature. They attempt to conceptualise the study from the researchers understanding. The CFs have mapped out the areas in which the research aims to make contributions theoretically, and are by no means complete at this stage without the empirical field work. Currently, it is impossible to determine all relationships that are likely to surface in the research framework. However, after the analysis and empirical investigation, these CFs will be modified to reflect those new insights to make full CsTK.

3.10 Conclusion

This chapter examines the core research theoretical frameworks. It reiterates the detailed literature review presented in Chapter Two, which justifies the need for integrated modelling for digital banking services, customer experience and financial performance. Table 3.6 presents the hierarchy of CFs which underpins the research. The primary CFs of the integrated modelling for DiBCEFPEF include marketing, organisational and performance management, service quality, and e-commerce marketing. The auxiliary ones include intention to use technology (human behaviour), innovation theory and CRM. The emphasis is on the primary CFs, with the auxiliary ones serving as a wider set of tools in developing the research model. The research uses Keisidou et al. (2013) and Klaus and Maklan's (2013) contemporary models, that capture most of the CFs requirements, with room to extend them to include digital banking, customer experience and financial performance. It will also extend some of the components of Garg et al.'s (2014) model for evidence in the UK. The above models were developed with a strong critical literature review, making them robust.

The research uses key literature references in various areas to develop the CFs, which are expected to create value in the study. This provides additional theoretical and methodological insights, some of which are summarised in Section 3.8 on gaps in knowledge and related research CsTK. This chapter, when combined with the critical literature review in Chapter Two, will effectively ground the research within the theories embodied in the CFs and develop the mixed methodology that is reflected in Chapter Four. The following methodology chapter shows how the CFs serve as links from the research questions, underpinning data sources, which make up the research empirical data collection.

CHAPTER FOUR – RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter presents the design and research method, which investigates the effects of digital banking services on customer experience and bank financial performance. The research philosophy, epistemology and methods, including procedures for data collection using bank financial reports, customer questionnaires and employee interviews are discussed. There is a discussion of sample selection, data collection, how the research is conducted, analysis strategy and methods to support the objectives, followed by a conclusion.

4.2 Research Methodology

Research methodology is the study of research methods. It relates to certain practices which researchers should respect when using particular methods of enquiry, as predicted by ontological and epistemological concerns (Guba, 1990). Methodology refers to the research process, which spans from theoretical background to data collection and analysis (Robson, 2002; Hussey & Hussey, 1997). Quantitative methods derive from natural sciences focussing on the knowledge of our social world, while qualitative methods are the study of social reality (Bryman, 1988). The two paradigms rest on different philosophical thinking and ontological beliefs, which can be described as traditional positivist, constructivist, post-positivist and realist (Guba & Lincoln, 1982; Smith, 1983; Robson, 2002, p.27). Researchers adopt one or both of the methods based on their ontological and epistemological approaches. In epistemology, the quantitative approach holds that the researcher remains independent of elements being researched. In qualitative research, reality tends to be constructed by the individuals involved.

The qualitative research method helps understand how and why people feel as they do, while quantitative research measures how many people think in a particular way (Creswell, 2003; Saunders, Lewis & Thornhill, 2003). Qualitative research can be a procedure for developing intuitive feelings and hypotheses, which can be corroborated with surveys. It provides detailed analysis of social environments, and uses contextualism in the understanding of events. The quantitative method tends to have a

prior set of concerns, from hypothetical issues or literature in a particular discipline, while qualitative researchers believe that the investigator elicits theoretical issues on the studied events (Bryman, 1989). In management studies, quantitative research follows a systematic approach to investigation (e.g. problem statement, hypothesis, data collection, analysis and findings, including formulating theories).

Sometimes researchers use experimentation, to evaluate whether a hypothesis is true or false, as part of the quantitative research method process. Keisidou et al. (2013) use quantitative research in the study of Greek banks. Padsakoff and Dalton (1987) claim that the quantitative method has dominated organisational studies, while Pettigrew (1987) argues that the qualitative method is the best way to study organisations. Qualitative research is associated with observation and unstructured, in-depth interviewing and focus group discussions, while quantitative research is structured and associated with surveys, questionnaires and experimental investigations.

4.2.1 Mixed Methods

While the view of mutual exclusivity is between qualitative and quantitative methods, Cronholm and Hjalmarsson (2011) argue that they can be integrated. This is supported by other research methodologists (Teddlie & Tashakkori, 2009; Creswell, 2003; Johnson & Onwuegbuzie, 2004). They argue that mixed methods are an alternative to qualitative and quantitative approaches. Mixed methods research is described: *“as the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration”* (Johnson, Onwuegbuzie & Turner, 2007, p.123).

Mixed methods have been associated with pragmatism as a form of philosophy, which involves the use of induction (discovery of patterns), deduction (testing of hypotheses), and abduction (relying on the best explanations for understanding results) (Johnson & Onwuegbuzie, 2004; Harrison, 2013). The basic pragmatic paradigm is to choose the mixture of methods and procedures that work best for answering research questions (Johnson & Onwuegbuzie, 2004). This view is supported by post-positivist philosophers, who suggest that methods can change depending on the research problem (Kuhn, 1970). The post-positivist holds the key to bridging the gap between the

positivist and constructivist perspectives (Lincoln & Guba, 2000; DeLuca, Gallivan & Kock, 2008). They argue that rigour can be achieved by analysing data from different sources, using multiple methods and measurements, and that the researcher should have freedom to choose the best research methods (Robson, 2002). By combining elements of each epistemological perspective, research can capture strengths of both views (positivist and constructivist) while reducing their limitations (DeLuca et al., 2008).

There has been a push towards the understanding of mixed methods research, and in the popularity of the domains (Creswell, 2003). Tashakkori and Teddlie (2010) argue that mixed methods research is a growing area of methodological choice for many researchers across disciplines. The research adopts a mixture of qualitative and quantitative methods, consistent with the post-positivist paradigm, on the basis that it reflects common understandings regarding both the nature of reality and the conduct of social and behavioural research in the second half of the twentieth century (Tashakkori & Teddlie, 1998, p.8). Harrison (2013) argues that for decades, scholars in the social sciences have used mixed methods. This has become the most popular term for combining qualitative and quantitative data into a single study (Johnson et al., 2007; Johnson & Onwuegbuzie, 2004).

A key design component in mixed methods research is whether the methods are implemented in a parallel or sequential manner (Teddlie & Tashakkori, 2009). The research adopts a sequential mixed methods approach. Due to the research objectives, which will also investigate employee perceptions, the quantitative research is supplemented with a qualitative element, to provide additional insights into the in-depth views of banks. Harrison (2013) and Tashakkori and Teddlie (1998, p.47) argue that qualitative and quantitative sequencing is popular among researchers, and quantitative closed-ended instruments are developed after exploratory qualitative investigations. Mixed methods can add insight and understanding that might be missed when only a single method is used (Johnson & Onwuegbuzie, 2004), and could also increase the ability to generalise the results further. It produces more complete knowledge to inform theory and practice, and can manage a broad range of research questions because the researcher is not confined to a single approach (Johnson & Onwuegbuzie, 2004).

According to Creswell (2003), the mixed methods approach provides a specific perspective of the world, which incorporates a combined qualitative and quantitative

understanding, and is more beneficial than using them individually. Mixed methods increase the possibility of achieving findings that are more trustworthy and relevant than using the approaches separately (Teddlie & Tashakkori, 2009). The choice of research method is summed up by DeLuca et al. (2008, p.53) as: “*when designing a study, consider relevance to the practitioners in their natural environment and relevance to the researchers with the advancement of knowledge and theory*”. This research uses mixed methods design to corroborate results, increase validity and reliability.

The initial exploratory qualitative research (financial reports) will help to inform and develop constructs in the questionnaire, however the results from the qualitative data (financial reports, interviews) and quantitative survey are jointly used to offer a more in-depth understanding of the research phenomena. It adopts the methods to explore and test the research questions, and both methodological practices can be observed. It would have been difficult to investigate the research questions elucidated using other methods. These data collection methods will enable the research to solve problems posed and understand digital banking.

The research follows a mixed methods approach which uses qualitative and quantitative research, utilising financial reports, questionnaire data and interviews to complement each other, helping maintain rigour and capture strengths of both perspectives. Using data from various sources, to critically investigate a study, is also good practice in the research paradigm.

4.3 Research Philosophy

The research philosophy looks at justification and beliefs, and how true knowledge is acquired, which is guided by a paradigm. Paradigms are characterised through ontology (what reality is), epistemology (how we know something) and methodology (how we go about finding out), which form a holistic view of knowledge (Guba, 1990). Paradigms underpin the philosophy of research, such as positivism, post-positivism, critical theorist and constructivist, and drive a disciplined research approach (Guba, 1990). Lacey (1996) describes epistemology theory as the nature, derivation, scope and reliability of true knowledge. Meanwhile, a research philosophy is what members of a research community share (Kuhn, 1977). Kuhn suggests that the research philosophy aims to find models that account for observations within a coherent framework.

4.3.1 Philosophy, Ontology and Epistemology

Researchers who use quantitative and qualitative methods display certain epistemological and ontological views about social reality and how it should be studied (Saunders et al., 2003). Ontology is the study of the relationship between the researcher and the element being studied (Lacey, 1996), which also reflects their philosophical position. Some researchers take a subjective view of our social world, believing reality can be interpreted, and that it is not independent of the objects being observed, regarded as the constructivist epistemology (Smith, 1983; Guba & Lincoln, 1994). According to Guba and Lincoln (1994) a constructivist's ontology is based on relativism and the belief that realities are apprehendable in the form of multiple, intangible mental constructions, socially and experientially based, specific in nature and dependent on the individual person holding the constructions. Constructions are not perfectly true, in any absolute sense, but simply to a certain extent informed. The constructivist believes knowledge is formed through accumulated experience of the objects being studied, which are socially constructed (Guba & Lincoln, 1994).

Other researchers believe in an objective view of our social world, claiming that reality exists independently and externally to the objects being observed. This is called the positivist philosophy. Some researchers adopt a realist view by mixing both a positivist and constructivist epistemological position and believe that the world exists independently of one's perception of it (Saunders et al., 2003; Smith, 1983). According to Guba and Lincoln (1994) a post-positivist's ontology is based on critical realism and the belief that reality is assumed to exist but only imperfectly apprehendable because of flawed human intellectual mechanisms and the fundamentally intractable nature of phenomena. They claim that reality must be subjected to the widest possible critical examination to facilitate apprehending it as closely as possible.

Guba and Lincoln (1982) argue that quantitative and qualitative research approaches rest in different paradigms in the study of the social world and have different epistemological views about knowledge formation. The positivist adopts the quantitative research approach and experiments, while the constructivist adopts qualitative research approaches. For positivists, replicated findings are considered as true reality (Guba & Lincoln, 1994). However, Saunders et al. (2003) and Smith (1983) argue that one or both of the ontological views can be adopted to suit the research needs and neither of the philosophical positions is superior to the other. The choice should

depend on the research and the problem statement, which is the position of post-positivist philosophers. They assume that reality exists, however can never be fully understood, it can only be approximated (Guba & Lincoln, 1994). Post-positivism has an expanded acceptance of falsifiable, common-sense hypothesis, and uses qualitative methods to support research (DeLuca et al., 2008).

Post-positivists believe that theories, knowledge and experience of the researcher is important in an observation (Popper, 1963). They posit that our understanding of reality is constructed by the investigators (Tashakkori & Teddlie, 1998). In this regard, replicated findings are probably true (Guba & Lincoln, 1994). The post-positivist paradigm adopts quantitative research and other epistemological views to tackle complex issues (Kuhn, 1970; Tashakkori & Teddlie, 1998). They maintain a reality exists which must be freely established by the researcher (Robson, 2002, p.27).

Kuhn (1970) argues that some researchers can take alternative routes to solve a complex task. This pragmatic approach has been coined as a 'paradigm shift', suggesting that science may not progress in a linear fashion, and therefore other paradigms should be embraced. Similarly, Kant (1997) takes a middle view of epistemological reasoning issues between the positivist and constructivist, and therefore stresses that both experience and reason can generate knowledge, and one should be free to think autonomously and not be dictated to by external influences. Kant's (1997) philosophy of reasoning has helped to dispel confusion between views of these two epistemologies.

Bryman (1989) describes what is structured and quantifiable as positivist epistemology, while the opposite is constructivist epistemology. In quantitative research, the technique is structured, social reality is static and external to actors and the researcher is distant from the interviewee, while qualitative research is unstructured, deals with social reality constructed by actors, gathers in-depth data, and the researcher is close to the interviewee. The quantitative method tests hypotheses and theories, while data can be interpreted in the qualitative method, which follows a constructivist paradigm.

The positivist's ontology is based on realism, which assumes an objective external reality upon which inquiries can converge (Guba & Lincoln, 1994), and they believe in empirical generalisation (Maxwell & Delaney, 2004, p.10). They see hypotheses as the bedrock of empirical research in the sense that theories are derived from them, meaning

that science is 'deductive'. Positivist philosophers believe in methodological naturalism, and all causes are empirical, as long as they can be measured, quantified and studied using scientific methods (Giedymin, 1975). They use a quantitative research method to investigate variables, controls, measures, hypotheses and experiments, underpinned by a scientific model. This epistemology has been criticised for being just the presence of measurement and number.

In contrast, the constructivist philosophy uses a qualitative research method in investigations (Guba & Lincoln, 1994; Tashakkori & Teddlie, 2010). The qualitative research epistemology is based on phenomenology, which views behaviour as a product of people's interpretation of their world and interactionism, which is 'how' people react towards things depending on their meaning to them. It attempts to interpret social phenomena from the view of the people being investigated; it deploys natural data (texts) and generates hypotheses rather than testing them, hence called an 'inductive' research approach (Silverman, 2005). There is also an 'abductive' approach, supported by post-positivists. Bryman (1988, p.64) states that qualitative method characteristics are based on contextualism, flexibility and limited theories. There can be a generalisation issue, however, qualitative methods can be used for an in-depth view of people and their perception in research.

The quantitative method can be replicable and used to generalise beyond the confines of the research boundary, however, it does not differentiate between people's behaviour and objects of the natural sciences. These differing opinions have questioned the completeness of positivist and constructivist paradigms, leading to qualitative and quantitative research being combined in research (Saunders et al., 2003; Silverman, 2005). They argue that both research methods are capable of being integrated, and an appropriate technique should be used depending on the research.

A constructivist paradigm places more emphasis on in-depth understanding of human behaviour and organisational settings (Pettigrew, 1987), while the positivist paradigm emphasises more on explaining human behaviour. Both are important in supporting the research. Some researchers have different epistemological and philosophical views, while some believe that both methods can be combined to corroborate results and increase validity (Creswell, 2003; Tashakkori & Teddlie, 1998). Trauth and Jessup (2000) note that it is possible to combine positivist and constructivist epistemology

within the same study. DeLuca et al. (2008, p.58-60) state: *“Design studies with rigorous and complementary quantitative and qualitative methodology to mitigate risks to validity. [...] Like ‘yin and yang’, the strengths of the two epistemologies can be harmonising.”*

The research accepts a post-positivist philosophy, which recognises that the external phenomena under study are independent of our social knowledge perceptions. This ontology is based on pragmatic critical realism, which believes that the world exists independently of one’s perceptions. It will help to capture strengths of positivist and constructivist perspectives while minimising their limitations. This enables the researcher to pragmatically use techniques that best illuminate knowledge.

4.4 Research Design

Research design is the planned arrangement for data collection and analysis in a manner that aims to combine relevance to the research purpose with economy of procedure (Selltiz, Wrightsman & Cook, 1981). In the bank context, customer interactions and expectations are crucial in determining their experience. Orlikowski (2000, p.409) argues that organisational action is enacted in context, and research design helps study the development of technology in organisations. Research design serves as a mechanism for understanding technological process, organisation action and its use of technology (Thomke, 1998). The research provides integrated viewpoints for understanding digital banking experience in UK banks.

The research adopts mixed methods enquiries to suit the investigation purpose, using financial report data to conceptualise early issues, while using survey and interview data to test and validate results. Qualitative research (e.g. interview) does not impose theories on interviewees, as this can be a constraint to participants, rather it can be used to formulate theories (Robson, 2002). It is appropriate in studies that involve gauging peoples’ feelings, while quantitative research (e.g. survey) quantifies how many people think in a certain way (Creswell, 2003; Saunders et al., 2003; Yin, 2009). The use of mixed methods enables the research to corroborate results and capture some of the context of digital banking within bank settings. The research design aims to develop and test an integrated framework, through the assessment of banks’, employees’ and customers’ perceptions about digital banking effectiveness in improving customer

experience and financial performance. The research is designed utilising bank reports, customer questionnaires and employee interviews.

4.4.1 Interview Research

The research uses interviews. An interview is a primary source of data in qualitative research, and can provide rich empirical information (Eisenhardt & Graebner, 2007). It is a widely used data collection method in social science research (e.g. opinion polls and market research). Kitzinger (1994) argues that when public opinion is sought where confidentiality and censorship are not the case, then a focus group may be considered, otherwise interviews can be used. In the research, confidentiality is considered, and a situation where employees will be free to express their personal feelings is required.

Interviews combine the advantages of unstructured and structured data gathering, however unstructured interviews without specific questions can be hard to analyse (Dick, 1998). The researcher conducted a semi-structured interview, which uses a loose collection of themes to be covered by respondents (Bryman, 1989). The investigator uses scheduled themes but departs if an interesting theme comes from respondents so their idea of events can be obtained. This method was used so an in-depth view of the bank employees could be ascertained and analysed, helping understand how dynamics of the bank employees' perceptions towards digital banking are constructed.

4.4.2 Questionnaires and Surveys Research

The research also uses questionnaires. Gathering data through questionnaires and surveys is generally associated with quantitative methods (Saunders et al., 2003). In organisational studies, questionnaires tend to be structured: data is standardised, while interviews tend to be loosely structured around issues of concern. A combined use of questionnaires and interviews can enhance the scope of research (e.g. in-depth understanding and corroboration) (Johnson et al., 2007). Questionnaires are usually uniform and administered to respondents (Keisidou et al., 2013). They can be conducted via email or web-based methods (Ritter & Sue, 2007). An attachment to an e-mail can be fast in gathering data, and cost efficient.

E-mail questionnaires can have a higher response rate than web-based surveys (Kwak & Radler, 2002). A web-based survey costs less, with no printing and postage (Dixon & Turner, 2007). It can be automated and reduce manual data entry as information can be

entered straight to the web server, whilst an e-mail survey can be tracked and a reminder sent (Ritter & Sue, 2007). However, privacy and anonymity can be major issues for web-based questionnaires (Dixon & Turner, 2007), and some respondents can see it as spam, making them reluctant to complete the survey and therefore reduce the response rate (Ritter & Sue, 2007). The research conducted a web-based survey, while taking into consideration the privacy of respondents. The web-based survey was supported by an e-mail reminding respondents about visiting the website to fill in the questionnaire. This helped the research benefit from both methods, while minimising limitations.

4.4.3 Analysing Qualitative Data

The research considered other qualitative data analysis techniques, before settling on the content analysis method as the most appropriate. Content analysis helps capture personal or collective issues, allowing the researcher to draw conclusions and communicate them to the audience. The information from employee interviews and bank reports can be organised into themes and categories, and analysed, hence capturing their views. Content analysis takes into consideration both dominant themes and ones from the literature. It enables qualitative data to be analysed in a flexible way, and to be used to generalise results. The research uses content analysis to analyse qualitative data.

4.4.4 Content Analysis of Bank Financial Report and Interview

The use of content analysis to analyse qualitative data, like interviews, reports and focus groups, has become popular (Ibrahim, Zailani & Tan, 2015; Mahraj, 2012). Data can be analysed qualitatively, quantitatively or both, depending on meaning to be deduced (Hsieh & Shannon, 2005; Vaismoradi et al., 2013; Krippendorff, 2004). In quantitative techniques, textual data is coded into categories and then described using frequencies and making inferences, while qualitative analysis involves the subjective interpretation of textual data through the systematic classification process of coding, synthesising, and identifying themes and patterns.

Content analysis uses ‘category’, which refers to “*groups of words with similar meanings or connotations*” (Weber, 1990, p.37). The coding units within the categories can be: syntactical (words), referential (objects, events, sentences and comments) or propositional (words, conforming to a certain structure) (Buber, Johnannes & Lyn, 2004). Data analysis involves “*working with data, organising it, breaking it into manageable units, synthesising it, searching for patterns, discovering what is important*

and what is to be learned, and deciding what you will tell others” (Bogdan & Biklen, 1982, p.145). Content analysis requires the researcher to be immersed in the data, obtaining the sense of whole, selecting the unit of analysis, deciding on the manifest content or latent analyses (Vaismoradi et al., 2013). However, in qualitative research the researcher must construct a world in which the texts make sense allowing them to answer research questions (Krippendorff, 2004). The author notes that what determines the quality of findings is whether new insights enhance the understanding of particular phenomena or inform practical actions.

Content Analysis is regarded as a bridge between qualitative and quantitative research (Kohlbacher, 2006). Berelson (1952) refers to it as a systematic description of the manifest content of communication and argues that researchers reflected on the quality of texts and thought it was also important to reconstruct them using frequencies. In content analysis, the content units of all the data are categorised according to the definition and themes they express (Weber, 1990). The categories are derived by looking at the content systematically and identifying the various themes expressed by respondents, and the standard categories from the literature. This qualitative analysis method is shared by other researchers (Roberts & Pettigrew, 2007; Creswell, 2003). The researcher can scan the sentence for phrases; each construct forms a basic unit of analysis. Content analysis concentrates on the essential which the researcher wishes to communicate as representative of the respondents as a whole.

Holsti’s (1969) study on content analysis infers that the construct is both the content and the context unit, serving as people’s basic units of description, while Garrison and Anderson (2003) refer to a content unit as a ‘content manifest’, available in a transcript, which can be collected and analysed through automation. Content identification reliability depends on the researcher’s skill and the ability to have this cross-checked. NVivo software has enhanced the content analysis procedure, however good judgement guided by the research objectives is still required.

Content analysis takes conventional, directed and summative approaches (Hsieh & Shannon 2005). The conventional approach is used to describe a phenomenon with very limited or non-existing theory, while a directed approach is used in an incomplete phenomenon which requires further description. The summative approach searches for occurrences of key words, which are quantified and presented using frequencies. The

focus is on discovering underlying meanings of the words or the content (Babbie, 1992), and to understand their frequencies, rank order comparisons and usage, which goes beyond word counts. However, the summative approach is limited by its inattention to the contextual meanings present in the data (Hsieh & Shannon, 2005; Vaismoradi et al., 2013). Other techniques can provide an in-depth and contextual research argument, similar to thematic analysis.

Content and thematic analyses share a common aim of examining narrative materials by breaking the text into small units of content and describing them (Vaismoradi et al., 2013). However, content analysis uses intercoder reliability, which measures the extent of agreement to which more than one coder independently classifies material in the same way (Vaismoradi et al., 2013; Landis & Koch, 1977). This involves checking for robustness of the categories. In content analysis, themes may be found based on the frequency of occurrence, and content units can be coded and counted around different categories. Srnka and Koeszegi's (2007) research coded categories into frequencies, similar to Roberts and Pettigrew's (2007) content analysis of children's food advertisements in Australia's newspapers. Content analysis is popular among researchers in organisational and management studies (Hofmeister-Tóth & Nagy, 2011; Seuring & Gold, 2012; Lee, Hui & Fong, 2003). These researchers have used different techniques to construe data, code and explain them to their audience.

Content analysis involves sourcing qualitative materials, transcription, unitisation, themes and categorisation, and coding of materials (Krippendorff, 2004; Vaismoradi et al., 2013; Mayring, 2000). The steps involved are:

1. State research objectives.
2. Identify the categories – qualitative (interpreted and derived from text) or quantitative (connecting predefined theoretical issues to text) analysis.
3. Establish coding rules and code the content units into categories.
4. Ask a colleague to repeat steps 1 to 3 separately, establish inter-coder reliability.
5. Revise categories and coding if necessary; and final working through the texts.
6. Report content units in each category using frequencies.
7. Interpret results.

One common technique in qualitative research analysis is using quotations to support themes, which brings rigour to the research. The analysis involves: noticing and

collecting relevant concepts and analysing these concepts to find the similarities, differences, patterns and trends. The research uses a directed content analysis approach, supported by a summative approach to add contextual meaning to the study, and allow further concepts to emerge and theories to be extended. It uses directed technique to code, contextualise and bring out rich meanings and patterns from the data, while using summative technique to explore frequencies, ranking, key words and give further insight. The research conducts both content analyses, producing qualitative and quantitative results to complement each other and bring out advantages of both techniques, so it can benefit from in-depth analysis results, and the frequency of occurrence of some key issues. It adopted the above methods to analyse the financial reports and interview transcripts.

4.4.5 Data Gathering Strategy

Before venturing into data gathering, the researcher and supervisor conducted an ‘Ideas Tournament’ to help evaluate and prioritise the best ideas for the research implementation. The ideas tournament took place to look at the items and instruments in the questionnaire and interviews to make sure they were adequate in addressing the research questions. This is critical to successful research data gathering. It is a technique that has been used in the successful supervision of PhD students. The concept of an ideas tournament is to run ideas around the research questions and look at them critically, to ensure reasonable information is being gathered from the employee interview and customer questionnaire. It guarantees research quality, so when data is gathered and analysed, there will be a high level of certainty that information coming out is adequate in handling the research questions.

The ideas tournament consists of normal conversations between participants, and involves bouncing ideas and exploring the research questions together to ensure every aspect and major theme of interest is covered in the data gathering. It is that exchange of views that is captured by the word ‘tournament’. This is usually recorded so that the researcher can transcribe and document it for reference purposes. It can be played back several times for clarification of points. The ideas tournament was digitally recorded and the transcript report, covering key research themes, is included in Appendix C.

4.5 Qualitative Research Design

The research used financial reports and interviews which involved gathering qualitative data. The financial reports investigate opinions of banks, while the interviews gather the opinions of key senior managers of a UK bank on digital banking, customer experience and financial performance. They were done to corroborate results from different sources and answer the research questions. The first step undertaken was to articulate the first version of the interview themes and questions, taking into consideration current issues and theoretical concerns, and literature and research goals. The questions and themes in the interviews were further refined after learning more about the themes from the financial report data, hence creating a second version. The final version used for the interview was constructed after the 'Ideas Tournament' to ensure the right questions, which cover the research context, were asked.

4.5.1 Banks' Financial Report

The banks used in the financial report analysis were selected using a purposive sampling technique, which allows for boundaries to be set in qualitative research (Miles & Huberman, 1994). It is a sampling technique, where the sample units are chosen due to particular features which will enable detailed exploration and understanding of the central themes in the study, and the research to achieve objectives (Ritchie & Lewis, 2003). Six major UK high-street banks were selected, HSBC, RBS, Lloyds, Santander, Barclays and Virgin Money. The financial reports were obtained from the banks' websites, containing digital banking and innovation comments, information on financial status, executive summary and financial measurement indicators. Within the reports, digital banking, customer experience and financial performance information was extracted, which forms the content analysis data. The financial report results address RQ1 and partly address PRQ. The results are presented in Chapter Five.

4.5.1.1 Placing the Six Banks in Context

The UK banking sector is characterised by a few large banks' presence, with a dominant share of the credit and current account markets, and the addition of various small ones. There are over 80 small UK banks with assets ranging from less than £100 million to over £10 billion (Ekpu & Paloni, 2016). The six UK retail banks chosen are: Lloyds, HSBC, RBS, Barclays, Santander and Virgin Money. The four largest banks (Lloyds, HSBC, RBS and Barclays) of these six represented a combined market share of 70 percent for individual current account (ICA), 80 percent for business current account, 80

percent for invoice finance, 65 percent for asset finance and 87 percent for credit cards in 2014 (CMA, 2015). Table 4.1 presents their revenue generation in different sectors in 2011, from British Bankers' Association (BBA).

Account Types	Revenue Generation
Individual Current Account	22%
Business Current Account	8%
Credit cards	26%
Mortgages	24%
Savings	4%
Loans	7%
Insurance	3%

Table 4.1: Revenue Generation of four largest UK Banks (Source: BBA, 2014)

The asset size of five of the banks (Lloyds, HSBC, RBS, Barclays and Santander) used, which are the largest UK retail banks (CMA, 2015), ranges between £500 billion to £2 trillion while Virgin Money is £40 billion. This shows their huge contribution to the UK gross domestic product and the financial market sector. In lending, in 2016, five of these largest banks controlled 70 percent of business, 50 percent of consumer and 75 percent of mortgage market share, with foreign banks controlling less than 15 percent (Ekpu & Paloni, 2016; BOE, 2016), and other banks, including Virgin Money, managing the remaining 10 percent. In ICA, in 2012, Lloyds controlled a 24 percent market share, RBS 17 percent, Barclays 16 percent, HSBC 14 percent, Santander 9 percent and others 6 percent, including Virgin Money (BBA, 2014). The six banks used in the empirical analysis of this research account for more than 80 percent of the ICA and credit card market share. They operate across the UK and provide different retail banking services, which are important to consumers, businesses and the economy.

Cable (2014) argues that five of the banks selected for this research dominate the banking market place, hence challenging the concentration and market share of UK banks, and questioning how they would affect the UK economy during economic crisis. Cable commends the increase in competition to reduce their market share through the challenger banks. These big banks also have subsidiaries, showing their dominance. For instance, NatWest and Ulster banks are part of RBS, Halifax is part of Lloyds while First Direct (digital only bank) is part of HSBC. Santander expanded in the UK, following a takeover of Abbey National, and Alliance and Leicester banks.

About 97 percent of adults in the UK have an ICA, representing more than 68 million active ICAs and generating revenues of approximately £8.7 billion for UK banks in 2014 (CMA, 2015). According to BBA (2014), ICA is a gateway to market other banking products and a significant number of these adults are adopting digital banking (e.g. branch 16%, Internet 43%, Telephone 5% and Mobile 13% users in 2012). Evidently, the six banks selected dominate UK retail and commercial banking markets as regards current accounts, savings, mortgages, loans, insurance and credit cards. They constitute over 80 percent of current accounts, loans and credit cards market share and have significantly large asset sizes, which highlight their representation, customer base and level of digital banking coverage of the UK banking sector.

4.5.2 Case Bank Interview

The researcher conducted semi-structured interviews of ten senior managers (with 2 to 20 years of banking experience) of the case bank. Two key managers were selected using a purposive sampling technique, from five departments: marketing, e-commerce, business processing and strategy, IT and business services. The candidate managers are involved in product and system development, marketing and innovation, relevant in digital banking service implementation. The managers are referred to as ‘Employees’.

This sample selection mechanism ensures that employees involved in digital banking development and strategic decision-making participated. It makes the sample a proper representation of the case bank and the research purpose. The interview discussion topics were organised into themes based on the research objective, following guidelines from Kitzinger (1994) and Dick (1998). The researcher used a collection of themes shown in Table 4.2.

Major Interview Themes (Answers RQ3 and Partially answers PRQ)
<ul style="list-style-type: none"> • Digital banking channels available in the bank • Type of services offered using digital banking • Customer experience and satisfaction at the bank using digital banking • Customer loyalty and banks’ financial performance of digital banking, (e.g. NPS, customer retention and capture, and market share, sales, growth and profitability) • Employee perceptions on digital banking (e.g. quality and uptake) • Trends in digital banking within the bank • Customer experience and operational risks about digital banking • Employee and customer engagement and digital banking experience

Table 4.2: Themes used in Interviews

The researcher conducted the interviews using these initial themes, important research concerns derived from the literature and financial reports. This method allowed the respondents to develop their own constructs on research issues, and suggest other themes as the discussion progressed, without restricting them to the suggested themes. The interviews were done to capture the employees' perceptions on the effects of digital banking on customer experience and financial performance. This addresses RQ3 and partly addresses PRQ. The results are presented in Chapter Seven.

4.5.3 Data Collection for Financial Report

The researcher collected seven years (2008 – 2014) annual financial report data from six major UK banks. The aim is to extract information related to the research topic. The banks used are all publicly quoted companies, which means their annual reports are available via the company register and their website. The researcher searched the reports for information relating to digital banking innovation's effect on customer experience, satisfaction, loyalty, security and financial performance (e.g. efficiency ratio, Cost-to-Income ratio, profitability, ROA, ROE, NIM). The researcher was careful not to include other technology information. Quotes from the banks around these areas were organised into a report according to the bank, and then coded into categories using content analysis based on the literature and arguments that emanated from the reports. The technique used also enabled other themes to emerge.

4.5.4 Data Collection for Interview

The interview data collected from the case bank form part of the information to be analysed. The interview activities aim to investigate the perceptions of the key employees using the themes shown in Table 4.2, to gauge their thinking about digital banking. The interviews will give insight into the employees' opinions towards digital banking innovation, and the likely effects on customer experience and financial performance. Ethical and management committee approval were sought from the case bank and SHU before the interviews. The researcher also signed a confidentiality agreement with the bank. The interviewees were not obliged to answer any question they were not comfortable with and they could back out of the interview any time.

At the beginning of each interview, the researcher introduced himself, highlighted the research aims and objectives, and introduced the themes of discussion. The interviews were conducted in a moderating style and audio recorded to ensure that all information

was captured and accurate. Each interview lasted for about 1 hour. The researcher was the facilitator, asking probing and follow on questions. At the end of each interview the audio recordings were transcribed. The information captured was sent to the managers, enabling them to identify anything that was incorrectly captured. The final records were then summarised and prepared for content analysis. To maintain anonymity the employees from the departments are represented by 'EMP'. The interview questions are shown in Appendix D.

4.5.5 Data Preparation and Financial Report Analysis

The financial report transcript was summarised into 6 different word document reports, according to the banks. This prepared the data from each bank to be analysed. The content units were then classified into different themes depending on the characteristics of the category they met. The report was analysed using content analysis and NVivo software to code the materials into 'Nodes', which are categories of interest from literature, as well as looking for new ones. This exercise continued until the information had been coded against the banks and categories. A similar analysis technique was used in the interview. Different comments about digital banking services, customer experience and financial performance were used to categorise content units as suggested by Krippendorff (2004), Vaismoradi et al. (2013), and Hsieh and Shannon (2005). This also involved performing a reliability test as suggested by Kolbe and Burnett (1991), Neuendorf (2002) and Holsti (1969). The results are shown in Chapter Five.

4.5.6 Data Preparation and Interview Analysis

The first step was to prepare the interview data for content analysis by summarising the transcript into 5 word document reports, according to the interviewees' departments and their response on each of the eight interview themes. The transcript was categorised into themes based on the sets of interviewees the information came from, coded using NVivo software by classifying the materials according to 'Nodes'. The interview comments were used to categorise content units based on the characteristics of the themes, as suggested by the literature in section 4.5.5.

The researcher coded comments and content units in the employees' transcripts by classifying them into different categories, synthesising and counting the content units within each category which represents their perceptions of digital banking innovation, customer experience and financial performance. This involved analysing the customer

experience components and how they relate to satisfaction, loyalty and financial performance. The content analysis' reliability was investigated using the suggestions derived from the literature in section 4.5.5, which suggests that two coders conduct the analysis and an inter-rater test be performed, using Kappa (k) statistic. This new evidence helps validate and correlate the literature, questionnaire and financial reports results. The interview results are shown in Chapter Seven.

4.6 Quantitative Research Design

The research utilises data from questionnaire distributions, methods of data gathering generally linked to quantitative methods (Robson, 2002). In organisational research, questionnaires are uniform and structured around theoretical issues of concern. The questionnaire was designed using web-based software.

4.6.1 Questionnaire Survey and Sampling Design

The banking customer sample participants were systematically selected, suitable in quantitative research (Maxwell & Delaney, 2004). There are different sampling techniques used in research such as random (e.g. simple, systematic, stratified, cluster and multi-stage sampling) and non-random (e.g. convenience, purposive, expert, quota and snowball sampling). The former is acceptable in quantitative research while the latter is used in qualitative research (Gall, Borg & Gall, 2003). In systematic sampling, a target population can be identified based on certain desired criteria that suit the research purpose (e.g. age, gender, location, education or profession), prior to selecting participants. Once the list is framed, every k th ($k=N/n$) person on the list (starting from a fixed point) would be selected. The sample profile for this research consisted of adults over the age of 18, UK residents and major UK retail bank account holders. The research uses systematic sampling within strata of customers: 500 SHU staff and students (aged 18-65), 360 staff from two large companies known to the researchers (with branches in UK) and 500 candidates from the researchers' contacts (professional LinkedIn) (located across the UK), representing a total population of 1360 candidate customers.

Considering $1360/680=2$, every other candidate was selected, ensuring unbiased sample unit selection. The starting point was 1, followed by 3rd, 5th and so on. Therefore, a total of 680 participants comprising half of each strata previously described, were selected. These respondents were most likely to be customers of six major UK banks,

and play a key role in digital banking uptake, making them a good representation to gauge their experience. The questionnaire's URL was sent to the selected participants. A sample e-mail, containing the researcher's name and research aims, preventing respondents from thinking it was a spam and discarding it, is included in Appendix E. The sampling technique helped remove bias, and maintain accuracy and generalise results in the studied population. The questionnaire aimed to investigate the effects of digital banking on customer experience and financial performance from the customers' perspectives. The results are presented in Chapter Six.

4.6.2 Questionnaire Design Method

The first step taken was to articulate the initial version of the questionnaire in Microsoft Word, taking into consideration current issues and theoretical concerns, and literature and research goals. The questionnaire was revised after learning more about the research topic from the financial report information. The research team then conducted an 'Ideas Tournament', before drawing up the final questionnaire. A web-based tool called Bristol Online Survey (BOS, 2015) for academic research was used to design the final questionnaire, before distributing it to respondents.

The questionnaire design targeted questions capable of addressing the research goals, by adopting the Goal Question Metrics (GQM) measurement technique (Basili & Oivo, 1992; Basili & Weiss, 1984). The approach recommends that for an organisation to measure in a purposeful way it must first specify the goals for its projects, trace those goals to the data and items that are intended to define those goals operationally, and finally provide a strategy for interpreting the data with respect to the stated goals.

The GQM is used in quality improvement. The measurement levels are:

- A 'Goal' defines the aims, targets and objectives with respect to the research viewpoints.
- A set of 'Questions' are asked about the goals to characterise the way the measurement of a specific goal is going to be performed based on a viewpoint.
- A set of data 'Metrics' is associated with every question used to analyse and measure the goals to answer it in a quantitative way.

The Goal is defined as the objective (digital banking's effect on customer experience and financial performance). Questions are asked to assess the objects (questionnaire items) and Metrics are used to measure it quantitatively (analysis strategy). In the

research the targets are the influencing factors of customer experience and financial performance from digital banking, and the questionnaire technique is used to identify them.

To obtain reliable measurement, it is desirable to use more than one question to address a goal, and each question is designed to be a direct measure of the goals. In the research, a questionnaire that can capture customers' perceptions was constructed. At least 3 questions were asked to measure each goal (factor): 'Functional Quality', 'Perceived Value', 'Service Convenience', 'DB Innovation', 'Brand Trust', 'Perceived Risk', 'Perceived Usability', 'Service Quality', 'Employee-Customer Engagement', 'Customer Experience', 'Customer Satisfaction', 'Customer Loyalty' and 'Financial Performance'. One question on NPS was asked following Reichheld's (2003) recommendation. One question was asked on 'DB Channels', and one question was asked on the 'Financial Services' offered through digital banking. These are digital banking qualities on which the research will collect and analyse information through the questionnaire. They will be tested to see if they have positive relationships with customer experience, which in turn is positively related to satisfaction, loyalty, and financial performance.

There were other questions about customers' personal details: their age, bank, frequency of digital banking transaction and gender. This information, combined with the 'Ideas Tournament', ensure that each goal, objective and theme in the research questions has been covered. It ensures that when the data is collected and analysed it produces the right results. The questionnaire used a 5-point Likert scale (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree) similarly used by Keisidou et al. (2013) and Garg et al. (2014). The NPS used an 11-point Likert scale. The questionnaire used, which also contains the percentage results, is included in Appendix F.

4.6.2.1 Operationalisation of Constructs

This area illustrates how constructs in section 4.6.2 were operationalised and derived from previous research to study the effect of digital banking on customer experience and financial performance. Operationalisation demonstrates how research variables or constructs are defined, which increases the robustness of study design and enables them to be empirically measured. The research adapted scales of items from other studies and improved them for digital banking to make a contribution, to assist further research. Table 4.3 shows how the constructs were operationalised (presented using Harrison et

al.'s (2014) format) and used to develop the measurement items and conceptualise the research model (DiBCEPEF) in Figure 3.9.

Variables	Operationalisation - influence / outcome	Supporting Literature
Perceived Value	Deriving utilitarian and hedonistic values such as money and time-savings, usefulness, enjoyment, better customer services are seen to improve experience.	Gentile et al. (2007); Keisidou et al. (2013); Liang et al. (2009); Garg et al. (2014); Fathollahzadeh et al. (2011); Chang & Lin (2015); Dootson et al. (2016)
Service Convenience	Convenience, regarding ability to carry out 24/7 services, quicker and more timely in the comfort of our homes is seen to motivate e-banking adoption and improve customer experience.	Garg et al. (2014); Keisidou et al. (2013); Knutson et al. (2007); Karatepe et al. (2005); Klaus & Maklan (2013); Jun & Palacios (2016); Harrison et al. (2014)
Functional Quality	Ability to offer interactive, clear information content and intuitive interface design is seen to make users adopt e-banking and improve their experience.	Keisidou et al. (2013); Garg et al. (2014); Monferrer-Tirado et al. (2016); Lee & Chung (2009); Yoon (2010)
Digital Banking Service Quality	Service quality is seen to improve via offering reliable, available, accessible and excellent services, which meet customer expectations and improve satisfaction and e-banking adoption.	Keisidou et al. (2013); Levy & Hino (2016); Parasuraman et al. (1988); Ladhari et al. (2011); Amin (2016); DeLone & McLean, 2003; Jun & Palacios (2016)
Brand Trust	Many customers will choose and stay loyal to a firm due to trustworthiness associated with brand image, which affects service perceptions.	Keisidou et al. (2013); Liang et al. (2009); Fathollahzadeh et al. (2011); Knutson et al. (2007); Akhter et al. (2011); Levy & Hino (2016)
Employee-Customer Engagement	Employee engagement with customers through feedback is seen to help improve quality services and customer satisfaction and firms' performance.	Karatepe & Aga (2016); Verhoef et al. (2009); Garg et al. (2014); Yee et al. (2010); Karatepe et al. (2005); Chi & Gursoy (2009); Kanyurhi & Akonkwa (2016)
Perceived Risk	Many customers would prefer to use branches to DB due to information risks (e.g. security) which affect their attitudes towards e-banking.	Martins et al. (2014); Akinci et al. (2003); Hanafizadeh et al. (2014); Jun & Palacios (2016); Daniel (1999)
Perceived	Ability to perform services	Alalwan et al. (2016); Gu et al.

Usability	without much mental effort due to ease of use, user-friendliness, flexibility and ease of navigation helps improve user experience and t-banking adoption.	(2009); Klaus (2013); Davis (1989)
Digital Banking Innovation	In marketing, innovation is seen to help create better services, and improve relative advantage, efficiency and customer value.	Hult et al. (2004); Patsiotis et al. (2012); Dootson et al. (2016); Baba (2012); Arts et al. (2011); Rogers (2003); Berry et al. (2010)
Customer Experience	Meeting service expectations (such as above factors), through the interaction between customers and firms can influence a positive customer behaviour which improves overall experience.	Klaus & Maklan (2013); Garg et al. (2014); Verhoef et al. (2009); Liang et al. (2009)
Customer Satisfaction	Meeting customers' overall needs such as service expectation and product purchase experience can effect a positive customer behaviour which satisfies them.	Klaus & Maklan (2013); Fathollahzadeh et al. (2011); Keisidou et al. (2013); Amin (2016); Jun & Palacios (2016)
Customer Loyalty	Meeting customers' overall needs, in terms of service expectations and experience can make them recommend friends and stay loyal.	Keisidou et al. (2013); Liang et al. (2009); Klaus & Maklan (2013); Reichheld (2003); Levy & Hino (2016); Amin (2016)
Financial Performance	Improving customer satisfaction, and loyalty can influence financial performance via financial ratios (e.g. NPM, ROE, ROA / ROI).	Keisidou et al.(2013); Chi & Gursoy (2009); Anderson et al. (1994); Kaplan & Norton (1996b)
Financial Performance	Improving customer satisfaction and loyalty can influence NPS values (Promoter, Passive and Detractor), which affect financial performance via CLV.	Reichheld (2003); Valenzuela et al. (2014); Reichheld et al. (2000); Liang et al. (2009)

Table 4.3: Constructs' Operationalisation and Supporting Literature (Source: Author)

4.6.3 Questionnaire Data Collection Method

There were 60 initial questions in the questionnaire. After the 'Ideas Tournament', the questionnaire was refined to make sure every aspect of customer experience was covered before distribution, and the questions were reduced to 50. There were 2 open-ended questions which required respondents' opinions in their own words, while closed-ended questions required respondents to answer on the 5-point Likert scale.

Prior to sending out the main questionnaire, a Pilot Survey to assess validity and correct errors was conducted. The questionnaire URL link was sent to 10 selected respondents from each of the sample strata to get their feedback and ensure the expected data would answer the research question. Their feedback was used to reshape the questionnaire, remove ambiguity and make sure the questions were understandable. One question was removed following feedback that respondents may not understand it. A similar question was asked elsewhere in the questionnaire, so information was not lost. A total of 49 questions were asked after the Pilot Survey. This finally formed the questionnaire distributed to customers for evaluating their experience in Chapter Six. Table 4.4 shows the themes covered in the questionnaire.

Major Questionnaire Themes (Answers RQ2 and Partially answers PRQ)
<ul style="list-style-type: none"> • Digital banking available in banks • Type of services offered using digital banking • Customer perceptions on digital banking and their uptake • Customer loyalty and financial performance of digital banking (e.g. linking NPS with customer retention, capture, sales, growth and value-adds) • Customer experience and operational risks in digital banking • Customer experience and brand trust • Customer experience and trend in digital banking acceptance within the banks • Employee / customer engagement and digital banking • Personal Profile Data
Open-Ended Questions
<ul style="list-style-type: none"> • Recommendations for improving digital banking customer experience • Summary of customer perceptions about digital banking offerings from banks

Table 4.4: Themes used in Questionnaire

The two open-ended questions gave respondents the opportunity to freely contribute to ways in which their experience can be improved, and on how they generally perceive and enjoy digital banking. This tactic can enable further information to emerge. The research obtained ethical approval, which ensured that issues affecting respondents were considered before circulating the questionnaire. Similar questions asked in the questionnaire were asked in the interview, so that results could be corroborated. The questionnaire aims to identify a model that can help banks understand the effects of digital banking on customer experience and financial performance from the customers' perspectives. It addresses RQ2 and partly addresses PRQ.

4.6.4 Questionnaire Administration and Data Preparation

The URL link to the questionnaire was e-mailed to the 680 selected respondents, followed by two reminders. Of the questionnaires administered, 206 were returned giving a return rate of 30.29%. The survey was open for three months, after which the answers to the questions were extracted and loaded into the Statistical Package for the Social Sciences (SPSS) and Structural Equation Modelling (SEM) tool, AMOS software version 23. The questions were grouped and coded according to different factors identified from the literature review in Chapters Two and Three, to influence digital banking, customer experience and financial performance. The open-ended questions were analysed using the content analysis technique, to authenticate results with closed-ended question responses. Different comments about how the customers think digital banking can be improved, and how they perceive digital banking were categorised and coded into different themes. SPSS and NVivo software were used to analyse the closed and open-ended question data respectively.

4.6.5 Questionnaire Data Analysis Method

A major component of quantitative research is statistical analysis, and hypothesis testing is one of the key elements. The data, comprising items and instruments from the survey were categorised into different factors of interest. The Principal Component Analysis (PCA) was used to reduce the data into manageable factors, to perform a factor analysis. To investigate digital banking factors in the research model to see if they were significant in determining customer uptake and experience, and financial performance, a number of statistical tests were carried out using descriptive statistics, Chi-Square (χ^2), T-Test, Reliability tests, SEM, Correlation Analysis and Regression Analysis. All these are valid statistical tests within the quantitative research method, to evaluate correlation, cause and effect, and relationships between items. They are also governed by certain rules, so their justifications were ascertained.

To investigate the effect of one variable over another, relationship and correlation analyses were performed. Chi-Square tests were performed to see if there are relationships among the factors grouped together from the questionnaire. These are the factors discussed earlier in section 4.6.2. Chi-Square is a test statistic used to investigate whether distributions of categorical variables are dependent on one another. The test statistic is always positive, as opposed to a 2-Tail test (having positive or negative value). Chi-Square test assumptions are: observations should be randomly sampled from

the population; observations should be independent - subjects are counted once; and when the sample size is less than 10, the lowest expected frequency required is five (Coates & Steed, 2003). A T-test is used when a sample is drawn from a normally distributed population.

Correlation tests were performed to see if correlation exists between the identified factors of customer experience, satisfaction and loyalty, and financial performance. Tests for correlation are performed between categorical variables. A Pearson Product-Moment Correlation Coefficient is a parametric statistic, which describes the relationship between two continuous variables and assumes that the sample is normally distributed (Maxwell & Delaney, 2004; Siegel & Castellan, 1988). Correlation Analysis assumptions are: the data must be from a related pair (X and Y); the scores for each variable should be normally distributed; the relationship between the two variables must be linear; and coefficient 'r' must lie between -1 and 1. Some of the analyses and results from these methods have also been used in methodological triangulation. The questionnaire results are shown in Chapter Six.

4.7 Triangulation Method for Integrated Framework

One of the research aims is to investigate whether the results from financial reports, questionnaires and interviews can be assembled into an integrated framework. This framework will show the effects of digital banking on customer experience and financial performance regarding profitability and economic value-adds, and aims to address PRQ. It shows how RQ1, RQ2 and RQ3 have partly contributed to answer PRQ. To address this question, similar models were investigated in Chapters Two and Three, by looking at other conceptual frameworks to see where new knowledge and contribution can be made. Ezepue and Ojo (2012) emphasise a framework that is capable of empowering researchers with the necessary skills to solve concrete and real life problems, to address modern business, research and economic goals.

The research adopted a proper analysis strategy in answering all four research questions, capable of addressing the research objectives, which are the relevant problems, and producing outcomes, which will be a major contribution to knowledge. The research aims to produce three models from different perspectives, therefore key elements of these models will be corroborated to obtain an integrated framework (DiBCEFPEF). This will encompass customers' and banks' joint value framework in digital banking.

The research will attempt to build a triangulation matrix which will incorporate important components analysed in the three investigations showing where there are agreements and differences in views, to validate results and develop the DiBCEFPEF.

4.8 Conclusion

The research design involves data collection from different sources: banks' financial reports, customer questionnaires and employee interviews. It details all data collection methods and postulates how they are analysed and tested. The research design method has highlighted different models depicting digital banking's effect on customer experience and financial performance from different perspectives, which will be assembled into an integrated framework. It will help to address the research questions highlighted in Chapter One. The strategy on how the questions will be analysed, the likely outcome and contribution to knowledge, is included in Chapters One and Three.

The thesis uses quantitative and qualitative research methods to evaluate the research questions. The data collection and analysis methods are also used in the research philosophy. The research utilises mixed methods, using pragmatic critical realist ontology to investigate the research topic. Other researchers that used mixed methods argue that triangulation and corroboration of results from different sources increases validity, predictability and reliability (Creswell, 2003; Johnson & Onwuegbuzie, 2004; Trauth & Jessup, 2000; Tashakkori & Teddlie, 2010). Therefore, it is believed that by adopting a similar method, this research will achieve results capable of transforming banks' business by offering value to them and customers. The next chapter presents the analysis and results of the financial reports.

CHAPTER FIVE – EXPLORING BANKS’ PERCEPTIONS OF DIGITAL BANKING SERVICES INNOVATION EFFECT ON CUSTOMER EXPERIENCE AND FINANCIAL PERFORMANCE

5.1 Introduction

This chapter investigates banks’ perceptions, through their financial reports, of core aspects of customer experience, satisfaction, loyalty and financial performance relating to digital banking innovation. It addresses the research objective and question:

- *What are the banks’ general perceptions of digital banking services innovation in terms of customer experience and financial performance?*

The research objective highlights organisational performance, service, marketing, digital banking uptake and innovation information. This investigation extends knowledge, through UK banks’ financial reports, rigorously analysed using content analysis to capture digital banking’s effect on customer experience and financial performance. The chapter is organised as follows: design, data analysis, results, discussion and implications, and conclusion.

5.2 Research Design

The research uses annual financial reports obtained from six UK banks with a high street presence. Report information relating to the research objective was extracted, forming the data to be analysed.

5.3 Data Analysis

Content analysis posits that many words or comments from reports and observations can be reduced to categories in which words share the same meaning. The research categorises financial report information, looking for trends and patterns on how they inform the research question. It captures both the contextual elements and frequency of occurrence of key points, and corroborates results. This analysis focusses on the categories and issues of interest (e.g. dominant themes). The results answer the research question.

5.4 Qualitative Results

This section presents theme details, and in-depth and contextual meanings. It highlights the manifest and latent content to draw out rich comments from banks, to give much deeper insight. Comments used to illustrate the manifest evidence and support the results are written around each bank.

Nature of Digital Banking Channels across the Banks

Evidently, UK banks are offering services through telephone, internet and mobile banking channels, as primary ones, showing how these channels have enabled banks to offer services for customers. Excerpts:

HSBC:

- *“Direct channels: these include online, and direct banking offerings such as telephone banking, automated teller machines, HSBCnet, Business Internet Banking and smart phone applications (iApp).”*
- *“Customers can interact with the bank through four principal channels: branches, self-service terminals, telephone service centres and digital (internet and mobile).”*

RBS:

- *“RBS serves customers through a number of channels including: ATMs in the UK, telephony, online and mobile.”*
- *“We issued two million time-saving contactless cards in 2013 allowing customers to make quick and easy payments for everyday items under £20 in less than a second.”*

Lloyds:

- *“We continue to [...] migrate products to digital distribution channels, encompassing the internet, mobile applications and telephony. We have also launched the new Visa contactless debit card.”*

Virgin Money:

- *“The Group operates through offices and stores in the UK. Other key distribution channels include online, mobile and telephone.”*

Santander:

- *“The Bank also provides service through other around-the-clock channels, such as online and telephone banking.”*
- *“A series of enhancements were introduced [...] to all the digital platforms including online and mobile telephone banking services, and there was the launch of increased digital technology at branches.”*

Barclays:

- *“We are continuing to transform customer and client interactions, enabling automated experiences for routine transactions, and offering a choice of channel (physical, telephony, or digital).”*
- *“We are already at the forefront of digital change, transforming the nature of banking globally through innovations such as Barclays Mobile Banking, Pingit, Voice Biometrics and Video Anywhere.”*

The result shows the three major digital channels through which banks deliver services. They provide banks with the opportunity to develop better customer service. There is also the ATM service, for withdrawing and paying in money. Through innovation, some banks attempt to offer unique services using these channels; for instance, Barclays offers Pingit for sending and receiving payments via mobile phone while contactless cards are offered by other banks. With contactless cards, money is debited by tapping it on a payment machine, without the need to enter a pin number. Barclays also offers digital Voice Biometrics recognition, which uses voice to verify customers, while HSBC offers customers a multi-level security platform for conducting transactions in real-time. Barclays Pingit service is good for customers living in remote areas. In sum, through these main digital channels, banks are offering various services to differentiate themselves and address changing customer needs.

Financial Services associated with Digital Banking

Digital banking is used to offer various financial services in different banking divisions, (e.g. retail and commercial banking). It adds value to product marketing, helping grow business and improve customer advocacy. Excerpts:

HSBC:

- *“Our four global businesses are Retail Banking and Wealth Management, Commercial Banking, Global Banking and Markets, and Global Private Banking. We deliver services through four principal channels: branches, self-service terminals, telephone service centres and digital (internet and mobile).”*

RBS:

- *“UK Retail offers a comprehensive range of banking products and related financial services to the personal market. It serves customers through a number of channels including: the network of branches and ATMs in the UK, telephony, online and mobile.”*

Lloyds:

- *“The Group’s main business activities are retail, commercial and corporate banking, general insurance, and life, pensions and investment provision. The key product markets are: mortgages, credit cards, loans and overdrafts, internet and telephone banking, Current accounts and Savings accounts. Services are offered through a number of well recognised brands and a range of distribution channels.”*

Virgin Money:

- *“The bank offers a broad range of products to customers across five key categories: Savings, Mortgages, Cards, Insurance, Investments. Virgin Money [...] also distributes products online, by post and telephone.”*

Santander:

- *“The UK area includes the retail, commercial and wholesale banking, and asset management and insurance business activities carried out by the various units and branches with a presence in the UK.*
- *The Bank also provides service through other around-the-clock channels, such as*

online and telephone banking.”

Barclays:

- *“Personal and Corporate Banking comprises personal banking, mortgages, wealth & investment management, and corporate banking. Managing these businesses together helps to drive product and customer segment capabilities as well as cost synergies through platform integration and leveraging expertise, particularly within digital channels.”*

The banks have branches and digital channels for marketing products. However, digital banking plays a key role in providing value-added services in various banking operations (e.g. mortgage, credit cards, current accounts, savings, pension, payment, share purchase and insurance). It has reshaped the way services are offered to customers and enabled banks to provide 24-hour service. Many customers are choosing to access services via digital banking due to the convenience it offers. Therefore banks are making significant cost savings, adding to their profitability. Banks are looking for alternative ways to meet customers’ service needs, making it easy and convenient to obtain services online. Customers’ ability to access the majority of services through digital banking shows how important and cost effective it has become for banks’ survival, customer acquisition and marketing of financial services.

Innovation in Digital Banking

The way banks provide services to customers is changing through innovation. Every bank wants to lead in the digital market space. Focus on innovation to provide a better, different and value-added service has continued amongst banks. Excerpts:

HSBC:

- *“We continued to develop and improve our direct channels through enhanced telephone-based relationship management services in key markets, including the launch of smartphone services.*
- *We also [...] extended the contactless payment systems to Android phones and enhanced our digital banking capabilities.*
- *We will collaborate with our supply chain to achieve sustainable savings through efficiency and innovation.”*

RBS:

- *“The ‘Tap and Go’ trial brought contactless debit or credit card payments to UK bus users for the first time and it reinforced our position as a leading innovator in a market which we believe has high potential.*
- *We use leading edge technologies in service innovation. Business Services is behind many of the innovations that make life easier for our customers. Improvements are evidenced by several industry awards including: [...] ‘Most innovative digital offering’ (Private Banker International).”*

Lloyds:

- *“Lloyds TSB took on over 1 million new customers for the second year in a row, this*

success has been driven by launching innovative new products and services, such as Vantage and Control accounts and the market leading mobile banking services.

- *We have developed and launched innovative internet tools such as Money Manager, which breaks down customer spending into specific categories, allowing customers to track their spending more effectively.”*

Virgin Money:

- *“Our programme to make products mobile-enabled commenced with a travel insurance application. This innovative mobile capability will be rolled out to other products in 2015.*
- *In 2014 we further improved our digital capability to make it easier for our customers to access Virgin Money services and products using their mobile devices. As a result we now have more than 1.2 million customers using our digital services, including 300,000 customers who accessed services from a mobile device.”*

Santander:

- *“The Customer VoiceLab was launched in 2012, and this builds on the traditional contact centre and integrates all customer attention channels, incidents and complaints, in a single team supported by the most innovative technology.*
- *Santander’s commitment to innovation, in response to the challenges that digital transformation represents for the business and our customers, is reflected in the following initiatives: Corporate unit of innovation, whose purpose is to plan and develop the Group’s digital innovation strategy from a global perspective, taking advantage of the innovation capacities that already exist in the different units.”*

Barclays:

- *“Innovation has also continued to be a differentiator for Barclays as we look to address the changing needs of our customers. More recently we have launched Barclays Pingit in 2012, Europe’s first person-to-person service for sending and receiving money using mobile phone numbers.*
- *We have continued to build on a heritage of innovation, supporting more than 1m payment-enabled devices across three continents and working with Transport for London on acceptance of contactless cards for over 6.5m bus journeys in the UK.”*

The result shows banks’ realisation that customers are becoming digitally aware and seeking good customer services. Customers want value from their banking services, and are getting attracted to digital banking. Banks are embracing digital innovation to meet these customer needs, focussing on new digital techniques to improve efficiency and effectiveness, making banking easier, more convenient and faster for customers. Innovation is helping banks build services around digital channels, enabling them to stay competitive and offer different products. They have automated processes, updated their computer network to a digital platform and developed new services to reflect changing business needs and provide a better customer experience.

Some banks are leveraging economy of scale and want to be pioneers in service introduction. Lessons learnt from one country have been implemented in another (e.g. m-banking, introduced in Africa and South America by Barclays and Santander

respectively, has been implemented in the UK). As banks innovate, customers are moving from labour intensive banking tasks to digital banking, which reduces operational costs and improves Cost-to-Income ratio. Some banks have an innovation department responsible for developing digital strategies and applications, showing the great emphasis their business places on innovation. Brand revitalisation is being reinforced by an extensive programme of innovation. For instance, Barclays is offering 'Pingit', RBS developed contactless cards, and Santander is developing 'VoiceLab'. The banks are differentiating their brands to be ahead of competitors and serve customers better. The result shows that digital banking innovation is aimed towards creating a niche market, making value-adding services available and convenient for customers, and improving experience, operational efficiency and financial performance.

Trend in Investment and Acceptance of Digital Banking

The trend in investment and digital banking uptake by banks and customers respectively has been upward. In the last few years investment in R&D and customer uptake have been growing in the UK, showing the economic potential of digital banking. Excerpts:

HSBC:

- *"We continue to invest in digital systems to better meet clients' evolving expectations and needs. We aim to deliver improved [...] products via investments in better sales coverage and customer proposition and mobile enhancements."*
- *"We improved our digital offering, migrating over 80,000 customers to date from legacy platforms to core electronic banking channels, and continued to develop innovative products. Global mobile banking application downloads surpass 6 million."*

RBS:

- *"To become more efficient we have invested in online banking and the number of active online banking customers increased by almost one quarter during the year. Over 5.5 million accounts have chosen to convert to paperless banking."*
- *"Good progress has been made with £180 million of investment [...] directed at enhancing customer service and simplification of products and services. These have included: Improvements to Mobile and Digital Banking which continue to evolve in line with how customers prefer to conduct their business."*
- *"We have invested in our online banking service and that has paid off. Branch counter transactions were 31 million or 11% lower across the same period. In addition, UK Retail now has over 2.5 million active mobile users, using the service 28 times a month on average."*

Lloyds:

- *"Our digital channels go from strength to strength, with active internet banking users now increased to over 10.5 million and mobile banking users to more than four million, and over 1.2 billion logons in 2013."*
- *"We are continuing to transform our digital proposition in line with customers' growing appetite and to support delivery of services to smart phones. We also continued to invest in enhancing our online capabilities. This will increase customer"*

advocacy and deliver lower customer acquisition costs and improved customer retention. As at 2014, investment in digital platform over the last three years was £750M.”

Virgin Money:

- *“We invested over £40.0 million in 2014 to improve our business capability, fully aligned with our strategy to grow the business. Investment in the digital channel has continued to develop both functionality and content to enhance the customer experience. Mobile usage continues to grow, with almost a quarter of website visits made through mobile devices in 2013, double the proportion for 2012.*
- *Virgin Money’s website is the most popular channel for customers, with over 20 million website visits during 2013.”*

Santander:

- *“In 2013, Santander has 11.6 million online banking customers, 2.6 million mobile banking customers and its telephone banking services tend to 30 million calls a month.*
- *Santander Group considers technological innovation and development to be a cornerstone of the corporate strategy, and it seeks to capitalise on the opportunities offered by digitalisation. In 2014, technology investment in R&D totalled EUR 1,345 million, which represents 3% of gross income, in line with previous years. A series of enhancements was introduced during the year to all the digital platforms including online and mobile telephone banking services.”*

Barclays:

- *“The implementation of measures to manage the risk involves continued investment and use of internal resources.*
- *We now have 17 million contactless cards in issue in the UK and we have maintained our leading position in this fast-developing area of payments with more than 61,000 retailers using our contactless terminals.*
- *Innovation in digital: Over 3.7m downloads of Mobile Banking app and 2.2m Pingit users with over £1bn payments sent.”*

The result shows that banks’ investment in R&D and customers’ digital banking uptake are aligned. In 2014, Lloyds and RBS invested about £750m and £180m respectively, while Virgin Money invested £40m, to improve their digital banking platforms. Similarly, Santander invested about 3% of its gross income, to enhance their online and mobile banking. The banks have all embarked on ambitious investment programmes aimed at improving processes and customer services, combatting cyber-crime and upgrading their systems to digital platforms. As banks are investing in digital banking to improve experience, customers are accepting it. All this shows a positive demand for an attractive proposition and an economically viable opportunity for customers and banks.

Customers are being migrated from branches to more efficient, convenient and faster digital platforms (e.g. in 2014, Lloyds and HSBC migrated 120,000 and 80,000 customers respectively), showing the speed at which customers are converting to digital banking. Also, Barclays noticed an increase in transactions through its m-banking and

contactless card services. In 2013, Santander had 11.6m e-banking customers, 2.6m m-banking customers and its t-banking handled 30m calls a month, while Virgin Money had 20m customers visit their online sites with 70% of sales carried out through them. In 2014, Lloyds online users increased by 29% from 2013.

This evidence shows that UK banks have implemented digital banking to improve sales, reduce operating and servicing costs, and improve efficiency and profitability. They look for opportunities to stay competitive, improve services and grow their business, and see investment in digital banking as the way forward. The digital banking uptake has made banks close branches. A common trend is that banks are investing to simplify processes, take advantage of digital banking, and improve customer experience, efficiency and profit. This is indicated by the increase in customer uptake and banks' investment.

Improving Customer Experience through Digital Banking

UK customers' interest in digital devices has changed their banking service behaviours and expectations. Customers expect high quality services and value from digital banking, making banks focus on improving customer experience and relationship. Excerpts:

HSBC:

- *"HSBC closely tracks the satisfaction of its customers [...]. First Direct, HSBC's internet and telephone bank achieved the highest level of customer satisfaction in the UK according to research company TNS.*
- *We continued to optimise the mortgage origination process to improve the customer experience and expanded our digital channel capabilities. We focus on this strategic imperative: using our global expertise to improve customer service and productivity to provide a high standard of banking solutions and service to our customers efficiently.*
- *Our three growth priorities are customer growth in target segments, deepening customer relationships [...] and enhancing distribution capabilities, including digital."*

RBS:

- *"Our website has also become a very effective tool for attracting new clients. We converted 41% of enquiries [...] via the website into new clients for Coutts. Good customer service is at the heart of our ability to attract and retain customers.*
- *Since we launched Bankline in 2006 we have upgraded it every year to make it easier to use and more efficient, saving our customers time and money. We are intent on providing customers with a superior experience. Our retail customer satisfaction scores remain higher than the average of our peer group.*
- *We enhanced our online and mobile services. Our iPhone and Android applications earned a combined 4.25 out of 5 rating from consumers. Over the year there has been an improvement in the NPS and rating of overall service quality across the*

business, together with a continuing fall in complaints.”

Lloyds:

- *“Customer satisfaction is assessed through the NPS, [...] with the group wide score rising from 38 in 2010 to 44 in 2011. We want to make digital banking easier and personal for all our customers, [...] offering better service, responding to customer needs.*
- *Our customer experience improvements continue to be reflected in falling complaint levels and improved customer advocacy scores. Service remains one of the key drivers of customer satisfaction and customers are less accepting of poor service given the competitive nature of the market.*
- *Creating the best customer experience initiatives through: Seamless multi-channel distribution across branch, online, mobile and telephony; tailored product propositions to meet customer needs more effectively; improved customer experience through enhanced digital offering.”*

Virgin Money:

- *“Virgin Money delivers by: operating a digitally-led distribution model, handling 15m online transactions each year; ensuring pricing parity through all channels, so customers can decide what suits them best; being the only bank in the UK to resolve 100% of its complaints within 8 weeks; achieving a NPS that is one of the highest of any bank.*
- *Demand for multi-channel banking is now more prevalent than ever. More customers expect to be able to manage their finances whenever and wherever is most convenient for them, whether by telephone, online, or by using their mobile device.*
- *Service remains one of the key drivers of customer satisfaction and customers are increasingly less forgiving of poor service. Overall NPS increased to +16 one of the highest scores of any UK bank, demonstrating the strength of our customer satisfaction and advocacy.”*

Santander:

- *“Santander continues to strengthen its range of services via online and mobile telephone banking and the contact centre. In the UK, we increased the number of loyal customers from about 1m to 3.3m by rewarding their loyalty with our innovative, transparent, value-adding products and services, for both existing customers and new customers.*
- *Improvement in customer experience - The continuous and unstoppable increase in the interaction of the Group’s customers through the various remote channels obliges us to improve the [...] functionality of these channels, without disregarding the obligatory demand for service quality and transparency.*
- *In 2014, 85.3% of Santander’s active individual customers were satisfied. In 2011, customer satisfaction with the services provided by Banco Santander through various channels (branches, telephone and internet) improved. Some 88.2% of customers said they were satisfied, generating greater linkage, proximity and loyalty, as well as higher customer revenues.”*

Barclays:

- *“We have put the customer in control by developing services and propositions that they can personalise to suit their needs.*
- *Barclays Mobile Banking app, Pingit and Text Alerts were launched with the aim of making customers’ lives much easier. These services help people to do their everyday banking, track payments and to send and receive money at any time, wherever they are. UK Retail Banking customer satisfaction in 2010 is 64.0% and 2009 is 62.5%.*
- *We have simplified our product range and processes, continue to add value through*

additional services, improving the customer experience and introducing many digital innovations, allowing applicants to track progress of mortgage applications, to the launch of Barclays Mobile Banking [...]. Total complaints to the bank continue to decrease year-on-year.”

The result shows banks' attempt to put customer experience at the centre of their strategy using digital banking, to acquire and retain customers. Customers want easy to use, interactive, convenient, fast and flexible services. This presents challenges and opportunities for banks. The consumer payments sector is increasing rapidly due to m-banking growth. Banks are deploying digital banking that saves time, adds value, makes services quicker and life easier for customers, and improves customer service. Some banks offer a text message service to customers who are about to go overdrawn, preventing them from paying charges. Although this costs money, it improves customer trust, perceived value and loyalty.

Banks are managing relationships with customers more effectively. They are hiring third-party companies and using NPS to gauge customer experience and satisfaction with the services provided, showing the level of importance attached to customer experience. This exercise helps reinforce the customer journey, loyalty, expectation and trust customers have in banks' brands. FirstDirect, a digital banking division of HSBC, achieved the highest level of customer satisfaction in 2009. Similarly, Virgin Money, another bank offering digital banking, claims to have one of the highest NPS, demonstrating the strength of their customer satisfaction and advocacy. These banks' high scores show that digital banking can be used to achieve good customer experience and then satisfaction. Banks have seen existing customers gradually moving from branch services to digital platforms (e.g. RBS used their website to attract new clients), and the number of bank branches has been reducing since 2011. All this shows digital banking's effectiveness in improving experience, cost and sales.

Virgin Money's customer satisfaction through digital banking improved, helping enhance sales, efficiency and profit in 2014. Santander also recorded better customer satisfaction via digital banking than branches, and increased profit through customer loyalty, recurrent revenue and reduced transaction costs. This shows the impact of customer experience, satisfaction and loyalty on banks' performance. The CLV effect shows that over years, banks can extract significant profit from loyal customers. The evidence shows that improving digital banking experience helps satisfy, attract new and retain existing customers, reduce operational costs and improve profit. This means that

by developing a deep understanding of customers, banks can align their services to customers' requirements, thereby reducing complaints and increasing NPS, which deliver low customer acquisition costs, and improved market share and customer retention, efficiency and profitability. In summary, banks are embracing digital banking to improve customer experience and financial performance.

Improving Financial Performance through Digital Banking

The banks' attempt to improve customer experience, satisfaction, loyalty and efficiency using digital banking is positively affecting financial performance, as more users and services are transferred online. Excerpts:

HSBC:

- *"The 2007 and 2008 volumes per delivery channel show a 9% reduction in the total number of labour intensive branch and call centre transactions and a 17% increase in automated internet transactions.*
- *We continue to develop our digital channels [...]to improve the customer experience and to deliver cost savings through our distribution network.*
- *We launched our first straight-through on-line mortgage application service in the UK and, by the end of 2014, 14% of our annual mortgage approvals were produced online. Across our priority growth markets, the revenue derived from digital channels increased by 18% compared with 2013."*

RBS:

- *"Privilege and Churchill have grown home policies by 90% and 13% respectively compared with 2007, mainly due to an increase in online sales. Expenses decreased by 6%, with the Cost-to-Income ratio improving from 56.5% to 49.3%. 2010 compared with 2009 - Operating profit recovered strongly [...] to £1,372 million.*
- *RBS continues to progress towards a more convenient, lower cost operating model, with over 4.8 million active users of online banking and a record share of new sales achieved through direct channels.*
- *More than 7.8 million accounts have switched to paperless statements and 276 branches now utilise automated cash deposit machines. Expenses decreased by 5%, with the Cost-to-Income ratio improving from 62% to 60%. It is reducing costs through rationalisation, integration and simplification."*

Lloyds:

- *"Overall sales increased by seven percent, with improvements over a broad range of products and through our wide variety of distribution channels. Both the internet and telephone banking channels performed strongly with sales growth of 29% and 19% respectively.*
- *[...] a significant percentage of Retail's customer enquiries and transactions now occur online. In addition, customers are making increasing use of electronic statements, with more than 6 million accounts now having statements delivered electronically rather than in paper format.*
- *We will [...] migrate products to digital distribution channels, encompassing the internet, mobile applications and telephony. The success of this approach is evidenced by our achievement of run rate cost savings of £847 million at the end of 2012, which gives us confidence in reaching our run rate cost savings target of £1.9*

billion by the end of 2014.”

Virgin Money:

- *“During 2012 our primary focus was to deliver a smooth and successful integration of the acquired business [...] and significant cost savings.*
- *Our online-led distribution model, supported by our efficient national store footprint, was a key factor in growing our retail deposit business in a cost-effective way during the year. During the course of the year our deposit balances grew by 6 percent to £22.4 billion, a market share of 1.4 percent. Both the average tenor of our retail deposit base and our customer retention improved during the year.*
- *70% of Virgin Money’s sales and 65% of its service transactions are carried out digitally.”*

Santander:

- *“The pace of opening current accounts (+33%) continued to rise, reaching a record number in the second half of the year and a significant market share. The market share was strengthened by the development of online and telephone banking.*
- *Recurring revenue growth, cost control culture and high productivity of branches make Santander one of the world’s most efficient international banks. Its cost-to-income efficiency ratio is 46.1%.*
- *By having more loyal customers we were able to reduce the cost of our retail deposits and our Group profit before taxes in the UK rose from £1,008m in 2012 to £1,612 in 2014 (+c.60%).”*

Barclays:

- *“Digital payments are a major part of our innovation and in 2012 we enabled over 750,000 mobile phones to make payments (using PayTag) across three countries and helped increase contactless transactions by over 250% year on year in the UK.*
- *Profit before tax increased 13% to £1,339m. Strong growth in 2014 was delivered through a diversified consumer and merchant business model, with customer numbers increasing to 30m (2013: 26m) and asset growth across all geographies generating a 6% increase in income.*
- *Growth has been managed on a well-controlled cost base, with the business focusing on scale through insourcing of services, consolidation of sites and digitalisation, resulting in an improvement in the cost to income ratio to 43% (2013: 45%).”*

The result shows banks’ efforts to deliver value using digital banking. The transition of customer transactions from labour intensive (branch and call-centre) to digital banking through credit card, internet, ATM, self-service and mobile channels is growing. HSBC saw a 9% reduction in manual transactions and a 17% increase in internet transactions in 2008. Branch transactions have fallen significantly. Banks have closed branches as customers move to digital banking, helping them save money and increase profit. This shows how digital banking reduces the customer acquisition cost of marketing, as information and products become easily accessible. Over 65% of Virgin Money’s services are carried out digitally, helping them to improve retail deposits by 6%, market share by 1.4% and profit in 2014. Similarly, Barclays recorded an improvement in profit

and Cost-to-Income ratio due to service digitalisation, showing how digital banking helps increase profitable growth.

HSBC's revenue increased, with about 14% of mortgage sales produced online in 2014, while Virgin Money noticed an increase in market share through digital channels. Banks use financial performance ratios (e.g. profit, ROE, ROI, NIM and Cost-to-Income ratios) to compare themselves with their competitors. In 2013, digital banking improvement helped to increase RBS online and mobile banking customers and profits, by reducing branch transactions, expenses and Cost-to-Income ratio. As a result, more than 7.8m customers have switched to online statements and using ATMs. The impact of digital banking shows a big efficiency saving, as RBS profit ratios improved despite their huge investment. Both Santander and Barclays reported a rise in digital banking customer numbers. Lloyds made a significant saving in 2012, by moving customers to digital channels whilst providing them with greater choice and convenience. These banks have made savings on postage, printing and labour, which adds efficiency and value to their overall profitability.

Evidently, banks look for efficient ways to improve services and profit using digital banking. Customers' demand for services on their digital devices is making banks innovate to improve customer experience and performance. For banks, efficiency helps reduce marketing and labour costs, and improve profitability. Santander improved recurring revenue and customer loyalty through digital innovation, hence maintaining a better efficiency ratio than their competitors and improving profit by 60%. This shows the impact of digital banking on profit via CLV. The consensus from the evidence is that good digital banking experience improves customer satisfaction and loyalty, and banks' financial performance, by reducing operational costs, and improving efficiency and Cost-to-Income ratio.

Operational and Security Risks with Digital Banking

Although digital banking is important, there are associated operational and information security risks that should be mitigated. With the growing digital banking uptake, customers are exposed to cyber risks. Excerpts:

HSBC:

- *“With the ever-growing acceptance and demand for internet and mobile services by customers, the group is naturally exposed to fraudulent and criminal activities via these channels.*

- *Information security risk gives rise to potential financial loss and reputational damage which could adversely affect customer and investor confidence.*
- *Loss of customer data would also result in regulatory breaches which would result in fines and penalties being incurred."*

RBS:

- *"Financial crime is at the heart of our most basic responsibility as a bank: to keep our customers' money secure. The Group continues to invest in programmes to enhance and maintain information security controls and systems.*
- *We have delivered almost 50 Cyber-Crime and Fraud Prevention seminars to more than 2,500 RBS customers, non-customers and RBS Relationship Managers worldwide."*

Lloyds:

- *"Our various brand websites contain information to help customers to understand how to protect against the risks of common types of internet fraud.*
- *[...] we face hundreds, sometimes thousands, of cyber-threats every day.*
- *Since 2011, we have invested £248 million to improve the security of our IT infrastructure, including £138 million this year."*

Virgin Money:

- *"The Committee received regular updates across the spectrum of operational risk matters relating to business areas, including information security, incident management and cybercrime.*
- *There is a programme of investment in security infrastructure to mitigate threats including cyber-attack and continued investment in and development of risk management frameworks, systems and processes."*

Santander:

- *"Electronic fraud - Measures were established at the corporate and local levels, such as: Improvements in the tracking of customer operations conducted by electronic banking, mobile phones and telephone banking (teams with specialised staff and intelligence software).*
- *Increased security in confirming customers' operations using strong procedures for the signature of operations."*

Barclays:

- *"The threat posed by cyber-attacks continues to grow and the banking industry has suffered major cyber-attacks during the year.*
- *Failure to adequately manage cyber security risk and continually review and update current processes in response to new threats could adversely affect the Group's reputation, operations, financial condition and prospects."*

The result shows that customers and banks are susceptible to operational risks like cyber-attack, internet fraud and security breaches in digital banking. Banks are paying significant attention to them, and preventing these risks is important to keep customers' money safe. These risks give rise to financial losses, loss of customer data and regulatory breaches, resulting in fines being imposed. They cause disruption to business, and reputational damage which could adversely affect customer experience, investor confidence and banks' performance. Banks are constantly addressing these risks, as they

evolve and adapt measures to mitigate them through innovation and information monitoring. For instance, in 2014, Lloyds invested £138 million to improve their internet security, showing the level of importance attached to it. Banks are training staff, helping reduce operational risks and protect customers from falling victim to cyber-crime, which is beneficial to them and customers, to prevent a negative effect on customer experience and financial performance.

Employee and Customer Engagement in Digital Banking

Employee competencies are key requirements to perform a job and improve operational effectiveness in banks. The banks emphasised development, training, and improving employees' knowledge through engagement, enabling them to innovate in digital banking for the benefit of customers. Excerpts:

HSBC:

- *"In implementing the operational effectiveness programme, the group concentrated on a number of key elements:[...] strong employee engagement leads to positive commercial outcomes and underpins improved business performance, increased customer satisfaction, higher productivity, talent retention and reduced absenteeism.*
- *The group assesses its employees' engagement through the Global People Surveys [...] supporting a values-led high-performance culture [...] to deliver on its ambition to become the world's leading international bank."*

RBS:

- *"In 2009, we launched our 'back to basics' strategy. It keeps us focussed on our customers and what they want and need. Alongside it, we created a vision, purpose and credo, emphasising customers, colleagues and community. This has included investment in professional qualifications as well as the development of a suite of banking tools to be rolled out in 2015.*
- *Together we connect colleagues and customers, providing the tools and services that help us to serve our customers when and where they need us."*

Lloyds:

- *"We delivered an average of 2.9 days formal learning per full time equivalent, which is commensurate with the continued investment in colleague development.*
- *We are increasing engagement with our customers by delivering greater choice and flexibility through our multiple brands and channels."*

Virgin Money:

- *"The Group believes that colleagues are fundamental to our success and that capitalising on what is unique about individuals and drawing on their different perspectives and experiences will add value to the way the Group does business.*
- *Our aim is to make 'everyone better off' by delivering good value to our customers, treating employees well, making a positive contribution to society, [...] and delivering sustainable profits to our shareholders."*

Santander:

- *"Becoming the leading bank for customers and employees, through an improvement in satisfaction and on the back of its leadership in cards, mobile and internet banking.*

- *The training of the Group's professionals has been improved to enable them to be more efficient and more competitive and to handle the advancing wave of technological transformation."*

Barclays:

- *"We have launched CloudIt through online and mobile banking as a result of customer feedback.*
- *There was however deterioration in the Colleague Sustained Engagement and due to a restatement, a change in the Customer & Client Relationship NPS metric. We will endeavour to improve both scores with further colleague engagement, and greater help within our retail network to adopt new technology [...].*
- *Employee engagement - We introduced a new policy in early 2014 outlining how we will help colleagues build their skillset and take ownership of their careers."*

The result shows that banks are conscious of employee engagement in knowledge acquisition, operational risk, customer satisfaction and capability aimed at improving organisational effectiveness. The banks achieve some of these through training, obtaining customer feedback and investment in digital banking innovation to serve customers better. For instance, Virgin Money develops their managers through training and empowerment, while Lloyds focusses on sharing digital product knowledge across all divisions. Santander focusses on training and investment in digital innovation to improve productivity and service quality. Barclays has invested to retain some key skilled employees to develop effective digital banking services.

Banks ensure employees have the right skills to implement digital banking, improve customer services and deal with internet fraud, organisational and security issues. They want to communicate with and reward employees, to bring satisfaction. This means that banks can develop effective digital banking when they have satisfied employees, capable of understanding customer requirements and how they impact on customer experience. Therefore, to achieve better value for customers and banks, employees must be engaged through development, skills improvement, customer feedback and awareness of digital banking strategy. Evidently, engaged and knowledgeable employees innovate, and improve customer experience and financial performance.

5.5 Quantitative Results

This section brings further insight into the research from a different perspective, showing trends in digital banking acceptance and alternative justifications of results using frequencies and ranks.

5.5.1 Digital Banking Acceptance, Experience and Financial Performance

This area shows how digital banking positively affects customer experience and financial performance. RBS has over 6.9m online and 2m mobile banking customers and increased ROE between 2012 (24.4%) and 2013 (26.3%) through efficient investment in digital banking. They delivered improvements in ROE and cost saving, and maintained a moderate Cost-to-Income ratio (between 51% and 54%), within the banking average.

HSBC also used digital banking to improve efficiency and Return on Average Invested Capital (ROIC) from 60.6% to 51.8% and 7.8% to 9.2% respectively in 2009. With successful investment in innovation, productivity among all digital channels generated high growth, cost efficiency and revenues, which translate into profitability and ROIC.

The customer acceptance trend of digital banking increased between 2008 and 2014, helping UK banks maintain a healthy profit. Table 5.1 shows active online and mobile banking customers in millions (m) and underlying profit before tax (£m) at Lloyds.

	2008	2009	2010	2011	2012	2013	2014
Online		6.9m	7.6m	8.3m	9.5m	10.5m	10.4m
Mobile				> 1.5m	3.3m	> 4m	> 5m
Profit	£1,793m	£1,382m	£4,716	£2,749m	£ 3,188m	£3,749m	£3,228m

Table 5.1: Lloyds Digital Banking Acceptance and Profitability

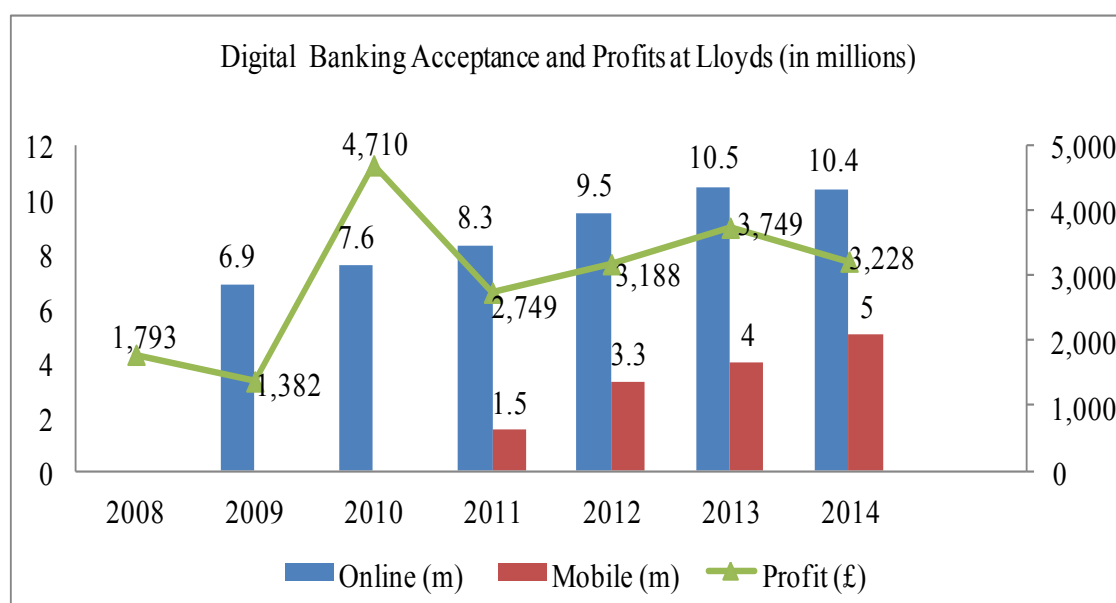


Figure 5.1: Lloyds Digital Banking Acceptance Trend and Profitability

Figure 5.1 shows that online banking acceptance increased between 2008 and 2014, peaking in 2013, while m-banking uptake has been increasing from 2011, as more customers choose to bank through their mobile devices. M-banking is proving to be more convenient and popular than e-banking. This also indicates that banks should put more resources into developing more m-banking. The increase in customers seeking to bank through digital channels shows how digital banking is having a positive effect on customer experience. As customers move towards digital banking, banks are making significant savings through operational efficiency improvement, showing enhancement in financial performance.

The increase in digital banking acceptance by customers is making banks close branches as customer visits decline, reducing labour costs. Table 5.2 shows the trend in Santander branch numbers between 2008 and 2014, which have decreased over years.

Year	2008	2009	2010	2011	2012	2013	2014
Branch	13,390	13,660	14,082	14,756	14,392	13,927	12,951

Table 5.2: Santander Branch numbers

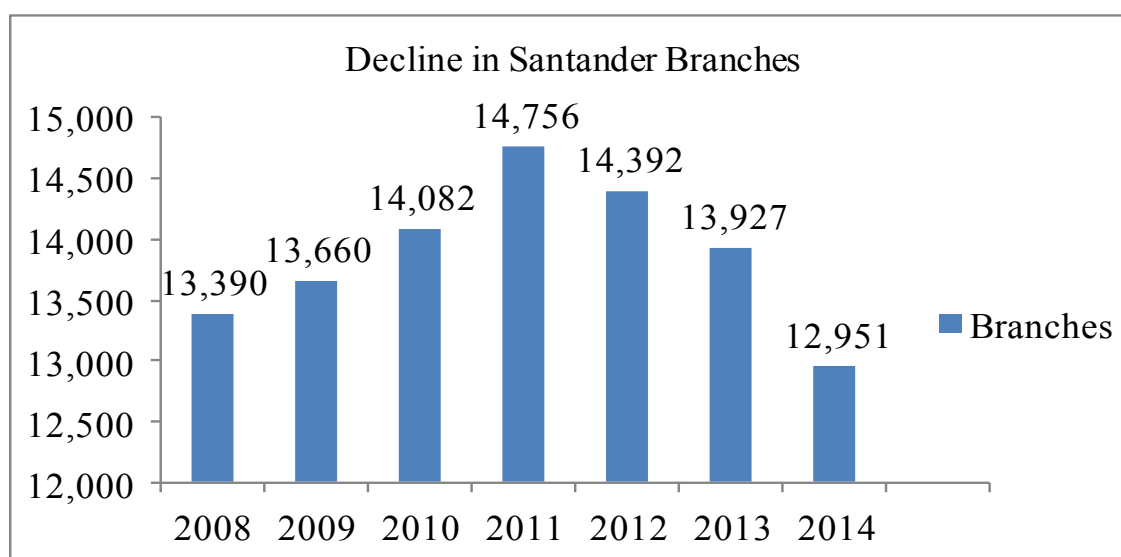


Figure 5.2: Santander Branches over the Years

Figure 5.2 shows that Santander branch numbers increased between 2008 and 2014, peaking in 2011, showing the impact of customer banking behaviours and digital banking uptake. In 2013, Santander had online and mobile banking customers of 11.6m and 2.6m respectively, and processed 30m calls a month through t-banking. Digital banking is becoming more convenient, easy to use, accessible and interactive than bank branches; therefore customers are abandoning branches. As customers move towards

digital banking, some branches are closed to save money, reduce operational and labour costs, and improve efficiency and profitability.

Some UK banks capture customer satisfaction (NPS) levels through different banking channels. Table 5.3 shows Santander customer satisfaction by banking channels in 2010 and 2011.

	Branches		Telephone		Internet	
Year	2010	2011	2010	2011	2010	2011
NPS (%)	87.5	89.1	88.9	89.7	90.2	93.7

Table 5.3: Santander Customer Satisfaction at different Channels

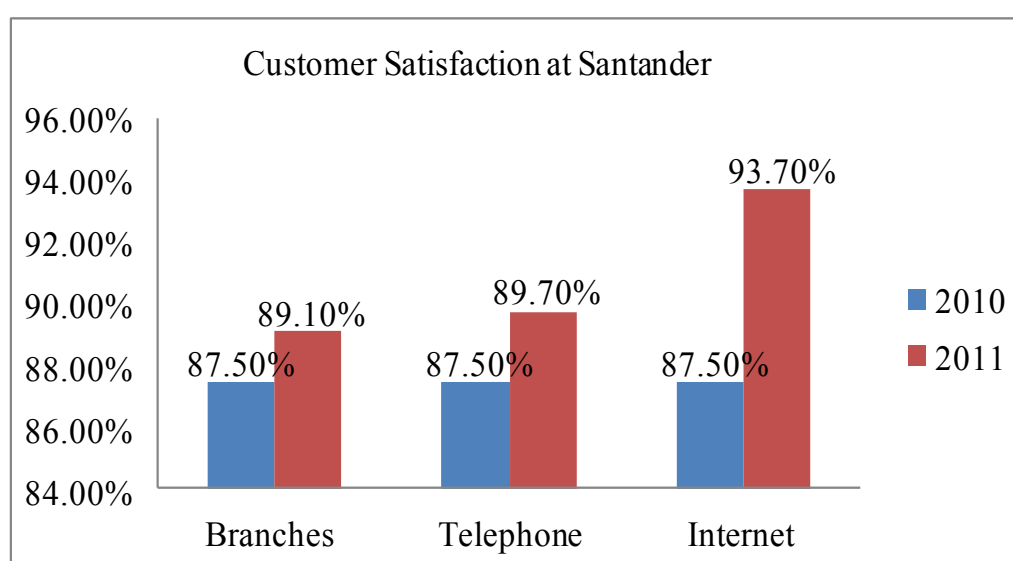


Figure 5.3: Santander Customer Satisfaction at different Channels

Figure 5.3 shows that more customers are satisfied and loyal via internet and telephone than branches, showing that digital banking helps improve customer experience and satisfaction. Evidence from other research shows that high customer satisfaction brings loyalty, and in turn leads to profitable growth, through CLV. The qualitative result shows Santander has used high customer loyalty to improve profitability, which authenticates their high NPS. The result shows that more customers are finding digital banking convenient, enjoyable, easy to use and cost-saving rather than spending time travelling to the branches. This again shows the impact of digital banking in improving customer experience and financial performance.

Table 5.4 shows Santander's efficiency ratios between 2009 and 2013, which are good in relation to the banking average.

Year	2009	2010	2011	2012	2013
Cost-to-Income ratio (%)	41.70	44.10	45.70	46.10	49.9

Table 5.4: Santander Efficiency Ratios

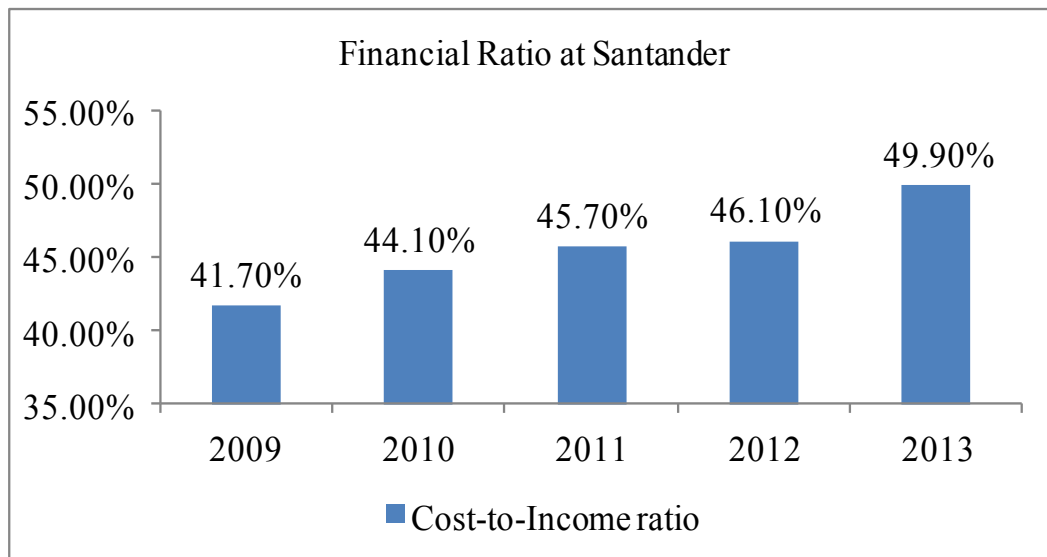


Figure 5.4: Presents Santander Efficiency Ratios

Figure 5.4 shows that Santander's Cost-to-Income ratio between 2009 and 2013 increased slightly due to investment in digital banking. However, there is improvement in satisfaction. It managed to stay within the banking industry efficiency ratio range and below their competitors, have more loyal customers and increase profit. In 2013, their efficiency ratio (49.9%) was better than their worldwide (61.5%) and European (63.2%) competitors. Santander maintained a lower efficiency ratio and improved profit due to its business strategy of generating recurrent income from satisfied and loyal customers, even though 3% of their annual income goes towards R&D on digitising their banking platform to improve customer services. Evidently, digital banking innovation positively influences customer experience, satisfaction and loyalty, and financial performance.

Table 5.5 shows Barclays Personal and Corporate Banking division profit between 2012 and 2014 which improved through efficiency and offering digital banking.

Contribution to the Group	2012	2013	2014
Income (£m)	8,579	8,723	8,828
Adjusted profit before tax (£m)	2,455	2,233	2,885
Adjusted ROE (%)	11.1	9.7	11.9
Customer deposits (£bn)	256.4	295.9	299.2

Table 5.5: Barclays Personal and Corporate Banking Revenue

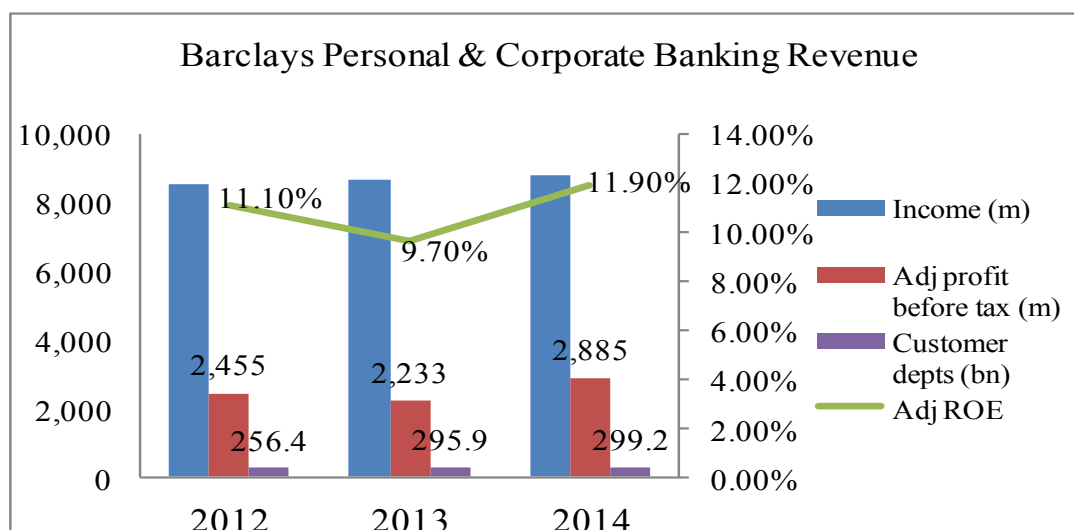


Figure 5.5: Barclays Personal and Corporate Banking Revenue

Figure 5.5 shows that Barclays maintained a good ROE, customer deposit and profit during that period. They managed to generate strong growth and a controlled cost base, through digitalisation, resulting in an improved Cost-to-Income ratio of 43% (2013: 45%). As a result of Barclays digitisation exercise in mobile and internet banking, the number of customers using their m-banking application, and customer deposits increased, helping boost their income and profit by 13% in 2014. This also shows how digital banking innovation can streamline processes, reduce costs, and improve efficiency, profitability and ROE.

5.5.2 Trend on Customer Acceptance of Digital Banking

Digital banking uptake among UK bank customers is on the increase, showing a change in customer attitudes. Table 5.6 shows digital banking channels, transactions and customer numbers among the banks, described in millions (m) and billions (bn).

	HSBC	RBS	Lloyds	Virgin Money	Santander	Barclays
Online		6.9m	10.4m	1.2m	11.6m	
Mobile	6m	2m	5m	0.3m	2.6m	3m
Telephone				5m	30m	
Web Chat		1.2m				
Transactions		4.2bn	1.2bn	15m		
Money transactions		11bn				1bn

Table 5.6: Digital Banking Users among Banks

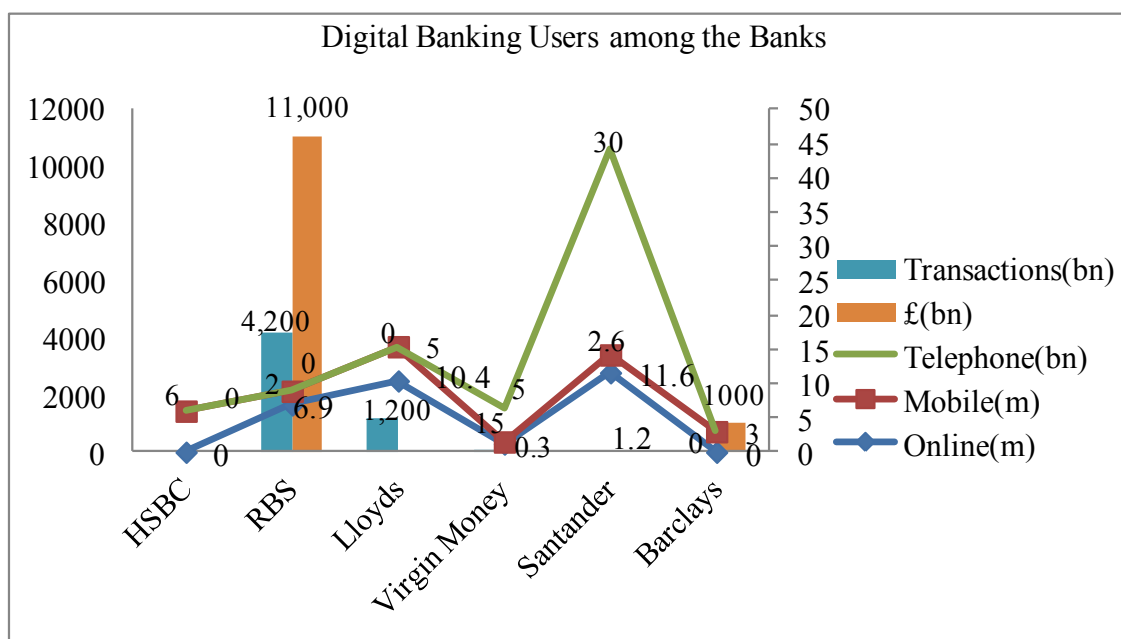


Figure 5.6: Digital Banking users among Banks

Figure 5.6 shows that Santander has the highest number of telephone and online banking customers, followed by Lloyds in online banking and Virgin Money in t-banking. HSBC is leading in m-banking with 6m customers, followed by Lloyds and then Barclays. Barclays is one of the leaders in m-banking, with its ‘PingIt’ application. RBS offers a web chat service, enabling users to have an interactive conversation online. It processed 4.2bn transactions, 1.2m web chats, and £11bn payments and transfers using the mobile app in 2012. This shows that digital banking has become a major way to offer services.

Virgin Money processed 15m transactions, while Lloyds processed 1.2bn. This supports evidence in qualitative results, which shows that 65% of Virgin Money’s services and sales are carried out via digital banking, increasing the balance sheet by 6%, market share by 1.4% and profitability. The increase in the number of users accessing digital banking channels shows a change in attitude from customers diverting from traditional banking. It shows that digital banking is offering customers the right experience and choice through convenience and usefulness, and hence making customers accept it. With customers moving to digital banking, banks are making significant savings through efficiency and improving their financial performance, as these customers are not getting served in branches.

Customers are choosing digital means to communicate with banks, enabling banks to save money on postage. Table 5.7 shows the number of customer and shareholder enquiries handled through digital channels.

	2010	2011	2012	2013
Telephone service	247,057	232,430	215,278	251,812
E-Mail	20,704	51,616	22,710	30,977
Web (SMS alerts)	1,430,542		963,401	784,483
Letters	692,091	677,060	612,500	544,259

Table 5.7: Santander Cost Saving on Enquiries

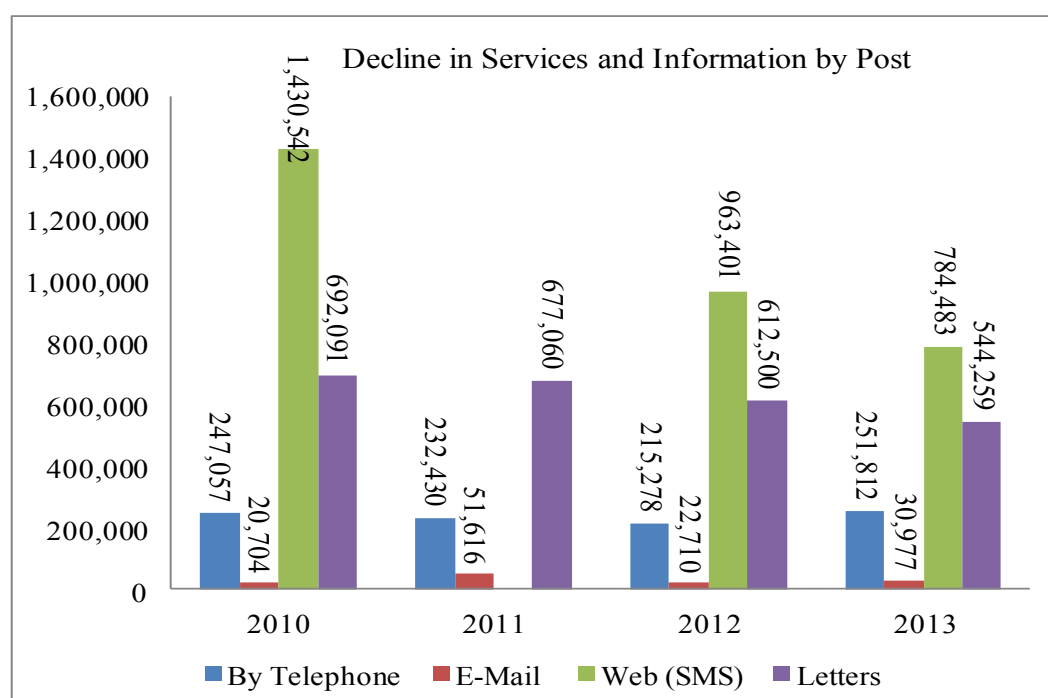


Figure 5.7: Santander Cost Saving on Services and Enquires

Figure 5.7 shows that service enquiries and information handled through digital channels have increased. Santander uses Web, Text Messages, e-Mail and Telephone to send information instead of letters, saving money on postage, processing and stationery, improving their efficiency savings. The cost of sending 784,483 letters using a first class stamp at the rate of 63p would have reduced the bank's operating profit by £494,224.29. Digital banking is helping improve financial performance and customer experience, as some customers find this technique convenient, judging by the satisfaction level in Figure 5.3.

5.5.3 Content Results showing Frequency Distribution

This section presents some key points to offer further support, by grouping some important manifest content units into categories to show the frequency of occurrence and their code ranking. Figure 5.8 presents Word Cloud results, showing the key words used by banks to describe digital banking and customer experience.



Figure 5.8: Most Frequently used Words in the Financial Report

Figure 5.8 displays up to 100 words in different font sizes, where the most frequently occurring words are in large fonts. Table 5.8 shows the ranking order of some key words.

Ranks	Key Words
1st	digital, banking, services, customer(s), mobile, online
2nd	bank, channels, business, service, experience, security, investment, products, internet, technology
3rd	strategy, transaction, accounts, offering, innovation, better, access, distribution, telephone, increased, efficiency, improve, brand, needs

Table 5.8: Key Words Ranking

The words ranked first are among the most noticeable, showing how important they are in the banks' reports. The key words show how they relate to the concepts investigated and illustrate their effectiveness in improving digital banking and customer experience. Table 5.9 shows the main categories and number of content units, percentage coding and their ranking. The content units are key words, used to measure the categories.

Categories	Content units	% code units	Code Ranking
Digital banking Channels (DBC)	662	16.53	2
Financial Services via Digital Banking (FSDB)	531	13.25	4
Innovation in Digital Banking (IDB)	448	11.18	5
Trend in Investment and Acceptance (TIADB)	371	9.26	7
Improving Customer Experience (ICEDB)	611	15.25	3
Improving Financial Performance (IFPDB)	747	18.65	1
Operational and Security Risks (OSRDB)	405	10.11	6
Employee and Customer Engagement (ECEDB)	231	5.77	8

Table 5.9: Coding Units from Categories

Figure 5.9 shows the percentage of content unit coding in order of frequency ranking.

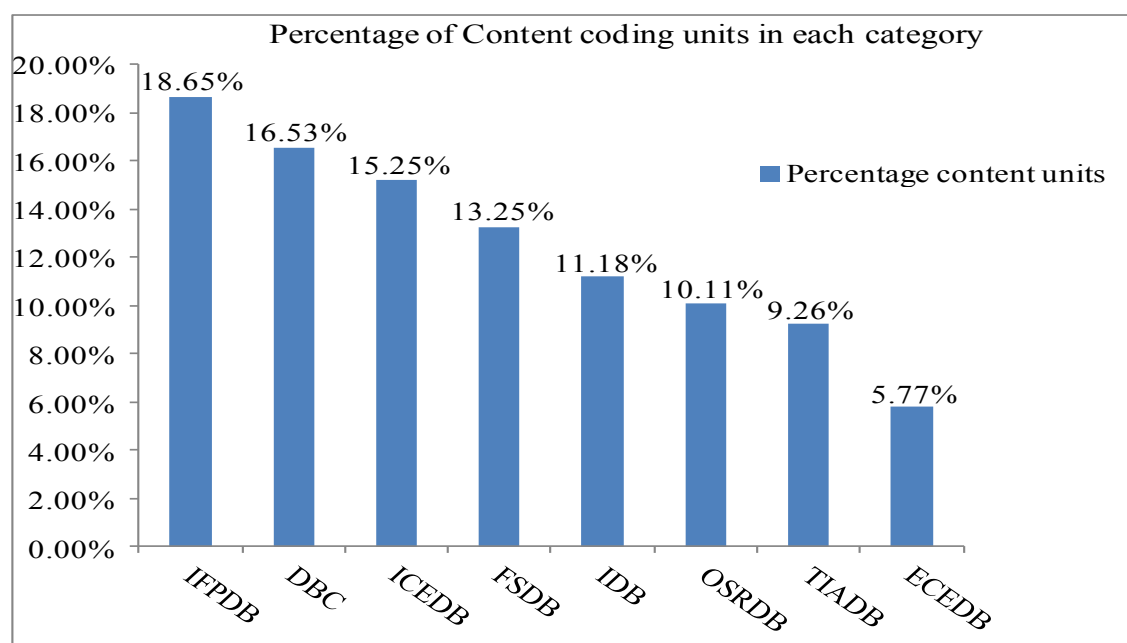


Figure 5.9: Frequency Occurrence of Units in Categories

Figure 5.9 is organised in code ranking order, showing the frequency of occurrence of content units in the categories, which gives further research insight. The result indicates, for instance, there are 662 occurrences of ‘DB Channels’ (e.g. telephone, ATM, internet and mobile banking), showing the level of importance attached to them in bank reporting and strategy. This represents 16.53% of the coded content units. ‘Financial Services’ via digital banking (e.g. transfer money, view/print statement, balance check, pension, mortgage, savings, insurance, loans, shares, payments and credit cards)

represents 13.25%. These touch different areas of banking, making digital innovation a corner stone of bank strategy, to enable various services to take place.

‘Innovation in DB’ (e.g. Bizcrowd, contactless card, mobile apps, Interactive Voice Response (IVR), VoiceLab, Pingit, Voice Biometrics, internet app, web chat and Pay-m) represents 11.18%. These show examples of innovative services provided through digital banking channels, which banks use to differentiate themselves and add value to the services offered to customers. ‘Trend in Investment and Acceptance of DB’ (e.g. R&D, investment, uptake, adoption, download, online customer, active users, logons, transactions and paperless users) represents 9.26%. This supports the evidence that investment in R&D, digital banking innovation and uptake have increased in recent years. As banks innovate to make services easy to use, customers are adopting them due to their convenience and the value derived.

‘Improving Customer Experience through DB’ (e.g. quicker, useful, easy to use, convenient, simple, rewarding, satisfaction, loyalty, speed, personalisation, brand, choice, cheaper, trust, flexibility, and capture and retain customers) represents 15.25%. This supports the evidence that digital banking is having a positive impact on customer experience and profitability through customer loyalty and then CLV. ‘Improving Financial Performance through DB’ (e.g. profitability, ROE, NIM, ROIC, efficiency, Cost-to-Income ratios, sales and revenue growth, market share, lower cost, productivity) represents 18.65%. This result supports the evidence that digital banking innovation enables value-added services to be developed, which can positively impact on financial performance, through enhancement on customer experience, satisfaction and loyalty, hence showing their relationships.

‘Operational and Security Risks with DB’ (e.g. security, cyber-crime, cyber-threats, fraud, penalties, reputation, resilience, cyber-attack and fines) represents 10.11%. These risks affect customers’ and investors’ confidence, brand and trust, and negatively impact on customer experience and financial performance. ‘Employee and Customer Engagement in DB’ (e.g. awareness, knowledge, skill, e-learning, feedback, training, engagement, motivation and development) represents 5.77%. The result shows that employee and customer engagement impact on customer experience, and operational risks. Employees need to obtain customer requirements and innovate in digital banking to offer value-adding services and reduce risks, to improve financial performance.

These results have illuminated key content units to support and provide further evidence, making the research more robust.

5.5.4 Intercoder Reliability and Ranking Results

In the code ranking order, ‘Improving Financial Performance’ received the highest number of coding elements, followed by ‘DB Channels’, ‘Improving Customer Experience’ and then the rest. To provide intercoder reliability, an independent coder performed a similar coding and the level of agreement was measured (Cohen Kappa (k) = 0.829, $p < 0.05$). This is considered an acceptable result (Neuendorf, 2002; Landis & Koch, 1977; Seuring & Gold, 2012).

5.6 Exploring Relationships between the Results

This section summarises the interrelationship of the main categories, by combining the results to further address the research question. Figure 5.10 depicts the relationship between the themes, and a conceptualised model of banks’ general perceptions of digital banking on customer experience and financial performance, from UK banks’ reports.

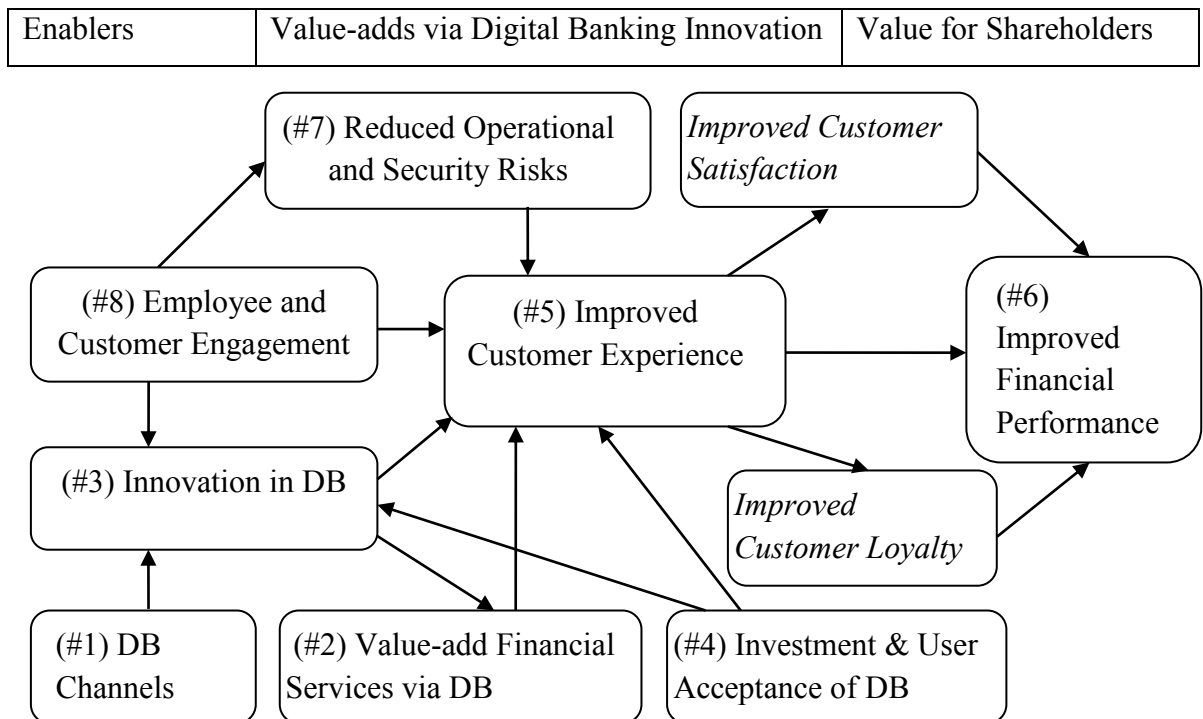


Figure 5.10: Model showing the Relationship between the Report Themes

The model shows that ‘Employee and Customer Engagement’, ‘Reduced Operational and Security Risks’, ‘Value-added Financial Services’, ‘Innovation in DB’ and

‘Investment and Customer Acceptance of DB’ lead to improved ‘Customer Experience’. It also shows that ‘Investment’ in R&D and customer ‘Acceptance’ of ‘DB’ channels lead to ‘Innovation in DB’, which in turn leads to value-added ‘Financial Services’. Banks are investing to keep up with customers’ uptake of and demand for better services. Through innovation, various value-added services are created which improve ‘Customer Experience’. ‘Improved Employee and Customer Engagement’ leads to better ‘Innovation in DB’ and ‘Reduced Operational and Security Risks’. The result shows that ‘Improved Customer Experience’, satisfaction and loyalty lead to ‘Improved Financial Performance’.

5.7 Discussion and Implications

Theoretically, the research contributes knowledge to other service improvement, satisfaction and financial performance related studies (Evanschitzky et al., 2012; Keisidou et al., 2013; Jun & Palacios, 2016), in UK digital banking through banks’ perceptions. Other research has shown that good customer experience leads to customer satisfaction and loyalty in non-digital banking (Klaus & Maklan, 2013). This research demonstrated how UK banks are adapting to current customer behaviour and the relevance of digital banking in improving customer experience and financial performance. It has implications in other studies that link customer loyalty to profitability using CLV (Reichheld, 2003; Valenzuela et al., 2014), by adding the positive impact of digital banking to financial performance via loyalty and efficiency generation.

The research contributes to other studies on digital banking (Chong et al., 2010; Lee & Chung, 2009), by showing that the drive for value-added services, customer experience improvement, ease of use and consumer convenience through digital innovation increases digital banking uptake and financial performance. It shows that engagement of employees and customers helps reduce operational risks, and improves customer experience and financial performance. This extends knowledge to other research that attributes employee satisfaction to customer satisfaction and profitability improvement (Glaveli & Karassavidou, 2011; Yee et al., 2010). The research insight extends current theories to incorporate improvement in digital banking, customer experience and profitability for future studies.

The research has practical implications. It shows the relevance of telephone, internet and mobile as the major digital banking channels among the banks for providing services. There are other ways like card and ATM, through which customers can conveniently access services. Banks should see these channels as media, and concentrate on developing innovative services that differentiate their brands, keeping them ahead of competition and offering superior services. There is evidence that digital banking can be used to perform most banking functions. Therefore, banks can expand services to other areas, currently under-served (e.g. cheque payment). Results show that customers and banks are looking for value from digital banking, however banks must invest and innovate to offer value-added services to customers regarding convenience, experience and satisfaction, to be rewarded in return, through customer loyalty, operational efficiencies and financial performance improvement. Thus, banks should improve customer experience to achieve their business objectives.

M-banking uptake is gaining momentum, so banks should pay attention to this market to leverage the flexibility it brings for customers. Evidently, banks are investing in digital banking innovation to transform their business to meet customer needs, achieve efficiency, reduce costs, and improve customer experience and profit. As banks invest to make things better, customers are responding by showing an increase in digital banking uptake. As a result, banks are closing branches and transferring labour intensive services to digital platforms. This result contributes to other studies (BBC, 2016; Stone & Laughlin, 2016; French et al., 2013), by highlighting why UK banks are closing branches as customer numbers decline.

Results show that mobile and internet banking among customers have increased significantly over the years. Banks can accelerate this trend even further by offering superior, cost-saving and flexible services through innovation. They need to engage more with employees and customers through training and feedback to understand how customers' needs can be met and offer distinctive services with digital banking. Digital banking helps improve customer experience and financial performance (e.g. cost reduction, NIM, ROE, Cost-to-Income ratio and profitability), however banks can learn to attribute profit accrued from it in their financial reporting. Banks can apply CLV and customer point of contact to measure profits attributed to different digital channels.

Results indicate that there are risks associated with digital banking like security risk, internet crime and fraud, which affect banks' brand and reputation, customer trust and attract fines from regulators. With the rise of social media, information can be circulated instantly on the internet, which can have a damaging effect (e.g. the RBS computer crash in 2014). The customer sentiment effect related to negative news can affect banks, therefore they should invest to make their digital systems very secure and robust, and reduce risks to avoid negative impact on customer experience, profitability and shareholder confidence. Information should be shared with employees and customers, to assist in improving digital innovation, experience, mitigating risks and understanding how they contribute to banks' performance.

5.8 Conclusion

This chapter investigated UK banks' perceptions of digital banking innovation with regard to customer experience and financial performance. The result indicates that banks are adopting digital banking across their divisions, enabling customers to access services. Banks are differentiating their brand through digital innovation, by offering unique services (e.g. Pingit), allowing customers to carry out different transactions. Evidently, banks pursue the most efficient way of fulfilling customer services, which can reduce servicing costs and risks, and increase productivity. Clearly, the majority of banking services can benefit from digitisation, which is convenient, cost efficient, empowers customers to bank 'anytime', adds value and offers the right customer experience. In the current market, customers and banks seek value, and digital banking innovation has become a good strategy to achieve this, as banks' strive to improve customer experience and financial performance.

The trend of customers' digital banking acceptance and investment in R&D by banks, since the financial crisis of 2008, has been upwards. Therefore, keeping pace with increasing customer expectations is a challenge to banks. Evidence shows they are turning to digital banking to meet changing customer needs, who expect to manage their finances from any location through digital devices. Therefore, satisfying customers through a good customer journey should be the aim of every bank's experience strategy, via simplification, automation, ease of use and convenience for customers.

Evidently, UK banks are embarking on digital banking, as a way to deliver quality services and improve efficiency, helping them improve financial performance. Their

profit ratios improved or remained stable between 2008 and 2014, due to moving processes to digital banking and reducing branches. This is in spite of investment and fines from regulators. Some banks have attracted new and retained existing customers, reducing marketing costs and complaints, and increasing sales, market share, customer loyalty and profit using digital banking. They are maximising their recurrent revenue, showing that high customer loyalty improves profitability through CLV. This clearly demonstrates that banks can utilise digital banking to improve customer experience, deliver cost savings and enhance financial performance.

With increasing digital banking uptake, customers and banks face the complexity of digital information management, cyber-crime and security risks, resulting in complaints and fines. Data storage faces a growing threat from cyber-attack which can result in the loss of sensitive information. Also, service outsourcing and social media mean that banks are no longer in full control of their data and information. This means that security breaches and loss of confidential customer data could damage the bank's brand, showing that operational and security risks affect customer experience and financial performance, which banks need to consider.

The research evidence suggests that improving employee and customer engagement enables employees to have the right skill sets, be satisfied and knowledgeable, and encourage them to innovate, and improve customer experience and financial performance using digital banking.

Finally, the research concludes that offering innovative digital banking services positively impact on customer experience, satisfaction and loyalty, and banks' financial performance. The research provides both qualitative and quantitative results, which corroborate each other and bring new insight, in answering the research question, developing the model and demonstrating digital banking impact in UK banks to help future studies. This approach ensures that important issues are captured to give the results rigorous and in-depth meaning.

CHAPTER SIX – EXPLORING CUSTOMERS’ PERCEPTIONS OF DIGITAL BANKING SERVICES EFFECT ON CUSTOMER EXPERIENCE AND FINANCIAL PERFORMANCE

6.1 Introduction

This chapter investigates UK bank customers’ views about digital banking uptake and customer experience, and how these could affect financial performance, using questionnaire techniques. The study addresses the research objective and question:

- *How do digital banking services generally affect customer experience and bank financial performance?*

The research uses organisational performance, service marketing and customer experience theories, supported by technology uptake theories from digital banking perspectives. The research objective and early research information have also been used to design questionnaires. Measuring service quality and its effects on customer satisfaction and loyalty (Klaus & Maklan, 2013), and financial performance (Keisidou et al., 2013), has been studied in other services. Different factors influence t-banking uptake in Jordanian banks (Alalwan et al., 2016). This research extends knowledge to digital banking experience studies in UK banks.

The chapter starts with research design, the proposed model, descriptive statistics containing customer profile information, and results. This is followed by an Exploratory Factor Analysis, Correlation Analysis and tests on the factors of customer experience and financial performance. Next is the model test using Regression Analysis and the SEM technique, followed by analysis of customer experience factors against customer demographic data. Finally, there is the open-ended question data analysis, followed by research discussion, implications and conclusion.

6.2 Research Design

A web-based questionnaire, comprising closed and open-ended questions, was sent to 680 selected participants, asking them about their digital banking experience. All questions, with the exception of NPS and customer profile, were measured on a 5-point

Likert scale. Customers were asked an 11-point Likert scale question to measure NPS and estimate CLV. The questionnaire is included in Appendix F.

These results evaluate the relationship between digital banking, customer experience and banks' financial performance based on their key financial ratios (common among the six banks from the financial reports) and CLV. For financial ratios, ROE, NIM and Cost-to-Income ratio were used, while for CLV, NPS of six UK banks was used. The first section of this chapter contains results of the closed-ended questions, while the second section comprises results of the open-ended questions. The investigation addresses the research question.

6.3 Proposed Model

After an extensive examination of previous studies and literature in Chapters Two and Three, a conceptual model was proposed, shown in Figure 6.1, which will be tested. The research has taken a broad view to analyse the attributes of customer experience, satisfaction, loyalty and financial performance, by combining all these characteristics in UK digital banking study. The hypotheses are:

- *There is a positive relationship between 'Perceived Value' (H1), 'Convenience' (H2), 'Functional Quality' (H3), 'DB Service Quality' (H4), 'Brand Trust' (H5), 'Employee-Customer Engagement' (H6), 'Perceived Risk' (H7), 'Perceived Usability' (H8), 'DB Innovation' (H9), and 'Customer Experience' of digital banking.*
- *There is a positive relationship between 'Customer Experience', 'Customer Satisfaction' (H10) and 'Customer Loyalty' (H11).*
- *There is a positive relationship between 'Customer Experience' (H12), 'Customer Satisfaction' (H13), 'Customer Loyalty' (H14) and 'Financial Performance'.*
- *There is a positive relationship between 'Customer Satisfaction' (H15) and 'Customer Loyalty'.*

Detailed hypotheses development is included in Appendix A. In the model 'em' symbolises the dependent variable while the rest are independent variables, 'BK' means Banking, 'Egt' Engagement and H is Hypothesis.

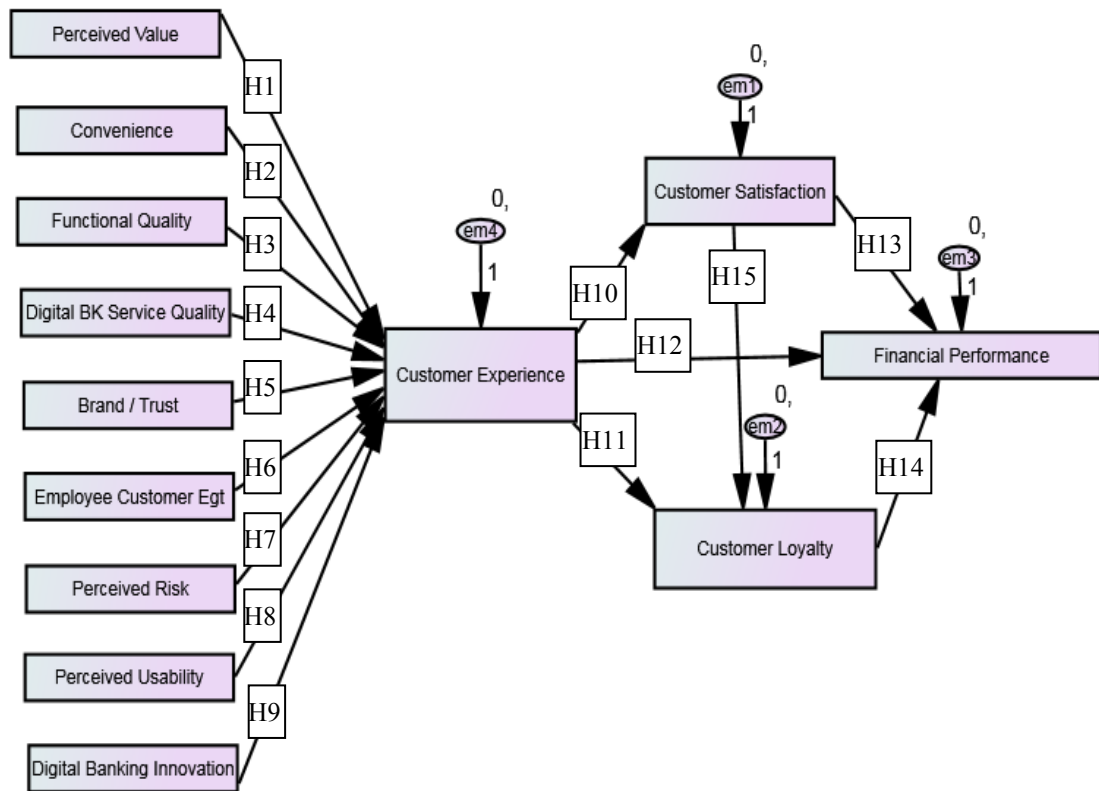


Figure 6.1: Proposed Model

The research uses different analysis techniques to test hypotheses on the factors so that methodological triangulation can be ascertained, to improve robustness.

6.4 Analysis and Results

6.4.1 Respondents' Profile and Frequency Results

This section presents some descriptive analysis results. Table 6.1 shows the respondents' profile data and results of some important questions as percentages and frequencies.

Measure	Customer Data	Frequencies	%
Gender	Male	145	70.40
	Female	61	29.60
Age Group	15-24	14	6.80
	25-34	51	24.80
	35-44	70	34.00
	45-54	59	28.60
	55-64	11	5.30
	65+	1	0.50
Educational Level	O Level/GCSE	8	3.90
	College	34	16.50
	University	164	79.60
Customers by Bank	Lloyds/Halifax	59	28.60

	RBS/NatWest	29	14.10
	HSBC	31	15.00
	Barclays	39	18.90
	Santander	18	8.70
	Virgin Money	6	2.90
	Other	24	11.70
Length of DB Usage	Less than 1 year	14	6.80
	1 to 5 years	84	40.80
	6 to 10 years	78	37.90
	11+ years	30	14.60
Customers' Years of Bank Loyalty	Less than 1 year	11	5.30
	1 to 5 years	58	28.20
	6 to 10 years	45	21.80
	11+ years	92	44.70
Frequency of DB Usage	Daily	70	34.00
	Weekly	102	49.50
	Monthly	25	12.10
	Less Often	9	4.40
Most used DB Channels	Telephone Banking	53	14.90
	Internet Banking	180	50.60
	Mobile Banking	117	32.90
	Other	6	1.70
DB and Financial Services	Savings	108	9.40
	Check Balance	181	15.80
	Pay Bills	147	12.80
	Print Statement	52	5.00
	Transfer Funds	172	15.00
	Standing Order	105	9.50
	Current Account	165	14.40
	Buy Insurance	27	2.40
	Stock/Shares	21	1.80
	Direct Debit	134	11.70
	Mortgages	28	2.40
	Other	5	0.40
NPS	Detractors (0-6)	43	20.87
	Passives (7-8)	85	41.26
	Promoters (9-10)	78	37.86
Note: n=206	Overall Bank NPS		16.99

Table 6.1: Bank Customer Profile and Frequency Information

Table 6.1 shows a gender distribution of (70.40%) males and (29.60%) females, enabling it to accommodate male and female opinions. About 96% of the respondents have college and university level education, making them literate enough to use digital

banking effectively. Telephone, internet and mobile banking are the major channels for accessing services. Regarding digital banking channels usage, the order of prevalence is internet (50.60%), mobile (32.90%) and telephone (14.90%). Other types of digital banking accounted for 1.70%. The use of telephone banking seems to be on the decline, while m-banking is increasing. Many customers use digital banking on a weekly basis (49.50%), followed by daily (34.00%) and then monthly (12.10%). The result also shows that customers use digital banking to carry out various services: check balance (15.80%), followed by fund transfer (15%), current account (14.40%), pay bills (12.80%), direct debit (11.70%) and standing order (9.50%).

Most of the customers have used digital banking for between 1 to 5 years (40.80%), followed by 6 to 10 years (37.90%), and then 11 years and above (14.60%). This indicates that digital banking trend has gone up within the last 5 years, showing the change in customers' behaviour and reflecting the high digital banking uptake noted in the literature.

Concerning loyalty, many customers have been with their bank for 11 years and above (44.70%), followed by 1 to 5 years (28.20%) and 6 to 10 years (21.80%). Lloyds banking customers represented 28.64%, followed by Barclays (18.90%), HSBC (15.00%), RBS (14.10%), Santander (8.70%) and then Virgin Money (2.90%). This also reflects the size of these banks' in the UK, regarding their customer base and digital banking usage. Among the customers, NPS values are Detractors (20.87%), Passives (41.26%) and Promoters (37.86%). These are scores in response to the NPS question, which shows a potential for converting UK (digital) bank customers to loyal promoters, if individual banks pay attention to customers' needs. The NPS was calculated based on customers' rating of each bank, used to estimate the CLV.

6.4.2 Descriptive Statistics Results

This section presents the results of mean, median, mode and standard deviation of data, showing the distribution of responses from questions. These indicate where the responses to each question lie on the scales (Minimum 1 and Maximum 5; Minimum 0 and Maximum 10). The mean values of customers' responses range between 3.04 and 4.72, showing they are more in 'Agreement' than 'Disagreement'. For instance, most customers agreed that digital banking is convenient and it saves them time. These have mean values of 4.70 and 4.72 respectively, while median and mode are each 5. On the

NPS question, the mean and mode values are 7.79 and 8 respectively, which means the majority of respondents fall within the passive category. The standard deviation values range between 0.54 to 1.07 and t-value estimates between 78.43 to 128.00. The distribution of responses is included in Appendix G.

6.4.3 Frequency and Percentage Distributions of Key Responses

This section shows frequency and percentage distribution of some key responses. Figure 6.2 shows major digital banking channels used by customers.

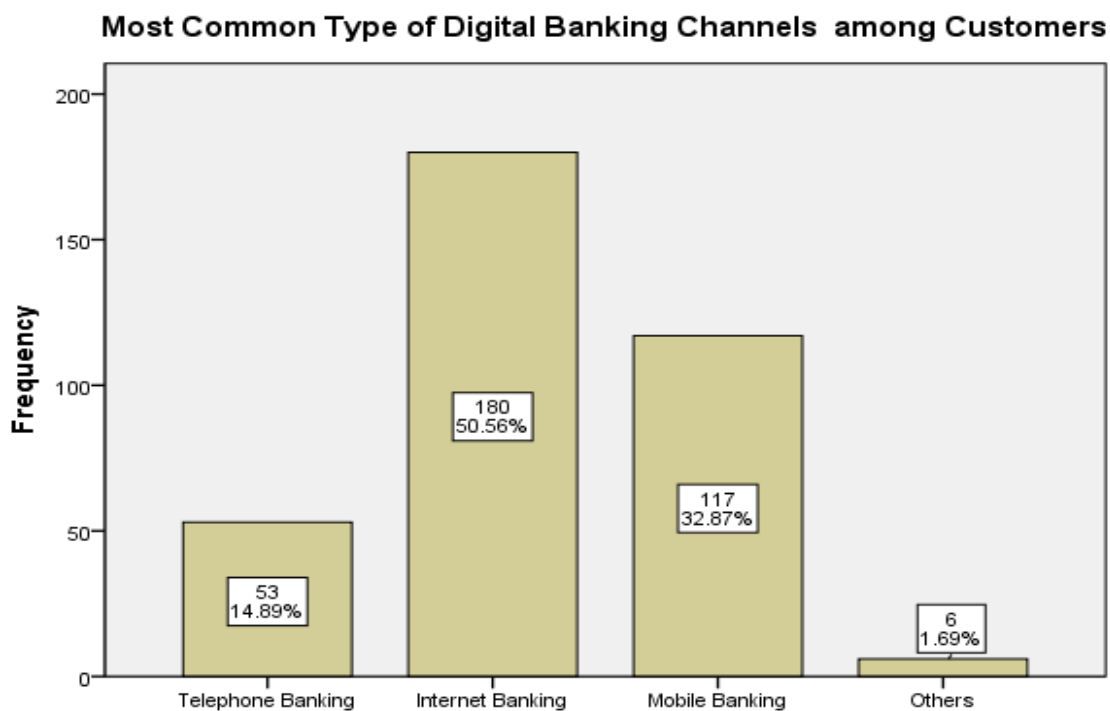


Figure 6.2: Bar Chart of Digital Banking used by Respondents

Figure 6.3 presents digital banking usage according to frequency of usage, showing how often respondents perform transactions.

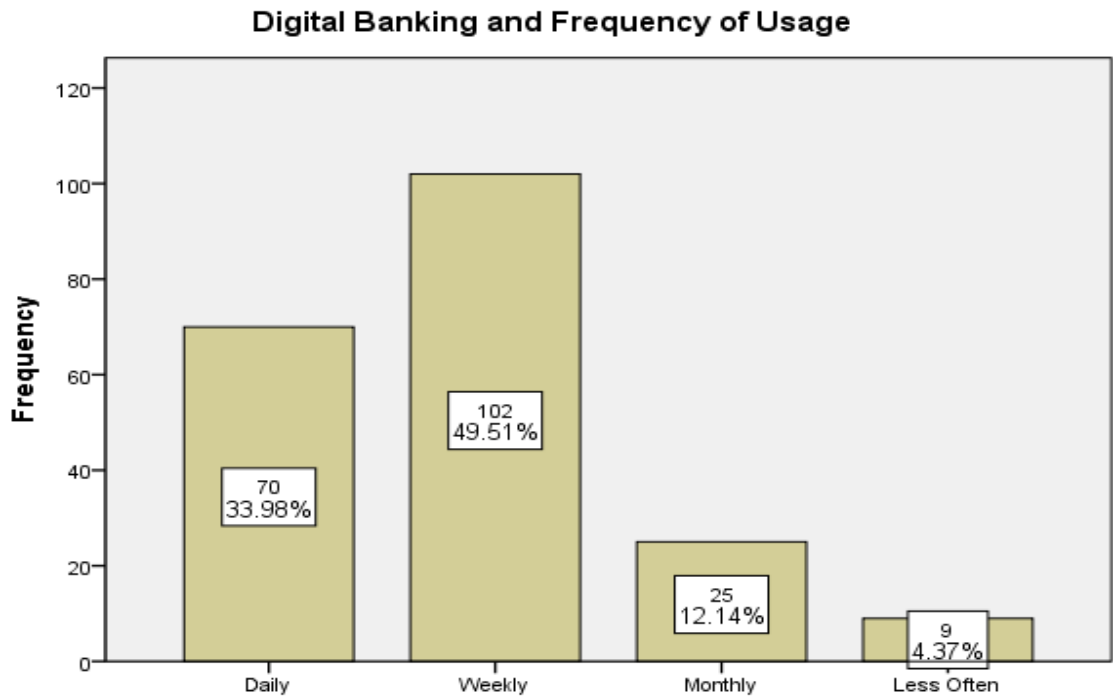


Figure 6.3: Bar Chart of Digital Banking Usage and Frequency

Figure 6.4 presents the digital banking acceptance trend within the banks.

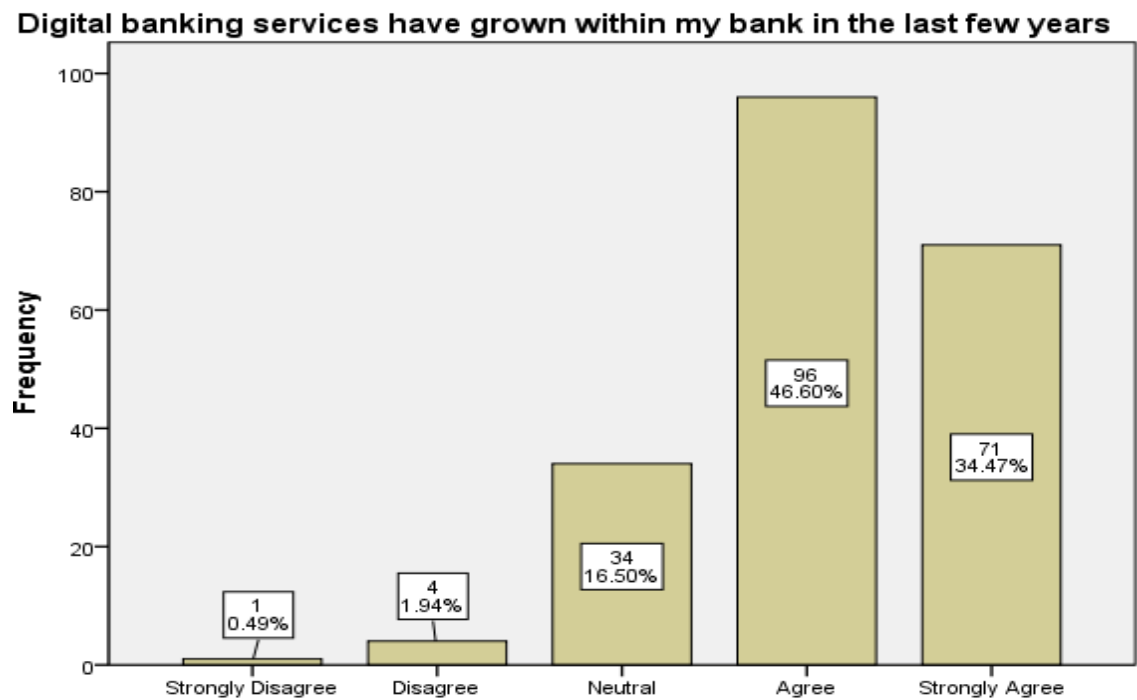


Figure 6.4: Bar Chart of Digital Banking Acceptance Trend

Figure 6.5 shows opinions on how digital banking saves customers money, as they use branches less.

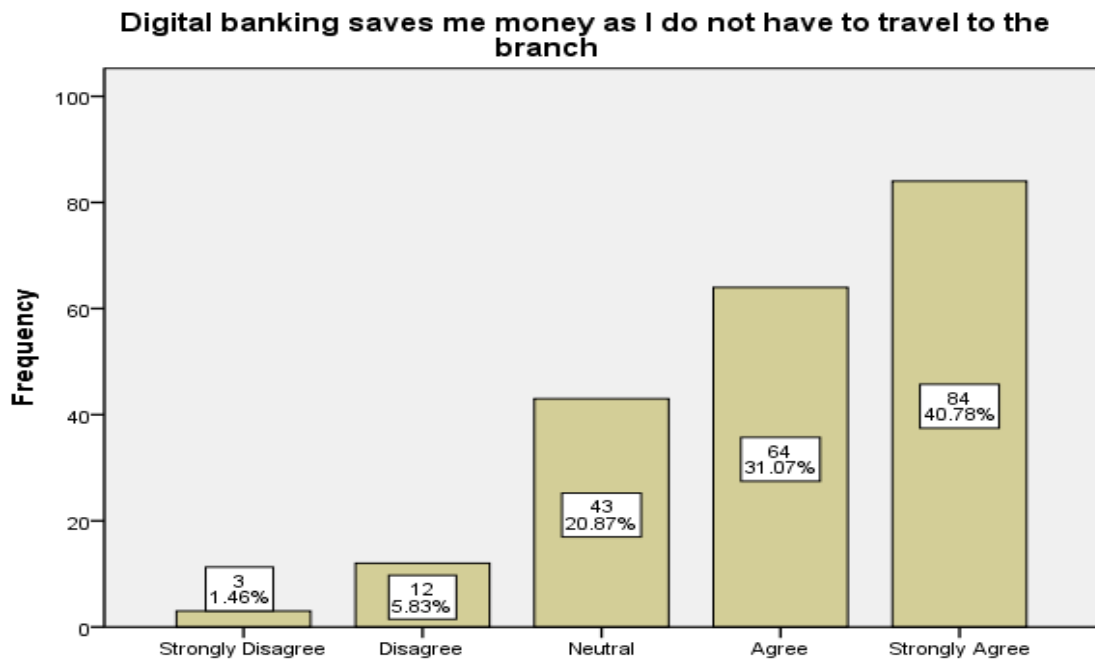


Figure 6.5: Bar Chart of Digital Banking versus Savings

6.5 Exploratory Factor Analysis Results

Exploratory Factor Analysis (EFA) was used to structure the questionnaire data into principal components to test the model hypotheses. EFA is performed to assess construct validity, concerning convergent and discriminant validity (Liang et al., 2009). It summarises information from a large group of variables into a smaller manageable number by allocating them into distinct factors without significant loss of meaning (Hair, Anderson, Tatham & Black, 1998). EFA is performed using PCA and Varimax rotation for examining factors which assumes they are unrelated to each other. Minimum value criteria for deleting items that do not meet criteria are factor loadings (0.50) (Karatepe et al., 2005), cross loadings (0.40) or communalities (0.30) (Garg et al., 2014). For good factor analysis and sampling adequacy, the value of Kaiser-Meyer-Olkin (KMO) statistic must be at least 0.60 (Tabachnick & Fidell, 2001).

6.5.1 Definition of Items and Content Validity

Content Validity ensures that questionnaire items are valid, so a thorough review of the existing literature and a confirmatory pilot test involving another group of respondents was carried out (Keisidou et al., 2013; Kim, Ferrin & Rao, 2008). This improves framing of the questionnaire items, so they are understood by different respondents and fulfil the research objective. The dimensions, factors, related literature and items used are summarised in Appendix B.

6.5.2 Unidimensionality, Reliability, Convergent and Discriminant Analyses

The two methods of assessing Unidimensionality of factors are EFA and Confirmatory Factor Analysis (CFA). CFA is necessary where the structure model does not incorporate previously examined literature information (Keisidou et al., 2013). EFA was performed, and from the 43 items used, 13 factors were produced. The cross loadings and communalities > 0.4. The overall KMO is 0.866 and significant ($p < 0.05$), showing that factor analysis is possible on the sample. The KMOs of all composite factors are > 0.6. The result justifies using EFA since all the criteria are met. Table 6.2 shows the factor and reliability analyses results. ‘TVE’ means Total Variance Explained.

Concept Factors	Items	Load-ings	KMO	TVE	Bartlett's Test Significance	Comu-nalities	Cronbach α
Perceived Value (PV)	Q3	0.774	0.744	57.888	0.000	0.714	0.736
	Q6:	0.584				0.617	
	Q8:	0.568				0.602	
	Q36:	0.538				0.631	
Convenience (CONV)	Q4	0.790	0.732	82.423	0.000	0.791	0.893
	Q5:	0.780				0.802	
	Q7:	0.680				0.699	
Functional Quality (FQ)	Q11:	0.590	0.689	70.140	0.000	0.588	0.786
	Q19:	0.650				0.678	
	Q26:	0.684				0.665	
Digital Banking Service Quality (DBSQ)	Q21:	0.748	0.690	66.760	0.000	0.777	0.749
	Q25:	0.576				0.670	
	Q27:	0.599				0.663	
Brand Trust (BT)	Q32:	0.550	0.615	54.400	0.000	0.504	0.754
	Q33:	0.718				0.686	
	Q34:	0.640				0.696	
Employee Customer Engagement (ECE)	Q12	0.586	0.606	50.799	0.000	0.628	0.706
	Q13:	0.768				0.659	
	Q31:	0.501				0.582	
Perceived Risk (PR)	Q28:	0.706	0.648	70.577	0.000	0.647	0.778
	Q29:	0.788				0.744	
	Q30:	0.739				0.747	
Perceived Usability (PU)	Q9:	0.767	0.691	72.486	0.000	0.770	0.803
	Q17:	0.736				0.721	
	Q22:	0.668				0.704	

Digital	Q10:	0.727	0.622	62.712	0.000	0.764	0.712
Banking	Q37:	0.783				0.745	
Innovation	Q38:	0.598				0.735	
(DBI)							
Customer	Q14:	0.771	0.667	66.022	0.000	0.699	0.736
Experience	Q15	0.568				0.591	
(CEQ)	Q16	0.680				0.589	
Customer	Q18	0.671	0.714	76.267	0.000	0.668	0.844
Satisfaction	Q20:	0.783				0.774	
(CSAT)	Q35:	0.765				0.670	
Customer	Q23:	0.797	0.689	64.362	0.000	0.767	0.710
Loyalty	Q24:	0.616				0.595	
(CLY)	Q39:	0.553				0.593	
Financial	ROE	0.795	0.704	81.025	0.000	0.710	0.882
Performance	NIM	0.893				0.861	
(FP1)	CostRatio	0.863				0.839	
Financial	NPS						
Performance	(CLV)						
(FP2)	Detractor	0.718	0.690	71.853	0.000	0.668	0.764
	Passive	0.859				0.818	
	Promoter	0.742				0.649	

Note: n=206, *p<0.05, **p<0.01, Over all KMO=0.866

Table 6.2: Exploratory Factor and Reliability Analysis Results

Reliability item analysis refers to the internal consistency of the factors, measured using Cronbach's coefficient α (Churchill, 1979; Fornell & Larcker, 1981). For all factors, coefficient α was computed and all values range from 0.706 to 0.893. The values of α exceed the minimum 0.7 reported in Nunnally (1978) and 0.6 reported in Garg et al. (2014). The result shows a construct reliability which indicates internal consistency. Therefore, improving the value of α for each cluster of items is not required. It shows the unidimensionality of the measures, as each item is related with only one fundamental construct (Garg et al., 2014; Gerbing & Anderson, 1988).

Convergent validity is the degree to which several methods of measuring a factor provide the same output (Keisidou et al., 2013). The acceptable value of convergent validity is 0.5 for all item loadings, while Kim et al. (2008) and Garg et al. (2014) added that all items should load to their predestined factor with an eigenvalue > 1 , which was satisfied. In Table 6.2, all items bear loadings > 0.5 which complete the criteria about convergent validity.

Convergent validity is also examined by identifying whether the loading of each indicator is significant to its underlying construct (Garg et al., 2014; Peter, 1981). Results show that KMO is significant ($p < 0.05$) and TVE values range from 50.80 to 82.42, which means that more than half of the variance is extracted. The NPS Detractors, Passives and Promoters range from 15.29 to 17.49, 34.63 to 38.73 and 32.68 to 36.93 respectively for the 6 banks. The TVE value range, factor loadings above 0.5 and range of t-values also prove convergence of items (Garg et al., 2014). All these estimates indicate a good degree of convergence validity between the items within the instruments.

The **discriminant validity** is about dissimilar constructs and items used in factor analysis being different (Keisidou et al., 2013). Table 6.3 was constructed to meet these criteria, so the factor correlation coefficients along the diagonal are compared with Cronbach's α values. The Cronbach's α values of the factors should be higher than the correlation values, indicating that the correlation among the factors is lower than the Cronbach's α (Churchill, 1979; Keisidou et al., 2013). The correlation values are below the maximum α (0.893), confirming discriminant validity criterion.

6.6 Correlation Analysis of the Factors

The proposed model was investigated using Multivariate Analysis (e.g. Correlation, Regression and SEM analyses), which has the ability to simultaneously examine a number of dependent linear relationships, where one or more variables are both dependent and independent (Hair et al., 1998). Table 6.3 presents the Correlation Analysis showing the nature of relationship among different customer experience attributes, satisfaction and loyalty, and two financial performance measurements, Financial Ratios (FP1) and NPS (CLV) (FP2).

Mean	SD		PV	Conv	FQ	DBSQ	BT	ECE	PR	PU	DBI	CSAT	CLY	CEQ	FP1	FP2
17.49	2.30	PV														
14.12	1.58	Conv	0.768**													
12.27	1.98	FQ	0.704**	0.630**												
11.55	2.11	DBSQ	0.651**	0.558**	0.720**											
11.00	1.94	BT	0.467**	0.324**	0.469**	0.617**										
11.93	1.73	ECE	0.509**	0.401**	0.421**	0.400**	0.430**									
10.41	2.24	PR	0.471**	0.349**	0.520**	0.641**	0.554**	0.351**								
12.54	2.00	PU	0.706**	0.596**	0.802**	0.793**	0.488**	0.360**	0.493**							
11.99	1.99	DBI	0.660**	0.535**	0.702**	0.666**	0.499**	0.451**	0.481**	0.668**						
12.15	1.97	CSAT	0.685**	0.551**	0.806**	0.804**	0.520**	0.351**	0.492**	0.847**	0.679**					
12.05	2.20	CLY	0.698**	0.593**	0.730**	0.783**	0.581**	0.481**	0.479**	0.783**	0.703**	0.761**				
11.59	2.12	CEQ	0.663**	0.538**	0.715**	0.659**	0.504**	0.564**	0.427**	0.713**	0.597**	0.682**	0.718**			
192.96	78.70	FP1	0.298**	0.311**	0.228**	0.214**	0.149*	0.205**	0.145*	0.211**	0.341**	0.169*	0.262**	0.230**		
18.42	14.42	FP2	0.174*	0.192**	0.227**	0.296**	0.167*	0.089	0.251**	0.216**	0.247**	0.212**	0.239**	0.130	0.570**	

Note: n=206, *p<0.05, **p<0.01,

Significance (2-tailed)

Table 6.3: Correlation Analysis of the Factors

Table 6.3 shows strong positive correlations among the factors. For instance, there is a significant correlation among ‘Perceived Value’, ‘Convenience’, ‘Functional Quality’, ‘DB Service Quality’, ‘Brand Trust’, ‘Employee-Customer Engagement’, ‘Perceived Risk’, ‘Perceived Usability’, ‘DB Innovation’, ‘Customer Satisfaction’, ‘Customer Loyalty’, and ‘Customer Experience’. The four dependent variables: ‘Customer Experience’, ‘Satisfaction’ and ‘Loyalty’, and ‘Financial Performance’ measures (FP1 and FP2) show strong correlation with the majority of other variables. This means that these factors are important mediators of customers’ perceptions of the value they derive from digital banking, and its impact on financial performance. There is no significant correlation between ‘Customer Experience’ and ‘Financial Performance (FP2)’. This result may mean that the information on customer experience is implicit in the strong positive correlations among customer experience, satisfaction and loyalty (0.68 and 0.72 respectively). In sum, the above results partially confirm most of the research hypotheses, but this requires objective tests using other multivariate analyses.

6.7 Testing Factors of Customer Experience and Digital Banking Uptake

A Chi-Square test was conducted on each factor to ascertain their level of significance in determining digital banking uptake. This was conducted using cross tabulation to help establish relationships on how the factors generally affect customer uptake. The hypotheses are that these factors affect customers’ decisions, as illustrated in Figure 6.1. Table 6.4 shows the test results.

	Digital Banking Factors	χ^2	df	Significance
H1	Perceived Value	144.32**	12	Accept
H2	Convenience	19.41**	8	Accept
H3	Functional Quality	16.95*	8	Accept
H4	DB Service Quality	38.93**	8	Accept
H5	Brand Trust	50.48**	8	Accept
H6	Employee-Customer Engagement	87.46**	8	Accept
H7	Perceived Risk	81.41**	8	Accept
H8	Perceived Usability	15.16*	8	Accept
H9	DB Innovation	10.80	8	Reject
H10	Customer Satisfaction	51.92**	8	Accept
H11	Customer Loyalty	141.10**	8	Accept
H12	Customer Experience	61.16**	8	Accept

Note: n=206, *p<0.05, **p< 0.01

Table 6.4: Chi-Square Test of the Factors

Table 6.4 shows a significant relationship between all factors and customer uptake of digital banking, with the exception of ‘DB Innovation’. This means that customers will accept digital banking due to perceived value, convenience, functional quality, service quality, brand trust, good usability, proper employee engagement with customers, with minimal risk and the overall experience being acceptable. It also means that if the overall digital banking experience is met, customers are satisfied and loyal to the bank.

6.7.1 Testing Customer Demographical Data

Chi-Square tests, shown in Table 6.5, were conducted on some customer categorical data, to see how digital banking usage affects their experience and loyalty. This will help banks to understand which customers to target in their marketing campaigns, customer demographics and how digital banking experience affects them.

Experience and Customer Category	χ^2	df	Significance
DB Experience and Frequency of Usage	40.28**	15	Accept
DB Experience and Banks	13.16	12	Reject
DB Experience and Age Groups	40.76**	20	Accept
DB Experience and Gender	0.72	4	Reject
DB Experience and Educational level	10.10	8	Reject
DB Experience and Length of bank Loyalty	12.87	12	Reject
DB Experience and Length of Usage	44.70**	12	Accept
Age Group and Frequency of DB Usage	16.21	15	Reject
NPS and Frequency of DB Usage	42.85**	6	Accept
NPS and Banks	13.16	12	Reject
NPS and Age Groups	17.79*	10	Accept
NPS and Gender	0.93	2	Reject
NPS and Educational Level	0.63	4	Reject
NPS and Length of bank Loyalty	11.90*	6	Accept
NPS and Length of DB usage	19.29**	6	Accept
Note: n=206, *p<0.05, **p<0.01			

Table 6.5: Chi-Square Test on Customer Demographical Data

Table 6.5 results show, for instance, there is a significant relationship between ‘Frequency of Use’, ‘Age Groups’, ‘Length of Usage’, and ‘DB Experience’. There is a significant relationship between ‘Age Groups’ and ‘DB Usage’; also, between ‘Frequency of DB Usage’, ‘Age Groups’, ‘Length of Bank Loyalty’, ‘Length of DB Usage’, and NPS. This means that customers who use digital banking frequently, for a long time and are of certain ages are likely to rate their banks highly.

There is no significant relationship between ‘Educational Level’, ‘Gender’, ‘Banks’, and NPS. These factors could not determine whether a user is likely to be a promoter, passive or detractor. There is no significant relationship between ‘Age Group’ and ‘Frequency of DB Usage’. However, customers between the ages of 35 – 44 use digital banking more on a daily basis, followed by 25 – 34. The age group 45 – 54 uses digital banking more on a weekly basis, followed by 35 – 44. On average more customers use digital banking on a weekly basis.

Figure 6.6 shows cross tabulation between banks' NPS categories and ‘Frequency of DB Usage’, which shows a significant relationship.

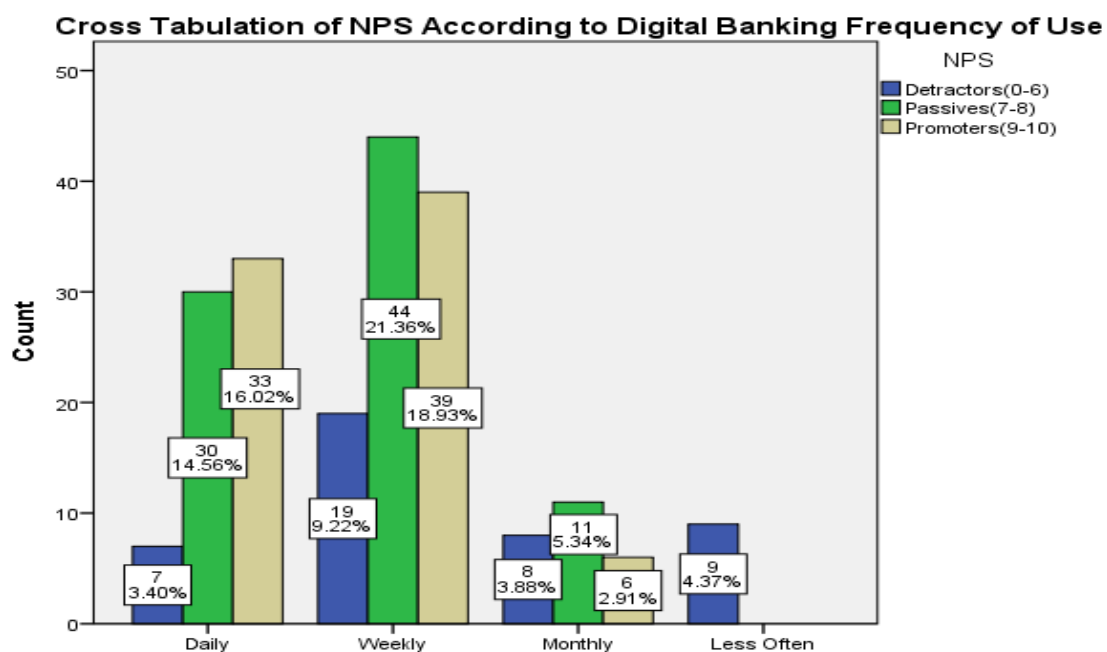


Figure 6.6: Banks NPS and Frequency of Digital Banking Usage

6.8 Testing Proposed Model using Regression Analysis

This section describes the multiple regression analysis (R) of the proposed model. Regression analysis tests how each factor explains customer experience and financial performance. It shows the relationship between variables and how changes in one variable predict another using a linear equation modelling technique.

The result estimates customer experience with 9 predictor variables, excluding customer satisfaction and loyalty. It is described using Mwangi and Iraya’s (2014) and Tabachnick and Fidell’s (2001) formats for reporting regression analysis results. This includes: correlation between the variables, the Unstandardised regression Coefficient

(b); Intercept (a); the Standardised regression Coefficient (β); the semi-partial (part) correlations (sr_i^2); and R^2 , adjusted R^2 and R.

Table 6.6 describes the goodness of fit results of a standard regression model, obtained by using ‘Customer Experience’ (CEQ) as the dependent variable while ‘Perceived Value’ (PV), ‘Convenience’ (Conv), ‘Functional Quality’ (FQ), ‘DB Service Quality’ (DBSQ), ‘Brand Trust’ (BT), ‘Employee-Customer Engagement’ (ECE), ‘Perceived Risk’ (PR), ‘Perceived Usability’ (PU) and ‘DB Innovation’ (DBI) are entered as independent variables.

	CEQ	PV	Conv	FQ	DBSQ	TB	ECE	PR	PU	DBI	b	β	$Sr_i^2_{(unique)}$
PV	0.66										0.12	0.13*	0.07
Conv	0.54	0.77									-0.05	-0.04	-0.03
FQ	0.72	0.70	0.63								0.29	0.27**	0.14
DBSQ	0.66	0.65	0.56	0.72							0.11	0.11*	0.05
BT	0.50	0.47	0.32	0.50	0.62						0.09	0.08	0.06
ECE	0.56	0.51	0.40	0.42	0.40	0.43					0.33	0.27**	0.22
PR	0.43	0.47	0.35	0.52	0.64	0.55	0.35				-0.08	-0.10*	-0.06
PU	0.71	0.71	0.60	0.80	0.79	0.49	0.36	0.49			0.29	0.27**	0.13
DBI	0.60	0.66	0.54	0.70	0.67	0.50	0.45	0.48	0.67		-0.03	-0.03	-0.02
Intercept (a)=1.82											R ² =0.66		
Mean	11.59	17.49	14.12	12.27	11.55	11.00	11.98	10.41	12.54	11.99	Adjusted R ² =0.64		
SD	2.12	2.29	1.58	1.98	2.11	1.94	1.73	2.24	2.00	1.99	R=0.811		
Note: n=206,		*p<0.05, **p<0.01											

Table 6.6: Regression Analysis of Customer Experience Variables

Table 6.6 shows a significant relationship between ‘Perceived Value’, ‘Functional Quality’, ‘DB Service Quality’, ‘Employee-Customer Engagement’, ‘Perceived Risk’, ‘Perceived Usability’, and ‘Customer Experience’. The result shows that 66% of variance in ‘Customer Experience’ was accounted for by the predictor variables. The adjusted $R^2=0.64$, $R=0.811$, $R^2=0.66$, $F(9, 196)=41.94$ and $p<0.01$. The findings indicate that the significant predictors of ‘Customer Experience’ are ‘Perceived Value’ ($\beta=0.13$, $t(196)=1.57$, $p<0.05$), ‘Functional Quality’ ($\beta=0.27$, $t(196)=3.37$, $p<0.01$), ‘DB Service Quality’ ($\beta=0.11$, $t(196)=1.66$, $p<0.05$), ‘Employee-Customer Engagement’ ($\beta=0.27$, $t(196)=5.32$, $p<0.01$), ‘Perceived Risk’ ($\beta=0.10$, $t(196)=-1.52$, $p<0.05$) and ‘Perceived Usability’ ($\beta=0.27$, $t(196)=3.19$, $p<0.01$). However, ‘Convenience’ ($\beta=-0.04$, $t(196)=-0.587$, $p=0.55$), ‘Brand Trust’ ($\beta=0.08$, $t(196)=-1.34$, $p=0.176$) and ‘DB Innovation’ ($\beta=0.08$, $t(196)=-0.377$, $p=0.707$) are not significant. The R^2 value of 0.66 indicates a large effect when compared with Cohen’s (1988) recommendation.

Therefore, the model’s hypothesis was largely supported in that digital banking qualities as measured by ‘Perceived Value’ (*H1*), ‘Functional Quality’ (*H3*), ‘DB Service Quality’ (*H4*), ‘Employee-Customer Engagement’ (*H6*), ‘Perceived Risk’ (*H7*), ‘Perceived Usability’ (*H8*) affect and are positively associated with ‘Customer Experience’. The hypotheses ‘Convenience’ (*H2*), ‘Brand Trust’ (*H5*) and ‘DB Innovation’ (*H9*) are not supported.

The slopes for estimating Customer Experience are in column β . The dependent variable = Intercept + Slope x independent variable. The regression model’s equation:

$$Y_i = \alpha + \beta_1 PV_i + \beta_2 CONV_i + \beta_3 FQ_i + \beta_4 DBSQ_i + \beta_5 TB_i + \beta_6 ECE_i + \beta_7 PR_i + \beta_8 PU_i + \beta_9 DBI_i + \varepsilon_i$$

Where Y =dependent variable, Customer Experience; X =independent variables; α =intercept; ε =error term; I =subscript i is the individual dimension and runs over observations, $i=1, \dots, n$; n =number of banks.

Figure 6.7 shows the regression model plot of customer experience as the dependent variable against other independent variables. The majority of values lie along a straight line, showing the goodness of fit of the predicting variables.

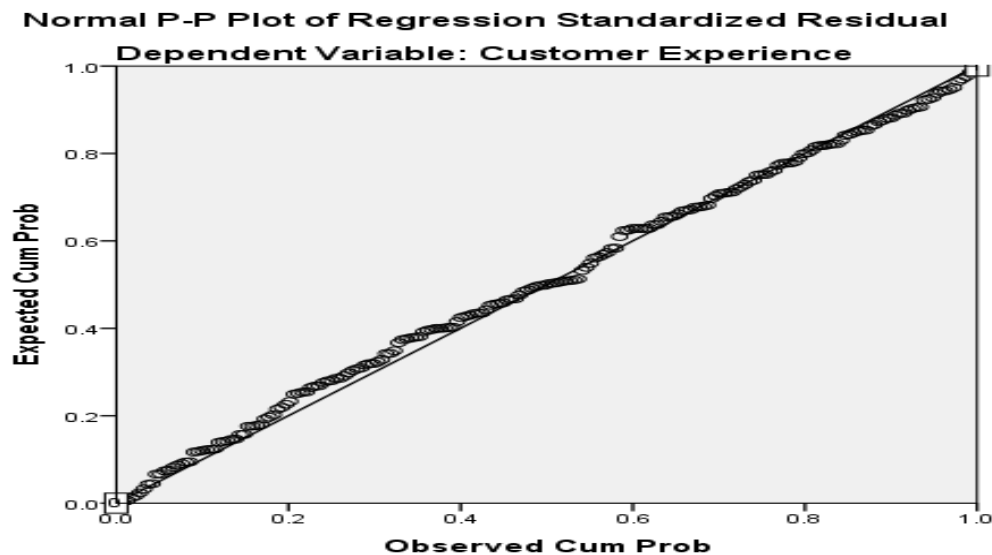


Figure 6.7: Regression Plot of Customer Experience

Parsimonious Multiple Regression Analysis was performed to simplify the model hierarchically to understand the variables that best explain ‘Customer Experience’, by entering only the six significant variables as independent variables. The result shows that 65% of variance in ‘Customer Experience’ was accounted for by the predictor variables. $R=0.81$, adjusted $R^2=0.64$, $R^2=0.65$, $F(6, 199)=62.68$ and $p<0.01$. The findings indicate that the significant predictors of ‘Customer Experience’ are ‘Functional Quality’ ($\beta=0.25$, $t(199)=3.29$, $p<0.01$), ‘DB Service Quality’ ($\beta=0.13$, $t(199)=1.62$, $p<0.05$), ‘Employee-Customer Engagement’ ($\beta=0.28$, $t(199)=5.73$, $p<0.01$), and ‘Perceived Usability’ ($\beta=0.27$, $t(199)=3.19$, $p<0.01$). However, ‘Perceived Risk’ ($\beta=-0.07$, $t(199)=-1.17$, $p=0.143$) and ‘Perceived Value’ ($\beta=0.10$, $t(199)=1.47$, $p=0.14$) are not significant.

Another test was performed by entering the remaining four significant variables as independent variables. The result shows that 65% of variance in ‘Customer Experience’ was accounted for. $R=0.81$, adjusted $R^2=0.64$, $R^2=0.65$, $F(4, 201)=92.52$ and $p<0.01$. The findings indicate that the significant predictors of ‘Customer Experience’ are ‘Functional Quality’ ($\beta=0.27$, $t(201)=3.62$, $p<0.01$), ‘Employee-Customer Engagement’ ($\beta=0.30$, $t(201)=6.42$, $p<0.01$) and ‘Perceived Usability’ ($\beta=0.31$, $t(201)=3.81$, $p<0.01$). However, ‘DB Service Quality’ ($\beta=0.10$, $t(201)=1.40$, $p=0.16$) is not significant.

Further regression analysis was conducted using the last three significant variables as independent variables. The result shows that 65% of variance in ‘Customer Experience’

was accounted for. $R=0.80$, adjusted $R^2=0.64$, $R^2=0.65$, $F(3, 202)=122.14$ and $p<0.01$. The findings indicate that the significant predictors of 'Customer Experience' are 'Functional Quality' ($\beta=0.29$, $t(202)=3.94$, $p<0.01$), 'Employee-Customer Engagement' ($\beta=0.31$, $t(202)=6.70$, $p<0.01$) and 'Perceived Usability' ($\beta=0.37$, $t(202)=5.31$, $p<0.01$). Therefore concerning hierarchy, 'Functional Quality', 'Employee-Customer Engagement' and 'Perceived Usability' are the most significant predictors of 'Customer Experience'. The R^2 value of 0.65 indicates a large effect.

Table 6.7 describes the regression analysis results obtained by using 'Customer Loyalty' (CLY), as the dependent variable while 'Customer Satisfaction' (CSAT), and 'Customer Experience' (CEQ) factors are entered as independent variables.

	CLY	CSAT	CEQ	b	β	Sr_i^2 (unique)
CSAT	0.76			0.57	0.51**	0.37
CEQ	0.72	0.68		0.39	0.37**	0.27
			Intercept (a)=0.67			$R^2=0.65$
Mean	12.05	12.15	11.59		Adjusted $R^2=0.65$	
SD	2.20	1.97	2.12			$R=0.81$
Note: n=206, *p<0.05, **p<0.01						

Table 6.7: Regression Analysis of Loyalty Variables

Table 6.7 shows that the adjusted $R^2=0.65$, $R^2=0.65$, $F(2, 203)=191.47$ and $p<0.01$. The findings indicate that the significant predictors of 'Customer Loyalty' are 'Customer Satisfaction' ($\beta=0.51$, $t(203)=1.13$, $p<0.01$) and 'Customer Experience' ($\beta=0.37$, $t(203)=8.99$, $p<0.01$). The result shows that 65% of variance in 'Customer Loyalty' was accounted for. Both 'H11' and 'H15' are supported. The R^2 value of 0.65 indicates a large effect.

Table 6.8 shows the regression analysis result obtained by using 'Customer Satisfaction' as the dependent variable, and 'Customer Experience' as the independent variable.

	CSAT	CEQ	b	β	Sr_i^2 (unique)
CEQ	0.68		0.632	0.68**	0.68
		Intercept (a)=4.82			$R^2=0.46$
Mean	12.15	11.59		Adjusted $R^2=0.46$	
SD	1.97	2.12			$R=0.68$
Note: n=206, *p<0.05, **p<0.01					

Table 6.8: Regression Analysis of Customer Satisfaction and Experience

Table 6.8 shows that the adjusted $R^2=0.46$, $R^2=0.46$, $F(1, 204)=177.11$ and $p<0.01$. The findings indicate that ‘Customer Experience’ is a significant predictor of ‘Customer Satisfaction’ ($\beta=0.68$, $t(204)=13.31$, $p<0.01$). The result shows that 46% of variance in ‘Customer Satisfaction’ was accounted for, and indicates a significant relationship between ‘Customer Experience’ and ‘Customer Satisfaction’ ($H10$). The R^2 value of 0.46 also indicates a medium effect.

Table 6.9 shows the regression model estimate of ‘Financial Performance’ using Financial Ratios (FP1) and NPS (CLV) (FP2) as dependent variables while using ‘Customer Experience’, ‘Satisfaction’ and ‘Loyalty’ as independent variables.

	FP1	CLY	CSAT	CEQ	b	β	Sr_i^2 (unique)
CLY	0.26				9.36	0.26*	0.15
CSAT	0.17	0.76			-4.39	-0.11	0.08
CEQ	0.23	0.72	0.68		4.33	0.12	-0.07
				Intercept (a)=83.27			$R^2=0.08$
Mean	192.96	12.15	12.05	11.59		Adjusted	$R^2=0.06$
SD	78.70	1.97	2.20	2.12			$R=0.28$
	FP2	CLY	CSAT	CEQ	b	β	Sr_i^2 (unique)
CLY	0.24				1.57	0.24*	0.07
CSAT	0.21	0.76			0.803	0.11	0.14
CEQ	0.13	0.71	0.68		-0.796	-0.12	-0.08
				Intercept (a)=-1.04			$R^2=0.06$
Mean	18.42	12.05	12.12	11.59		Adjusted	$R^2=0.05$
SD	14.42	2.20	1.97	2.12			$R=0.26$

Note: n=206, * $p<0.05$, ** $p<0.01$

Table 6.9: Regression Analysis of Financial Performance FP1 and FP2

Table 6.9 shows that for FP1 the adjusted $R^2=0.06$, $R^2=0.08$, $F(3, 202)=5.62$ and $p<0.01$, while for FP2 the adjusted $R^2=0.05$, $R^2=0.06$ and $F(3, 202)=4.71$ and $p<0.01$. The findings indicate that ‘Customer Loyalty’ is a significant predictor of both FP1 ($\beta=0.26$, $t(202)=2.28$, $p<0.05$) and FP2 ($\beta=0.24$, $t(202)=2.08$, $p<0.05$). The result shows that 8% and 6% of variance were accounted for by the predictor variables in FP1 and FP2 respectively. However, ‘Customer Satisfaction’ ($\beta=-0.11$, $t(202)=-1.00$, $p=0.317$) and ‘Customer Experience’ ($\beta=0.26$, $t(202)=1.145$, $p=0.254$) in FP1, and ‘Customer Satisfaction’ ($\beta=0.11$, $t(202)=0.995$, $p=0.321$) and ‘Customer Experience’ ($\beta=-0.12$, $t(202)=-1.143$, $p=0.254$) in FP2, are not significant predictors. The result indicates a significant relationship between ‘Customer Loyalty’ ($H14$) and FP1 and FP2. ‘Customer

Experience' (*H12*) and 'Satisfaction' (*H13*) are not supported. The R^2 values for FP1 and FP2 are 0.08 and 0.06 respectively, which indicate a small effect.

The Regression Model:

$$Y_{it} = \alpha + \beta_1 CEQ_{it} + \beta_2 CSAT_{it} + \beta_3 CLY_{it} + \varepsilon_i$$

Where Y=dependent variable, FP; X=independent variables; α =intercept; ε =the error term; i=subscript i is the individual dimension and runs over observations, $i=1, \dots, n$; n =number of banks; t=subscript t is the time dimension and runs over observations, $t=1, \dots, t$; t =number of years of financial report.

6.9 Testing Customer Experience Factors against Customer Demographics

The section applies a one-way Analysis of Variance (ANOVA) test to identify the relationship between respondents' profile variables and 12 factors in the model. Table 6.10 shows how the factors are affected by different bank types and customer profiles.

Factors	Age Group	Educational Level	Gender	Banks	Frequency of DB Usage	Length of DB Usage	Length of Bank Loyalty	NPS Value
	<i>F-Value</i>	<i>F-Value</i>	<i>F-Value</i>	<i>F-Value</i>	<i>F-Value</i>	<i>F-Value</i>	<i>F-Value</i>	<i>F-Value</i>
PV	5.41**	0.49	0.09	5.22**	35.95**	12.29**	1.99	39.68**
Conv	2.88**	0.03	0.18	5.33**	30.98**	12.08**	0.51	22.02**
FQ	2.77**	0.19	0.01	2.73**	25.73**	6.85**	0.65	42.72**
DBSQ	3.27**	0.72	0.69	4.84**	18.82**	6.81**	0.78	54.02**
BT	2.98**	1.73	1.10	1.57	8.03**	4.56**	2.54**	19.19**
ECE	1.62	2.22	0.56	2.27*	5.13**	2.15	3.00**	7.22
PR	0.64	0.58	0.55	3.19**	8.33**	1.29	1.33	13.32**
PU	6.48**	0.66	0.02	2.47*	19.98**	11.62**	0.23	44.83**
DBI	2.47*	0.35	0.03	4.78**	27.81**	4.28**	0.34	48.26
CSAT	3.71**	0.64	0.29	2.09*	18.19**	11.85**	0.65	82.98**
CLY	5.04**	1.47	0.03	3.31**	31.20**	11.17**	1.70	80.29**
CEQ	4.17**	2.15	0.04	2.86**	19.03**	13.14**	0.33	35.29**

Note: n=206, *p<0.05, **p<0.01

Table 6.10: ANOVA between Factors and Customer Data

Table 6.10 shows, for instance, that 'Perceived Value'(PV) is significantly affected by customers' 'Age Group', 'Type of Bank', 'Frequency of DB Usage' and 'NPS value'. There is a significant relationship between 'Length of DB Usage' and all the factors, except 'Perceived Risk' and 'Employee-Customer Engagement'. All the factors are generally affected by most customer characteristics, apart from 'Educational Level' and

‘Gender’. This result shows that all the influencing customer characteristics are potential inputs into bank marketing and service strategies aimed at influencing customers’ perceptions, with the factors linked to accepted hypotheses more important to focus on.

6.10 Testing Proposed Model using Structural Equation Modelling

SEM technique was used to examine the model factors. It can test all dependent and independent variables together, and draw relationships on the paths of a model. The most commonly used model fit measures are: Chi-square/degree of freedom (χ^2/df), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Tucker Lewis index (TLI), Normed Fit Index (NFI), Incremental fit index (IFI) and Root Mean Square Error of Approximation (RMSEA) (Keisidou et al., 2013; Chahal & Dutta, 2015). Table 6.11 presents the overall model fit values obtained by examining the causal relationships among the factor variables, which indicates a moderately good fit for both FP1 and FP2. All demonstrated good fit except $\text{NFI} < 0.9$. Table 6.11 shows the SEM model fit values for FP1 and FP2.

Overall fit of the model		
Parameters	FP1	FP2
χ^2/df	2.11	2.09
CFI	0.907	0.911
TLI	0.901	0.906
NFI	0.862	0.864
RMSEA	0.068	0.065

Table 6.11: Model Fit for Financial Performance FP1 and FP2

Table 6.11 shows the path loadings for the SEM, with model fit indices for FP2 (χ^2/df)=2.11, $p=0.00$, CFI=0.907, TLI=0.901, NFI=0.862, and RMSEA=0.068. The path loadings with indices of model fit for FP2 are (χ^2/df)=2.09, $p=0.00$, CFI=0.911, TLI=0.906, NFI=0.864 and RMSEA=0.065. Figure 6.8 shows SEM of the factors using financial ratios as FP1 indicators, along with path coefficients.

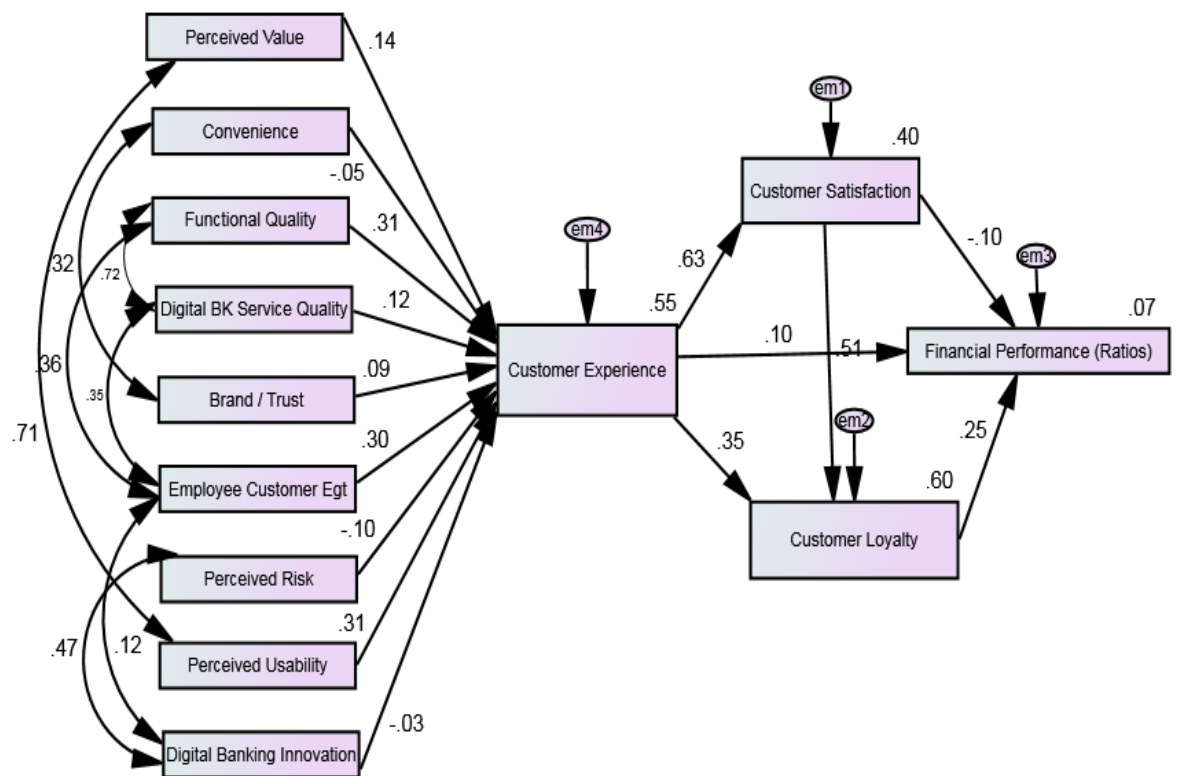


Figure 6.8: Model of the Factors using Financial Performance (FP1)

Figure 6.9 shows the SEM of the factors using NPS (CLV) as FP2 indicators.

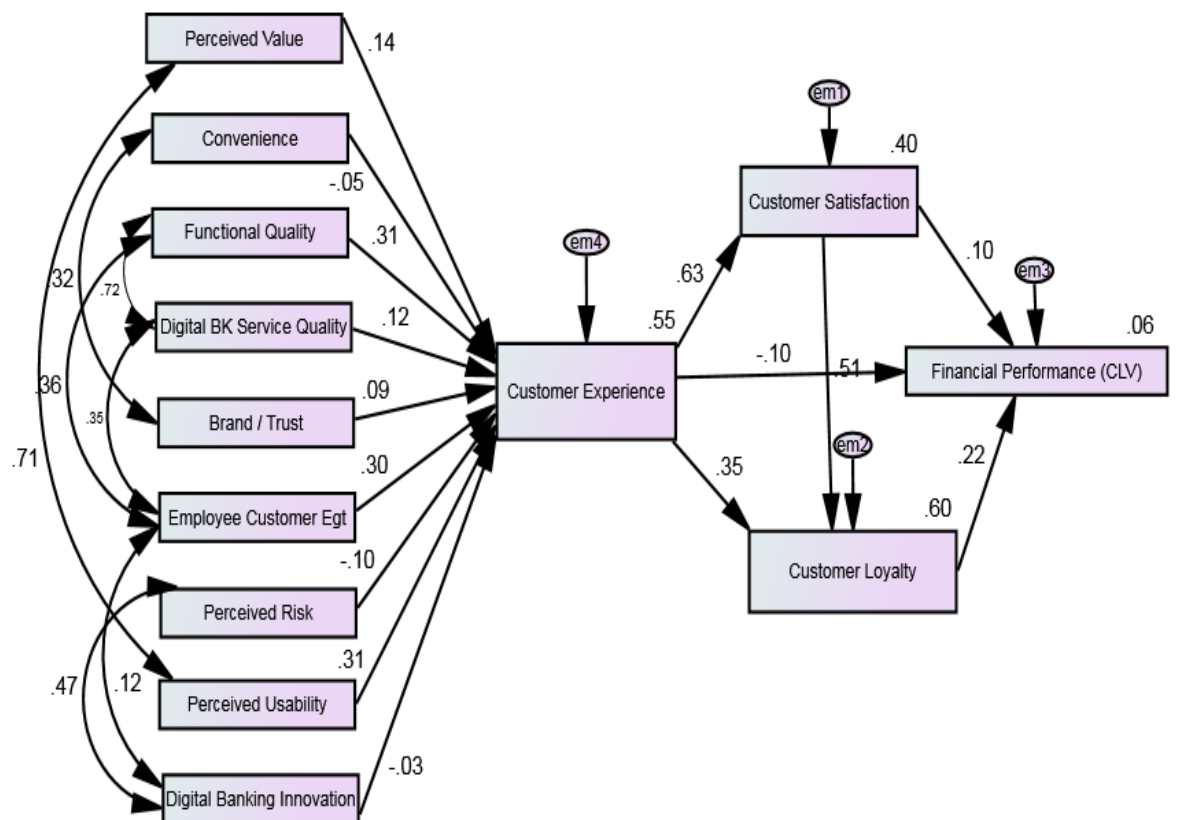


Figure 6.9: Model of the Factors using Financial Performance (FP2)

Table 6.12 shows the SEM test results for all the factors against Customer Experience (CE) as the dependent variable while other factors are independent variables for FP1 and FP2. There are two financial performance tests in the Model, hence (a) and (b).

Research Model Hypotheses		Path Coefficient	Remark
H1	Perceived Value has a positive relationship with CE	0.14*	Accept
H2	Convenience has a positive relationship with CE	-0.05	Reject
H3	Functional Quality has a positive relationship with CE	0.31**	Accept
H4	DB Service Quality has a positive relationship with CE	0.12*	Accept
H5	Brand Trust has a positive relationship with CE	0.09	Reject
H6	Employee-Customer Engagement has a positive relationship with CE	0.30**	Accept
H7	Perceived Risk has a negative relationship with CE	-0.10*	Accept
H8	Perceived Usability has a positive relationship with CE	0.31**	Accept
H9	DB Innovation has a positive relationship with CE	-0.03	Reject
H10	CE has a positive relationship with Customer Satisfaction	0.63**	Accept
H11	CE has a positive relationship with Customer Loyalty	0.35**	Accept
H15	Customer Satisfaction has a positive relationship with Customer Loyalty	0.51**	Accept
H13a	Customer Satisfaction has a positive relationship with FP1	-0.10	Reject
H14a	Customer Loyalty has a positive relationship with FP1	0.25*	Accept
H12a	CE has a positive relationship FP1	0.10	Reject
H13b	Customer Satisfaction has a positive relationship FP2	0.10	Reject
H14b	Customer Loyalty has a positive relationship with FP2	0.22*	Accept
H12b	CE has a positive relationship FP2	-0.10	Reject
New SEM Path			
	Functional Quality has a positive relationship with DB Service Quality	0.72**	Accept
	Employee-Customer Engagement has a positive relationship with Functional Quality	0.36**	Accept
	DB Innovation has a positive relationship with Perceived Risk	0.47**	Accept
	Employee-Customer Engagement has a positive relationship with DB Service Quality	0.35**	Accept
	Brand Trust has a positive relationship with Convenience	0.32**	Accept
	Perceived Value has a positive relationship with Perceived Usability	0.77**	Accept
	DB Innovation has a positive relationship with Employee-Customer Engagement	0.12*	Accept
Note: n=206, *p<0.05, **p<0.01			

Table 6.12: SEM Test Results for FP1 and FP2

Table 6.12 shows results similar to those obtained in the Regression analysis. For instance, there is a significant relationship between ‘Perceived Value’, ‘Functional Quality’, ‘DB Service Quality’, ‘Employee-Customer Engagement’, ‘Perceived Risk’, ‘Perceived Usability’, and ‘Customer Experience’. Again, ‘Convenience’, ‘Brand Trust’ and ‘DB Innovation’ are not significant. There is a significant relationship between ‘Customer Experience’, ‘Satisfaction’, and ‘Loyalty’; also, between ‘Customer Loyalty’ and both FP1 and FP2 respectively. There is an additional new path, which shows the relationship between some variables of ‘Customer Experience’. For instance, there is a significant relationship between ‘Functional Quality’ and ‘DB Service Quality’, ‘Employee-Customer Engagement’ and ‘Functional Quality’. The accepted hypotheses are the significant results that should inform bank marketing and service strategies for improving customer experience and financial performance.

6.11 Qualitative Analysis Results of Open-Ended Questions

This section presents the analysis results of two open-ended questions.

Q1: Please can you summarise your perceptions of your bank’s digital banking services, for instance, how do you enjoy them compared to going to the branches?

Q2: If you were to recommend improvements to your bank’s digital banking services what would they be?

Some customers commented on how they are enjoying digital banking experience and recommendations of what they expect to see improved. These were categorised and analysed according to the matching theme and questions.

Functional Quality

Many customers think that digital banking is user-friendly, flexible and enables them to perform various services. They can access services without going to the branches. However, some customers expect additional functions. Excerpts:

Q1:

- *“Digital banking gives me the information I require (balance/GBP cost of purchases made overseas, etc) - quickly and easily.*
- *I enjoy being able to check on my finances (debit and credit) from my mobile.*
- *It gives me more control and flexibility.*
- *Allows me to easily transfer money between accounts and to keep track of transactions in current account and on credit card.”*

Q2:

- *“Sending weekly statement through email address.*
- *Paying in a cheque is difficult - not sure what the answer to that one is.*

- *More functionality for the app, ideally just as functional as the website.”*

The evidence shows that functional quality is important in digital banking. Many customers think that it serves the purpose and is very helpful, although some think their bank should improve on the mobile design, and provide automation of cheque payment and regular messages for transactions to prevent them from going overdrawn. This shows that customers are expecting more functional qualities than the banks are currently providing.

Service Quality

Many customers are enjoying digital banking, as their requirements are being met and they get great service accessibility. However, some anticipate better service quality and stability. Excerpts:

Q1:

- *“Digital services are now an essential requirement for me I would not bank with an organisation that didn't offer a high level of digital services.*
- *More accessible than going to the branch.*
- *It's a really good, reliable and secure service.”*

Q2:

- *“Accessibility of linked accounts (e.g. kid's accounts) via the same online user interface.*
- *Online actions need to be more stable, transactions fall over leaving you unsure if they have completed or not.*
- *Ability to amend multiple payments without having to restart.”*

Many customers think that digital banking is more reliable, accessible and faster than the branch method, although some want to see further improvements made. They want their banks to improve on the network infrastructure, ability to do multiple tasks simultaneously and reliability, and to grant similar qualities in internet and mobile banking. The evidence shows that service quality is crucial to customers.

Perceived Usability

There is evidence that customers are enjoying digital banking. It is easy to access, use, and perform services. However, some customers want further improvements. Excerpts:

Q1:

- *“Very easy to complete banking activities.*
- *Easy to use, useful and reliable but need to make it easy to get the security key.*
- *Strongly prefer mobile banking over branch and PC based internet.”*

Q2:

- *“Make it easy to get or change the security key.*
- *Don't keep changing layout, I get used to a format.*
- *Easier navigation around the website.”*

The result shows that usability is important for customers. Many customers think that digital banking is easier to complete banking activities than in branches, although some want banks to improve on the layout design and navigation. This shows that users have different requirements and banks should strive to meet them.

Perceived Value

Customers want digital banking due to value derived. They find it helpful, as it saves them time from visiting branches. It allows them to transfer money easily and takes the hassle out of banking. Excerpts:

Q1:

- *“Digital banking saves me time and it allows me to see my balance instantly.*
- *It makes life easier for me and saves me time.*
- *It saves time and cost.*
- *Enjoyable.”*

Perceived value is a major reason customers demand digital banking. Many customers think that it is making their life easy, useful and enjoyable. The customers appreciate that they can do the majority of their transactions. They do not have to pay for parking at the branches, and the time saved can be used for other activities. Results show that many customers are benefiting from digital banking because it is fulfilling their needs and removing stress from banking.

Service Convenience

Many customers think digital banking is convenient, can be accessed 24 hours, hassle free and comfortable for them. These are qualities that branches do not give them. However, some customers want more capabilities that improve service convenience further. Excerpts:

Q1:

- *“I find it comfortable, doing it at my own home at anytime.*
- *I enjoy it because of its convenience and time saving also stress free.*
- *Digital Banking is a lot more convenient than going to the branch as it is not particularly close to me.*
- *Accessible 24 hours a day, incredibly convenient.”*

Q2:

- *“Not make it such a hassle to get online (as I currently need to enter two passwords), something like touchID for iPhone would be good to log in.*
- *Allow for online chat capability that's quick, that's 24/7 and that has an operator that has the power to enable financial transactions on your account.”*

The evidence shows that customers can log on to their devices anytime and perform banking from the comfort of their homes, making it convenient. Some customers want to see more of these qualities (e.g. better login process to shorten their journey and make digital banking even more convenient). Customers expect 24 hours online chat with their banks. From the customers' comments, convenience is an important reason to use digital banking.

Perceived Risk

Customers are still worried about perceived risks (e.g. security and cyber-attack). They want more security enhancements from their mobile phone and a smart way of authentication. Excerpts:

Q2:

- *“A less complicated but still secure logon process.*
- *Cyber security is a worry to me.*
- *Protect more against fraud.*
- *Security credentials are a mess. It needs to be supremely easy which means they need to invest big money.”*

Many customers expect more improvements in security, fraud prevention and cyber-crime. Even though perceived risks have improved in recent years, some customers are still concerned about these factors. Therefore, their digital banking confidence has not improved. Customers want banks to improve authentication and invest more in maximising security to make digital banking safer.

Employee-Customer Engagement

Results show that customers want more engagement with banks' employees, to help improve their experience, make digital banking simpler and banks understand their needs better. Excerpts:

Q2:

- *“Educate people and make the process much simpler.*
- *GUI should be designed around the user experience rather than what the bank thinks the user experience is.*
- *Create awareness and training on security.*

- *Improved staff/customer relationship.”*

Customers expect more engagement to ensure that their requirements are understood and acted upon. They want a better relationship with bank employees, more education, awareness creation and a better user experience designed in conjunction with customer feedback. The engagement will enable banks to design digital banking that is more appealing to customers and tied to their needs.

Service Speed

There is evidence that customers are enjoying digital banking due to service speed. It is faster to access than going to the branches, however, some customers expect improvement. Excerpts:

Q1:

- *“Usually faster, but only for simple transactions. I go to my bank for more complicated financial transactions and open up new accounts.*
- *Faster to bank online.*
- *Quick and easy access if required. Don't have to wait for the branch to open to be able to do banking.”*

Q2:

- *“No more passwords, they drive me mad*
- *Complex passwords*
- *Less complex system access.”*

With digital banking, customers can log in and perform transactions within minutes, it is easier and saves time. Some customers want reduction in login process and password authentication through personalisation. Undoubtedly, many customers demand digital banking due to the speed at which they can access services.

Service Customisation

Evidence shows that customers expect service customisation, with embedded security and personalisation, to avoid having to remember several passwords. Excerpts:

Q2:

- *“I want my bank to provide secure processes and facilities where for example I can give my Car access to my bank account and authorise it to pay for Car Tax when it's due, or where my Boiler is allowed to agree and pay for renewal of a yearly service plan.*
- *Customise, reduce the amount of numbers and pins.”*

Many customers anticipate more service customisation to improve security and the customer journey. They believe that customisation of services will make their journey shorter and experience better. Customers expect more intelligent digital banking, customised to perform various tasks (e.g. pay bills and link to other domestic devices).

Customer Acceptance Trend

Results show that customers are demanding more services through their digital banking channels. Excerpts:

Q2:

- *“It has not changed in 10 Years. Therefore it needs refreshing with the latest trends.*
- *Have more mobile banking.*
- *I would want my bank to be getting ready for the "Internet of Things" where everything will be Online.”*

There is evidence that digital banking acceptance is trending up. Customers are demanding more services on their digital devices than their banks can provide, due to the benefit, social change and value from digital banking. To some customers, banks are not changing quickly enough, they expect more m-banking services.

Customer Experience

Digital banking is giving many customers the right experience. Some customers believe they are enjoying the facilities offered, however some believe that customer service can be improved. Excerpts:

Q1:

- *“Excellent.*
- *Absolutely love digital banking.*
- *Wonderful.*
- *It is very good in terms of the services it gives because it saves time.”*

Q2:

- *“End to end account opening, all done online.*
- *Better customer service.”*

Many customers think they are getting good customer experience based on the words used to express their feeling. It shows fulfilment, convenience and value being derived. However, some customers expect better service and relationships from their banks.

Customer Satisfaction

Many customers are satisfied with digital banking, judging by the words used to express their feelings. However, some expect more improvement in service security, personalisation and functions. Excerpts:

Q1:

- *“Satisfactory.*
- *Satisfied.*
- *Happy.”*

Q2:

- *“Am currently satisfied with the offer at the moment but would like them to dedicate more time to security.”*

Customers used good expressions to show the satisfaction, enjoyment and value they are getting. Evidently, customers think their needs are being met and are satisfied with their experience, however some expect more security improvement, showing its importance.

Other

Despite the convenience and value derived from digital banking, there are customers who would like to bank in branches. They see digital banking as an alternative to the branches rather than a complete replacement. Excerpts:

Q2:

- *“I go to the branches often if there is some problem that cannot be resolved via telephone, or for some important consultations.*
- *I’d prefer to go to a branch and keep it open.*
- *If digital banking results in no branches then it will be a bad outcome.”*

Some customers still prefer to bank face-to-face and interact with customer service personnel. They want the personal touch from branches and feel that not all their banking requirements can be satisfied via digital banking. However, some of them think that even though they prefer going to branches, they have to embrace change.

6.12 Discussion and Implications

The research investigated the impact of digital banking on customer experience and financial performance, using different analysis methods to rigorously test the model to corroborate results. Theoretically, the research extends knowledge in service quality, organisational performance and strategic marketing and digital banking uptake. It

produces a model which will support further research in digital banking, customer experience and financial performance, considering that no such studies were done, except on e-banking and m-banking uptake in other countries (Amin, 2016; Jun & Palacios, 2016) and the UK (Shanmugam et al., 2015).

Other research has been conducted in contact service quality improvement, customer satisfaction and financial performance (Keisidou et al., 2013; Liang et al., 2009), and in e-banking uptake intentions (Martins et al., 2014; Xue et al., 2011). This research found a significant relationship between 'Convenience', 'Functional Quality', 'Perceived Value', 'Brand Trust', 'DB Service Quality', 'Employee-Customer Engagement', 'Perceived Risk', 'Perceived Usability', 'Customer Experience', 'Customer Satisfaction', 'Customer Loyalty', and customer uptake. 'DB Innovation' was not significant. This comprehensive study extends knowledge to similar research in UK digital banking. Therefore, banks should consider these factors as important.

Using Regression and SEM analyses, the research found that there is a significant relationship between 'Functional Quality', 'Perceived Value', 'DB Service Quality', 'Employee-Customer Engagement', 'Perceived Risk', 'Perceived Usability', and 'Customer Experience'. 'Convenience', 'Brand Trust' and 'DB Innovation' were not significant. Garg et al. (2014) found 'Convenience' to be significant for customer experience while Keisidou et al. (2013) did not find it significant for customer satisfaction, which corroborates this result.

Through Parsimonious Analysis, the research found 'Functional Quality', 'Employee-Customer Engagement' and 'Perceived Usability' to be the most significant predictors of 'Customer Experience'. The result of 'Convenience' and 'Brand Trust' could mean that these two factors play more roles in digital banking uptake than in experience. This could be because customer experience leans toward 'Functional Quality' (e.g. better interfaces), 'Service Quality' (e.g. reliability), 'Perceived Risk' (e.g. security), 'Employee-Customer Engagement' (e.g. through getting better requirements from feedback), 'Perceived Value' (e.g. being useful) and the 'Perceived Usability' (e.g. ease of use) of digital banking. The analysis method adopted has contributed to explaining these differences. The managerial implication is that to improve digital banking experience, banks should pay attention to these factors, while theoretically they can serve as building blocks for further research.

The research identified the relationship between these factors and some customer profile data (e.g. 'Age group', 'Educational level', 'Gender', 'Frequency of DB Usage', 'NPS', 'Length of Bank Loyalty' and 'Length of DB Usage'). The research found no significant effect from 'Educational Level' and 'Gender' in digital banking experience, which extends Garg et al.'s (2014) results on gender, marital status, age, education level and income in Indian banks. The results will help banks in strategic marketing of financial products, so certain customer profiles can be targeted, based on the aspect of digital banking services they are sensitive to.

The research found a significant positive relationship between 'Customer Experience', 'Customer Satisfaction', and 'Customer Loyalty', and between 'Customer Satisfaction' and 'Customer Loyalty'. Klaus and Maklan (2013) found similar results in different research on measuring customer experience in UK contact services. The research uses ROE, Cost-to-Income ratio and NIM to estimate financial performance indicators (FP1), and uses NPS to estimate CLV (FP2). Results show a significant positive relationship between 'Customer Loyalty' and 'Financial Performance' on both FP1 and FP2, hence contributing to similar studies (Keisidou et al., 2013; Valenzuela et al., 2014; Reichheld, 2003). This research has demonstrated the result in digital banking, which contributes to knowledge. It offers a theoretical link between customer relationships and bank financial performance, which can serve future study.

Practically, this research has highlighted the importance of customer experience and digital banking uptake and how they relate to financial performance. The results will enable banks to understand important factors that make a customer accept one bank's digital banking services over another, which should be considered during implementation. Improving these factors can help capture and retain customers, making them accept digital banking and stay loyal, leading to financial performance improvement. To improve customer experience, banks should offer value-added services, improve service quality, functional quality and security. Bank employees should constantly engage with customers through feedback to be attuned to their requirements.

Telephone, internet and mobile banking were found to be the most commonly used digital channels for accessing services (e.g. savings, check balance, pay bills, print statement, transfer funds, insurance and mortgages). Checking balance accounted for

the most frequent service, followed by funds transfer. This will help banks to know the digital channels to focus on in their marketing strategy and the financial services to provide for customers.

The research has demonstrated how banks can estimate profit attributed to customers through NPS (CLV) in digital banking. Methodologically, the study has contributed to existing customer experience, satisfaction, loyalty and financial performance measurement research. Many studies that have investigated financial performance have used financial ratios (Keisidou et al., 2013; Chi & Gursoy, 2009), which is a limitation. Some research has investigated customer experience without financial performance (Garg et al., 2014). This research extends knowledge in this area, especially on how it relates to digital banking. The research has been undertaken from qualitative and quantitative data perspectives, and most of the results corroborate each other. 'Service Customisation', 'Service Speed' and 'Customer Acceptance Trend' themes surfaced in the qualitative analysis, showing the benefit of combining both methods. Customers were calling for more services and wanted them customised for easy access and security proof. The overall customers' NPS is positive (16.99), however Passive customers are higher than Promoters. UK banks need to target the Passive customers and turn them into Promoters to improve their NPS using the identified factors, which can help improve financial performance.

Results show that 'Frequency of Use', 'Age Group' and 'Length of Usage' positively affect digital banking experience. This implies that customers who use digital banking frequently are the ones enjoying it, having a good experience and using it for a long time. The research shows that digital banking uptake has improved in recent years due to benefits to both banks and customers. More customers are preferring digital banking, making banks close branches as a result. That said, banks should consider why some customers do not use digital banking frequently and some of the factors that affect customers have been highlighted. The research measurement scales and methods can serve in further study.

6.13 Conclusion

This chapter examined customers' perceptions to understand how digital banking services generally affect customer experience and bank financial performance, using a questionnaire. The research found that telephone, internet and mobile are the main

digital channels for accessing services. More customers access services through e-banking than other channels, however m-banking demand is increasing while telephone banking demand is declining. It also identified the major services customers are likely to access through digital banking.

The research demonstrated the factors that affect 'Customer Experience', namely 'Perceived Value', 'Functional Quality', 'DB Service Quality', 'Employee-Customer Engagement' 'Perceived Risk' and 'Perceived Usability' of digital banking services. 'Convenience', 'Brand Trust' and 'DB Innovation' were found not to be significant. All these factors including 'Customer Satisfaction' and 'Customer Loyalty', with the exception of 'DB Innovation' were significantly related to digital banking uptake. The research found that different customer profiles are significantly related to some of these factors, which will help banks in their service improvement and management. Banks will know which customers to target based on the factors that are significant to them.

'Perceived Value' is found to influence customer experience and uptake of digital banking. This shows that customers are looking for value, so banks should be making value propositions to them. 'Customer Satisfaction' is found to be an antecedent of 'Customer Loyalty', while 'Customer Experience' mediates 'Customer Satisfaction' and 'Customer Loyalty', which in turn is significantly related to both FP1 and FP2 indicators. The research result shows that more customers are using digital banking than branches. This corroborates other studies which conclude that banks are closing branches because customer visitors have declined. The result shows that many customers are enjoying digital banking. However, Passive customers are more than Promoter customers on the NPS. Therefore, banks need to win over the Passive customers, which is part of the research recommendations. The result shows that digital banking uptake trend among customers is increasing, which corroborates the financial report results.

The open-ended question results brought further insight and in-depth information. 'Service Speed', 'Service Customisation' and 'Customer Acceptance Trend' were investigated, which show the relevance of qualitative methods, helping support and validate the quantitative results. By combining open and closed-question analyses, all factors except 'DB Innovation' and 'Brand Trust' generally affect 'Customer Experience'. The open-ended question shows that although 'Perceived Risks' have

improved over the years, some customers still have negative feelings about security. The general feeling is that customers are getting a good experience and value from digital banking, however they want improvement in security, fraud prevention, functional qualities, access speed, customisation of services and shorter customer journey to improve their experience further. Customers want better engagement from banks' employees, enabling them to understand their requirements better.

The open-ended questions show that there are customers who still want to bank through the branch method in spite of the benefits derived from digital banking. These customers see digital banking as a supplement rather than replacement to branches. Therefore, while the banks are pushing to enhance customer experience, these customers' needs should also be considered. The challenge for banks is to convince these customers to adopt digital banking. For these customers, security and service personalisation are important. By combining open and closed-ended questions the research has identified other factors, showing the strength of integrating qualitative and quantitative methods. The majority of results from both types of question corroborate each other, making them more reliable. The methods and analyses undertaken show the robustness of the developed models, which can be used to explore customer experience, satisfaction, loyalty and financial performance in future research.

CHAPTER SEVEN – EXPLORING EMPLOYEES’ PERCEPTIONS OF DIGITAL BANKING SERVICES INNOVATION ON ENHANCING CUSTOMER EXPERIENCE AND FINANCIAL PERFORMANCE

7.1 Introduction

This chapter investigates UK bank employees’ (managers’) perceptions of digital banking’s effect on customer experience and financial performance. It addresses the research objective and question:

- *What are the employees' perceptions of digital banking innovation in the studied bank, and how effective is the bank's digital banking in enhancing customer experience and financial performance?*

To investigate the research question, interviews were conducted at the case bank, covering themes such as the digital banking channels and services offered; and how to use digital banking to capture and retain customers, and improve customer experience and financial performance. These were analysed using content analysis. This chapter is organised as follows: design, analysis, results, discussion and implications, and conclusion.

7.2 Research Design

The research uses interviews from senior employees of the bank, who are involved in decision-making that affects customers. The bank was selected due to its history, digital innovation tendencies and willingness to support the research. The interview questions are shown in Appendix D.

7.3 Data Analysis

The research uses content analysis to code the interview transcripts into categories, supporting them with quotes and coding frequencies, and establishing patterns and commonalities to see where relationships between the concepts exist. Evidence of relationship is shown where quotes could fit into more than one category or where employees’ thinking in one category precipitated the other. There is a discussion of the

relationship between the category ideas, which support employees' perceptions of digital banking, customer experience and financial performance. The comments and words used to support evidence are coded according to the sets of interviewees from the 5 departments, represented by EMP1, EMP2, EMP3, EMP4 and EMP5. Two additional themes: 'Financial Services' and 'DB Channels', are investigated to corroborate the financial report and questionnaire results.

7.4 Qualitative Results

This section brings out in-depth and contextual definitions, to give the results deeper meaning. The themes analysed to answer the research questions are discussed below.

Digital Banking Channels

The interviews show that telephone, internet and mobile are the primary digital banking channels for offering services. Interactive Voice Response (IVR) services are offered via the telephone, while others are offered via the internet and mobile devices. Excerpts:

EMP1:

- *"The channels I would classify as digital are the online services. We also have mobile and telephone banking services. We have telephone IVR capability, so customers do banking transactions through that too."*

EMP2:

- *"We have got a sales Website, Mobile Apps, ATMs, e-mail and digitally enabled contact centre. We have got online application processing and online servicing for products."*

EMP3:

- *"We have iPads in stores which can take customers through the mortgage journey."*
- *"On the Savings side you have an online site and portal to access your account which is optimised for mobile banking [...]."*
- *"We do some level of service through telephone IVR and call centres."*

EMP4:

- *"We have got some self-service channels (e.g. the web application) where people can have a look at information on our products. We just kind of launched into the Mobile banking channel."*
- *"We have got ATM, point-of-sale [...]. We have different messaging, like secure e-mail, text alert in certain cases."*

EMP5:

- *"We provide the contact centre, the telephony channel. We do Chat and online channel, but that is sort of internet to contact centre. We also do purely just the internet banking. We also use e-mail as another channel."*

The investigation shows the main digital channels through which customers effectively interact with banks. They provide banks with the opportunity to develop digital banking

propositions and deliver good customer services. With m-banking, customers download the application which gives them access to the bank's system to perform transactions. The bank provides other services, such as point-of-sale, ATM, online chat, secure e-mail and text alert. They have branches and call centres for servicing customers, but these are not regarded as digital channels, unlike self-service IVR and iPad services. Therefore services from digital channels are about serving customers well, meeting their needs through electronic and alternative means from branches, and making customers' journeys smooth.

Financial Services

The employees' opinion is that digital banking is used to offer different financial services, which add value and improve customer advocacy. Excerpts:

EMP1:

- *"Through these services we can do all sorts of mortgages, savings and insurance in our own online systems.*
- *We also have online credit card payment, transactions and servicing. We also offer online current account capability to customers."*

EMP2:

- *"Digital banking lends itself to high volume transactions (e.g. checking your balance, transfer and search for products).*
- *There are certain transactions you may want to do online but it does not lend itself to an online banking service."*

EMP3:

- *"Predominantly, mortgages and savings are our biggest business. I think the biggest thing for the vast majority of banks is the current account, because everything hangs off the current account [...] servicing it through a mobile application is becoming more popular. You can look at your credit card, lending, overdraft, withdrawals, standing order, etc."*

EMP4:

- *"We offer different things through different channels (e.g. savings, insurance and mortgages). Some channels will do onboarding, transfer of funds, savings and account opening as well."*

EMP5:

- *"I will start with credit card. Customers use the digital channels to apply and contact centre as well, before they apply, they want to know what the size of their credit limit is. They will also regularly log onto their account to check transactions and balances and credit that is still available, and their payments as to when they become due."*

The evidence shows that different services lend themselves better to different channels. There is agreement amongst employees that digital banking can be used to perform services (e.g. standing order, payments, balance enquiry and transfers). Digital banking

is primarily about enquiry and account services. The result indicates that these services can be offered to customers, without visiting branches, showing that digital banking has changed the way customers access services. Previously customers used branches or contact centres, now they log on to their accounts to perform these services. Digital banking offers value-added services, reducing costs, as customers can self-serve.

Functional Quality

The employees' perception is that digital banking is scalable and accessible to the vast majority of customers. The bank gets more business traffic and a greater volume of customers, making information easily available and the experience more appealing to customers. Customers can access numerous services anytime. Excerpts:

EMP1:

- *"When we are doing a product launch we can push the product to a significant number of customers through the digital channel. And also we do not have to scale for our online applications but we have to scale our call centres to take the volumes."*
- *"It is easier for us now to reach a large demographic of customers through the digital banking channel, which we could not have done through post or branches."*

EMP2:

- *"I think digital banking does a lot of the job for customers. NPS scores are good – based on functional experience."*
- *"Being able to process stuff digitally scales really nicely, so it can handle high volume products."*

EMP3:

- *"We do a lot of optimisation to make sure that the journey on our website is aligned to what people want to see, making sure the right information is available on the right page in the right size and making it accessible and it seems to work."*
- *"We get a lot of traffic through sites and derive a lot of sales through our websites."*

EMP4:

- *"So I think if you have got a digital presence, you have got a worldwide presence."*
- *"The social media, recommendation from friends, families, peers, also the way customers search for products are part of these features."*

EMP5:

- *"So the key function of digital banking is that it is accessible 24x7, you can do it on Sundays and weekends, and check balances."*
- *"Our contact centres via the telephone are also open 24x7, and they do things like card billing, checking fraudulent transactions."*

The result suggests that digital banking offers unique functions which traditional banking channels do not offer (e.g. 24-hour services). The bank can optimise products and reach more customers easily. They can improve the service appeal through custom interface design to enhance different customer journeys, which takes the hassle out of services and improves customer experience. Digital banking makes banking accessible

to people in remote areas without access to branches, and offers the bank the ability to differentiate itself and provide superior services. It enables the bank to have a world-wide presence and advertising capability, allowing customers to search and buy products from anywhere. There is agreement that digital banking offers flexible and good functional qualities, which improve customer experience.

Perceived Value

The employees believe that digital banking offers value, such as satisfying customers' needs and having impact on profitability. Customers get value-added services, have more banking choices, save money and time. For customers, digital banking is useful and does the necessary job for them. Excerpts:

EMP1:

- *“Certainly from the IT perspective, [...] it is what the customer wants. If you put the equivalent of offshoring your call centre that improves your cost ratio but it gives the customer a worse experience.*
- *Using digital channels, actually the customer gets better value and experience. They get a faster and much more convenient experience and the profitability as a company goes up.”*

EMP2:

- *“I think our digital banking service does the job, customers want to use it because they value it. [...] I think it serves their needs at the moment.*
- *Being able to offer value-adding services alongside the services we offer. For instance, when buying travel insurance, being able to provide a lot of information about where you are travelling to, so we can use a natural document with natural language search.”*

EMP3:

- *“I think it is around the customer experience, which make customers want to use it, and it is where the customer and market are heading.*
- *The customers want to be able to do things on their mobile. They do not want to go to the branches. Now they just want to bank on the go. They have a digital option [...] to interact with us.”*

EMP4:

- *“They will expect more of the mobile channel flexible benefits. We have developed a proposition that has more mobile channels now which is being tested by some users. I think it is probably something some customers are expecting and value more of from the bank.”*

EMP5:

- *“Digital banking is useful to customers. I think we are at the stage where it is mandatory to have digital banking.*
- *Customers want to use them, because they prefer them sometimes than going to the branches, especially on the credit card and savings.*
- *We have heard customers say they want to use it because it can help them to track their mortgage process in one sense. Another one is that, I want to use it because I can see balance on my savings, current account or damage done after my holiday.”*

The result indicates that digital banking is useful to customers. Customers can check their current and mortgage account balances, which could prevent them from going overdrawn and wasting time visiting branches. Employees are anticipating the growth of m-banking, as it offers more flexibility. These days many customers use the internet or mobile phones to perform digital banking, which has become an essential part of their lives. Digital banking serves customers' purposes and evidently, they are expecting more services than the bank can provide. This shows that customers are getting a good digital banking experience and better value, without extra costs. Most of the perceived value seems to be around time saving, serving customers' needs, more choices for customers and service convenience, indicating a relationship between perceived value and convenience.

Service Convenience

The employees' view is that digital banking provides service convenience. Customers can bank from the comfort of their homes and access services anytime. They get more choice and faster service experience than branches. Excerpts:

EMP1:

- *“Effectively, more and more customers now use mobile phones leading to the demand for information and transactions at the point and anywhere. So I think it is just convenience, ease of use of the services but also due to speed.*
- *[...] a classic example is, if someone wants a balance transfer, previously they needed to phone the call centre, give all the details and that could take a number of minutes before they could check the balance of the customer.”*

EMP2:

- *“Primarily digital banking is about convenience, you want to be able to do your banking anywhere on any device. You cannot have people everywhere, so I think convenience is certainly one and I think that is to the benefit of the customer.*
- *It is a convenience thing, if it is done well, it will be a frictionless transaction. The customer would be able to do what they want to do with minimum fuss.”*

EMP3:

- *“I think digital banking is about accessibility and convenience. When they want it is convenient when it works for them.*
- *Traditionally, you wait for the banks opening hours to do your business with them. I think customers do not want that. They want to go out at 1 o'clock in the morning when they finish night shift and check their balances, make payments to friends.”*

EMP4:

- *“Customers are not walking the streets going from one bank to another picking up leaflets. They are sitting at home browsing online or browsing through their mobile and comparing and contrasting products.”*

EMP5:

- *“We see digital banking as our biggest growth area because of the level of self-serviceness they provide and convenience. As they can do digital banking from the comfort of their house rather than going to branches.”*

The result indicates that digital banking is convenient, offering customers a flexible way to bank. Some customers are unable to visit branches, so they can bank on the train, on holiday and from their home. Digital banking enables them to access services, self-serve and bank 24 hours. Customers can conveniently log on to check their balance, pay bills, transfer money, set up standing orders and search for better mortgage deals. Digital banking takes the hassle out of banking, preventing customers from queuing in branches. The fact that customers are demanding digital banking means they are getting a better experience. There is agreement from employees that digital banking offers customers a convenient method of banking. Clearly, digital banking is convenient due to the perceived value and speed at which customers can access services, showing how they relate to each other.

Digital Banking Innovation

The employees' perception is that better customer experience is achieved through innovation. They believe that to achieve good experience there should be investment in R&D to catch up with competitors and meet customers' demands, so the strategy should move towards digital banking innovation. Excerpts:

EMP1:

- *“I think we are doing some of the things our competitors do but there are things our competitors are doing we are not doing. For instance, mobile payment we ought to do a lot more of it.*
- *In terms of innovation, we are investing more in digital channels than the other channels, and customer demand is driving the larger proportion of it, which is good. However, I would want us to spend more money on it.”*

EMP2:

- *“There is also a defensive position to innovation. In many ways if banks do not get their digital experience right there is a good chance they are going to lose business.*
- *Investment in R&D in digital innovation has gone up. We are investing in both web and apps.*
- *With a finite amount of money we have to spread the innovation across a number of initiatives.”*

EMP3:

- *“The way our digital banking compares with our competitors varies. If you say our competitors are the big banks, we are sort of lacking on innovation because we do not invest and offer the same level of service as they do.*
- *As a bank we compare well, in digital banking innovation we are still behind the other ones who are pure digital banks.”*

EMP4:

- *“I think some competitors are doing more and some competitors are a different size to us as well [...]. I think they are more innovative and do things we are not doing.*
- *For instance, some banks are looking at biometric security [...] and other ones are offering different types of payment through the mobile channel.*
- *There will be things we need to drive revenue forward and there will be more strategic initiatives like moving into digital channels and services and capabilities.”*

EMP5:

- *“There is awareness right at the board level and actions are being taken on different digital innovation that will position us better in the market.*
- *A lot of things about digital banking strategies are to do with priorities on investment. Digital banking innovation absolutely is in our strategy.”*

The result shows that digital innovation through investment, R&D and strategy go together in meeting customers' demands and improving their experience. However, the employees have to prioritise their investment portfolio with limited resources. There is a belief amongst the employees that innovation should be sped up to meet customer demand and improve services. Therefore, banks need to innovate to stay competitive; otherwise business will go to more innovative competitors. The employees agree that more development is required in m-banking. However, it can appear difficult sometimes, especially when they have other priorities and competitors have more money to invest. There is agreement that innovation needs to be pervasive across the digital channels to offer better customer experience. Therefore, digital banking innovation is high in the bank's strategy, despite other top priority regulatory requirements. This suggests that digital banking is the future.

Brand Trust

The employees believe that brand plays a crucial role. Some customers stay loyal and use digital banking because of the brand name and trust in the bank. Excerpts:

EMP1:

- *“The services look good, we have got the brand and we have got the image. So actually regarding customer experience, it is basic at the moment, (e.g. in our websites). Our sites look nice but actually the transactions [...] are quite clunky.”*

EMP2:

- *“The customers we have accept that there is a limit to the functionality they need and therefore they are attracted to us because of great products and brand.*
- *They are simple and very competitive, and a lot of other reasons to come and be a customer. I think it is due to brand.*
- *Customers think they are getting an honest trustworthy provider.”*

EMP3:

- *“Customers come back to us due to a combination of value and brand. I think brand is a big one especially when they interact with us.*

- *We have got a good product, we have got good people and we have a good brand.”*

EMP4:

- *“I think the brand helps as well. I think by having your brand there in a digital presence that people know and are comfortable with the brand they do find it attractive.*
- *Then you have to build that trust and integrity with the customer to keep them for the retention part of it. So you have to be safe with customers’ money, and customers’ data. They want to be able to trust the bank.”*

EMP5:

- *“We spend more money creating a brand environment on a face-to-face basis (e.g. in the real world, as opposed to in digital world).*
- *The other thing is that we also have UK based contact centres, which is important for us as a bank. Being able to dial someone and speak to them in English is important, and also being able to give that extra brand care online effectively.”*

The bank’s brand helps retain customers and maintain good digital banking experience. Even though their digital banking offerings may be unexceptional, customers derive joy from being associated with the brand, making them stay loyal. Evidently, some customers stay with the bank due to the brand name, image and trust, and type of experience the bank offers. Therefore, banks should care about their customers, by giving them the best experience, within budget, to retain them. The bank provides a good customer experience to protect the brand and avoid damaging its reputation, which can make it lose business. Clearly, the bank takes anything that could affect its customer loyalty, brand and trustworthiness very seriously, like security, showing the relationship between brand trust, loyalty and perceived risk.

Perceived Risk

Although digital banking offers good experience there are perceived risks (e.g. security and fraud) to consider. These risks are high on the bank’s strategy and the bank invests in mitigating them to safeguard customers’ money. Excerpts:

EMP1:

- *“Everyone [...] has that question about security, so you need to be able to provide that assurance around security.*
- *I think in terms of strategy, security and customer personalisation will be the key driver. The two will obviously be linked together because with personalisation you will be able to have a key identification of the customer. We are doing everything to protect ourselves.”*

EMP2:

- *“Security considerations have to be at the fore-front of any digital banking service and you can never be complacent, we are continually investing in extra layers of defence and knowing how to react in case of a breach.*
- *As an organisation that is our top priority, keeping our customers’ money safe. You*

just cannot be complacent – it is like a brand and trust.”

EMP3:

- *“I think there are very few applications that cannot be completely hacked. We take a lot of measures to protect our digital banking services, infrastructure, customer data and account information.*
- *We invest heavily every year in security and controls by securing our fire walls and all different components we have got in order to secure our infrastructure, and have to keep monitoring it, and constantly monitoring traffic and events and incidents as they happen and to tackle them straightway.”*

EMP4:

- *“There is a lot of focus on security. You do not want bad press relating to cyber-attack or Security leakages. So one of the key things is to make the bank safe.*
- *There is also an investment being made to improve our security against cyber-attack (e.g. in denial of services, intruder detection and improving firewall, network segmentation, privileged access management).”*

EMP5:

- *“Some of digital banking, as they are maturing, we have begun to see more and more fraud in them. For instance, contactless payment, we are seeing people walking around with their payment cards, in crowded areas people being able to pick up payment or fraudulent transactions happening in that space.*
- *As you take on more digital banking there are security and fraudulent concerns which can happen.”*

The result indicates that the availability of digital banking at all times makes it more prone to cyber-attack. The bank invests in developing firewalls to prevent cyber-crime and bad press that damage its reputation. This means that with proper investment, banks can secure digital banking channels. The employees advocate personalisation of services to improve security, so customers can be recognised automatically through their personalised mobile details. The bank takes security seriously to prevent financial loss and fines, maintain its brand, keep customers' money safe and enhance customer experience. Therefore, customers should be educated about the effort banks are making to mitigate risks and improve their confidence. There is consensus about perceived risk issues, however the bank invests to reduce them. Customers should also take responsibility for securing their log in details to prevent fraud, meaning that security rests on both banks and customers. Perceived risks are important in servicing customers better and in safeguarding the brand name.

Perceived Usability

The employees' perception is that digital banking should be easy to use and navigate. Digital banking is provided on self-service devices customers are used to, making their lives easier and giving them the right experience. Excerpts:

EMP1:

- *“Over 50% of our transactions are done through the digital platform. By that measure, you could obviously say it is useful and customers want to use it. One example is that you can easily sign up to our system and get a balance enquiry.*
- *Not only from that perspective but also as a bank we want to make it as usable and easy as possible for customers to use. Therefore, understanding what makes digital channels easier (e.g. nice key board strokes and clicks are critical).”*

EMP2:

- *“Designing the customer experience to make it easy and intuitive are key.*
- *We have recently delivered a new iPad app – but we were careful to design the whole process, which included a thorough training plan to ensure a successful outcome – rather than just focus on the technology.*
- *I think our existing digital solutions are quite fragmented, certain products are not served well from the digital channel. It would be nice to make it quick and easy to use as new modern technology would be.”*

EMP3:

- *“I think we do the basics for customers, which are largely there and they pretty much work. I do not think it is a wow experience. However it is available, it is reliable, useful and gives access to the right information. I think it serves the needs for what they want to use.”*

EMP4:

- *“[...], in fact let me put myself as a customer because I am a customer as well. When I am using digital banking services I found it easy and intuitive but I do want more services. Of those that are offered I think feedback is generally good. If you asked a different question, do you want more services I think yes will be the answer.”*

EMP5:

- *“Customers’ views about our services do vary. On those coming in through digital banking, internet and mobile, they are services which customers would like to use more of and to be able to self-serve a lot more.*
- *There is an element of usability as well, but I would grow internet banking to phone communication. Customers can browse and call at the same time. The design element can be improved [...], but the straight through part is the most important part.”*

The result suggests that perceived usability is important for digital banking experience. Digital banking must be effective to serve different customers’ needs. Its design ought to be intuitive and provide the right interaction at all times. Customers need to use digital banking with minimal effort and learning. They need flexibility, for instance browsing the e-banking website, whilst calling the t-banking channel if they need further information. The employees recommend more m-banking, online chat while browsing for products, pushing the customer experience boundaries further. Digital banking should offer customers quality information through hassle-free services with the right user interface. Common feedback from the employees is that the bank offers customers a decent usability experience, however they need to do more to wow the

customers. Digital banking cannot achieve perceived value without usable interface designs, which means that perceived usability and perceived value are related.

Service Quality

The employees' opinion is that high quality services can be offered. Digital banking offers customers accurate, up-to-date and better service capabilities than the branch method. A high volume of transactions and reliable services are available. Excerpts:

EMP1:

- *"Services are more and more pervasively available, the technology like digital banking is becoming available to any customer no matter where they are. In the same way by reaching a very large number of customers through the web you are exposing the company."*
- *"Certainly they are not less reliable than any other services. What people forget is that there are fewer single points of failure in digital channels than other channels."*

EMP2:

- *"Personally I would always prefer to interact with my bank via the digital channel and have picked my provider based on their capability, but I also want to know that I can talk to somebody if things go wrong – so first class customer service through other channels is equally as important."*

EMP3:

- *"I think it is about the product we offer to customers, we give them choice on how they interact with us. Digital banking is making data and banking accessible to them."*
- *"We also have a team of good people, but digital banking is between customer and internet, with no human interaction. The quality of service from it is reliable."*

EMP4:

- *"I think customers expect more of digital banking and they do compare what is possible, and maybe they would like services that are not offered in terms of requirements. It depends on the customers, the younger customers will be in this space."*
- *"I think in terms of customers' ambitions they may want a bit more but currently it does the basics of what they might need in terms of knowing about their accounts, balance enquiry and savings."*

EMP5:

- *"Definitely we are meeting a lot of our customers' needs through self-service, that is our biggest requirement, because digital banking is quicker and it is more direct and more accurate, not that other channels are inaccurate."*
- *"Customers can tailor their questions quite specifically. There has to be straight through process and speed to respond."*

Digital banking helps the bank to offer better services, meet customers' needs and improve their experience. It enables reliable, accurate and faster services to be simultaneously available and accessible through different self-service channels, meeting demand from older and younger customers. These two groups of customers have different service expectations. Younger customers are used to clicking with their mobile

phones and prefer banking on the move more than the older ones. There is consensus among the employees that the bank is meeting many customer requirements through digital banking capabilities, however some further improvements are needed. Digital banking cannot achieve the perceived usability and value for customers if the service quality is inefficient, showing how these three themes are related.

Employee-Customer Engagement

The employees' perception is that customers should be engaged during digital banking services implementation. The bank ensures that staff have the relevant knowledge and skills necessary to support customer requirements. It has a customer experience team that ensures customer needs are met. Excerpts:

EMP1:

- *"We [...] do a massive amount of research with customers both in terms of customer group and their feedback."*
- *"Engagement of customers is absolutely necessary, because people's feedback on our digital channel is far more available and therefore it is wrong to put something that is not particularly nice or user-friendly, as you will see feedback through social media or twitter immediately."*

EMP2:

- *"We have a dedicated User Experience department, any project, any system that touches the customer is looked at from a people perspective to try to qualify and understand these things."*
- *"We would use focus groups, we would do a lot of usability experience experiment. Once we have implemented the solution we will optimise it, we will continue to take customer feedback from customers, tweak and change the analytics of the site to see how the customer is going through it."*

EMP3:

- *"Our customer experience team works closely with the customer service team. It uses the customer feedback survey. So we use them to check on how customers are feeling and what they are looking for."*
- *"Depending on which aspect of digital banking, there is training. That is the kind of thing we do to make sure people are up to date with digital banking."*

EMP4:

- *"I do know that customer feedback is sought from our customers by our marketing team [...], when we are designing digital banking services."*
- *"If you think when a product is being developed and it might be implemented over a digital channel, then there is a lot of work done on what is the customer journey and customer experience and they actually model that across what the customer may be interacting with when they are using the product."*

EMP5:

- *"We invite customers in for a control group [...], so we do things like that to help in terms of shaping what the new offering and requirement will look like."*
- *"We do 360 degrees feedback on customers and we do analysis on that on how we could better improve our customer experience and then we implement the changes"*

and then use the study group to see the effect of recommendations and how we could improve changes.”

The result suggests that employee-customer engagement is vital to successful customer experience. Staff engage with customers to understand their requirements through feedback. The bank ensures there is proper employee training and communication, and contact with customers on a regular basis. The user experience team engages with customers, test-runs new services and gets feedback, helping understand the customer experience impact before development. This means that ‘employee-customer engagement’ is key to understanding customers’ needs before meeting them through ‘DB innovation’, showing the relationship between them. As employees are the innovators, engaging with customers during digital banking design is important. This suggests that highly trained and engaged employees contribute to creating good experience and satisfied customers. Therefore, banks should conduct frequent feedback to model their digital banking in accordance with customers’ changing requirements.

Service Customisation

Digital banking can be customised for different customers to improve their service experience. The employees believe that current digital banking is not personalised enough and mobile technology offers the opportunity to tailor services to different users.

Excerpts:

EMP1:

- *“We need to push to customise our services to our customers significantly more than we do, and in doing that we will shorten their experience.*
- *Although the current digital application runs on the mobile, [...] it is not personalised to them, it does not really remember them from their previous settings.*
- *The next step is to build a mobile specific application which will improve the customer journey (e.g. good image and products). We also have the opportunity to tailor the services for the customers much more cleanly.”*

EMP2:

- *“We can have a single sign-on for multiple products and systems, so they can log into the system and see different products. Currently it is not a personal experience, so we need to be able to personalise the service. We should be able to tailor it to an individual customer.*
- *We can have a banking dashboard that can look slightly different from one to another. We want to be able to offer that sort of flexibility.”*

EMP3:

- *“We have seen a drop in the number of people using internet banking. Everyone has a smart phone and it is with them all the time, so they are getting a better user experience from the mobile phone.*
- *I think you can offer all sorts of customised services and I do not think there is a*

restriction on what mobile banking services you can offer through the mobile.”

EMP4:

- *“It is an interesting one because the strategy is to exploit more of the mobile banking channels and online provisioning to offer more personalised services to customers. Sometimes it is easy to deliver against those strategies (e.g. to pick them when you are launching a new product, to offer that through a digital channel rather than in every channel).”*

EMP5:

- *“One of the improvement recommendations will be aligning the customisation to the analytics that is happening behind the scenes.*
- *Basically you do an insight analysis into your customer to understand their requirement (e.g. whether their savings product or mortgage product is coming to an end, and then tailor those specific pop-ups and product information to them).”*

The result indicates that service customisation for different groups of customers enables digital banking to be adapted and designed with customers’ security details and products they are likely to buy. It enables customer’s details to be recognised by the bank system through their mobile, to give them personal experience. This functionality makes the customer journey shorter by reducing login time. Customisation can help in strategic marketing and tailoring services and interface design according to customers’ needs and demographics. Customers can automatically get access to the bank’s portal using their mobile phone and perform transactions. This enhances security, as customers can access services at a much faster rate using personalised information, showing how customisation relates to speed of service and perceived risk.

Service Speed

The employees perception is that digital banking makes services faster for customers. Traditionally, customers go into the branch to get information, taking a huge amount of time and resource. Excerpts:

EMP1:

- *“What we hear about is that it is good, it has good content and information [...], in particular faster and more available when they are travelling and mobile.*
- *The convenience and speed to the customer is quite significant. Whilst I think the industry is going much more mobile, shorter transactions, understanding the customer data and knowing their requirements, we should not be looking for them to enter data we should already know about them.”*

EMP2:

- *“Personally, I have not been going to a bank branch for many years. I have everything I need to do banking electronically, to which one exception is paying in a cheque, it is still a manual process. So I think [...] banks are making things easier, quicker and more convenient and taking hassle out of banking.”*

EMP3:

- *“With digital banking customers have more choices and access to banking is quicker.”*

EMP4:

- *“Digital banking is all about convenience, making things easier and faster for customers.*
- *Business users can have conversations with their service providers about Software as a Service. It is easier and faster to deploy financial services. So it is quicker for business users to take this kind of service and put them together.”*

EMP5:

- *“We find that people will use the digital channels rather than use the face-to-face channels, because they are available or the speed of the response is significantly quicker as well.”*

The result suggests that digital banking makes it quicker for customers to buy products, thereby improving their experience. Every customer has instant access to and choices of products and services. The availability and provision of service are faster than in traditional banking, so customers do not miss out on good financial products. This means that the bank offers a shorter customer journey through mobile and responds to customer demand almost instantly, giving customers better experience. With ‘Software as a Service’, banks can deploy digital services very quickly and cheaply, without investing in the full digital infrastructure. The consensus is that digital banking helps make banking faster and more convenient, therefore improving customers’ value and well-being, as they access services anytime and avoid queuing in branches. The service speed improves convenience and perceived value, showing how they relate to each other.

Customer Acceptance Trend

The employees’ perception is that customers’ digital banking uptake has increased in recent years, affecting their experience. They refer to the trend as ‘fashion driven’, changing all the time. Different age groups are demanding services on their digital devices, forcing banks to innovate to keep up with their expectations and avoid being left behind. Their attitude towards digital banking is growing rapidly. Excerpts:

EMP1:

- *“This industry is fashion driven you need not be 3 or 4 months out of date.*
- *[...], the acceptance of digital banking among customers has been driven by them. The user adoption of digital banking is faster than we can deliver the services.*
- *Digital channels have taken over in terms of being the much more preferred banking route. I think customers now want a different kind of service.”*

EMP2:

- *“I think the digital banking acceptance trend has gone up and it is still going up, almost exponentially. The business has grown a lot over the last few years and it has opened up new product lines.*
- *The whole digital banking strategy is driven by customer eccentricity, so it is really putting customers at the heart of the business and working out how the digital enablers and digital banking services can support that and meet their demands.”*

EMP3:

- *“We have never had the entire population wanting to use one channel.*
- *The massive switch from old world to the new world who want digital banking services is increasing and I think it is this new world technology that we would need to offer. If you just look around everyone has a smart phone.”*

EMP4:

- *“Browsing was not prevalent in banking in the early 1990s when I joined. It was much of a branch model, but obviously mobile banking has exploded in that time frame.*
- *These days you have a mobile to make a phone call and mobile to do everything (e.g. photos, movies, doing your banking, browse internet, make phone calls, text). I think the customers are accepting them. Beyond accepting it, they demand it.”*

EMP5:

- *“The development trend of digital banking has been around payments. Payments are becoming easier amongst customers, as well as accessing across several devices.*
- *Customers are demanding digital banking services more and accepting them as a standard piece of service and equipment they can have.*
- *Banks are seeing digital banking service as a better way of communicating with customers.”*

Evidence suggests that customers’ acceptance trend of digital banking affects their experience. Customers get used to the latest digital communications (e.g. mobile phone and internet) quicker than banks. They are demanding banking services on their digital devices, making banks play catch-up to meet their needs. Different customers have different expectations, and the way banks meet their needs helps determine their experience. The result suggests that the demand for digital banking from customers outweighs the supply. Customers want to use their digital devices to perform services because they are convenient and fashionable. Mobile phone use has become prevalent amongst customers and is proving effective to conduct banking services. The bank is changing its strategy, investing and innovating to maintain customers’ aspirations. This shows the relationship between the customers’ digital banking uptake and innovation.

Customer Experience

The employees’ perception is that customer experience can be improved through offering high quality digital banking services, meeting customers’ needs, catering for different demographics of customers and providing flexible services. Excerpts:

EMP1:

- *"[...], customers are demanding the digital channels significantly more than the others. In terms of enjoying the experience [...], they are happy to use our digital banking.*
- *Every customer is different, obviously some customers have low expectations and some have high expectations. But I do think generally customers are enjoying the digital experience. They are using it because they need and want to use it, and they think it looks good and nice."*

EMP2:

- *"I think customers' are getting a better experience compared to 10 years ago. Not too sure about NPS but my recollection, it is about 16 or 18 points. It was a good story the last time I checked.*
- *Digital is one of our key strategic initiatives. The whole customer experience is central to that strategy. [...] in certain respects I think we are meeting their requirements quite well.*
- *If you asked how customers experience digital banking, most would say they were able to do what they want. I think we service the customers' needs rather than delight the customer."*

EMP3:

- *"Some of the things we do are all about customer experience and to have multi-channel for customers to interact with the bank and get away from traditional banking.*
- *We are giving customers more choice. [...] we are making sure our website is optimised so customers can get a better experience when they want to go online to look for our products or buy our products.*
- *I think at the moment, we provide pretty good experience; our customer satisfaction is very high which tells us that we are doing what we need to do."*

EMP4:

- *"In terms of customer experience [...] a lot of it is to do with brand.*
- *The experience, there is a lot of care taken over it and that is how it kind of feels for the customer. I think it should be straightforward, we try and cut jargon out of the digital channels so they should find it reasonably intuitive to use in terms of the services that are offered.*
- *I think customers might want more services [...] than they have but for the ones that are there, lots of care is taken on how they are presented to customers and how they would navigate through it."*

EMP5:

- *"I think customers have an adequate experience with our digital banking. It is not one that wows them, it is one that fulfils their basic requirements.*
- *To capture and retain customers with digital banking is by having a more tailored response, almost knowing what the customer wants as they log in, for instance, if someone's mortgage is coming to an end, being able to communicate and have more of a digital interaction via the web and e-mail and those kind of things.*
- *In terms of growing the customer foot print or capturing them, we want to have similar digital platform like John Lewis (e.g. when a customer wants our product they click on it and immediately apply)."*

Evidence shows that digital banking is an effective mechanism for enhancing customer experience and meeting different customers' service expectations. Results from other themes also indicate how customer experience is affected. Customers are demanding and enjoying digital banking because they value it and access products much quicker than in branches. Digital banking is convenient, saves customers time, and the functional quality helps determine usage. The bank's NPS looks good, showing good experience. However, there is room for improvement to make the experience better, capture and retain customers such as modernising design, implementing more innovative and interactive services, and improving security and personalisation of services. The consensus is that current digital banking gives customers a good experience, but does not delight them. Digital banking changes quickly, so banks need to provide frequent service refresh, better design and choices to satisfy and retain customers. Thus, improving customer experience enhances satisfaction and loyalty, highlighting their relationships.

Customer Satisfaction

The employees' opinion is that customer satisfaction can be improved through digital banking. The employees are fairly satisfied with the level of digital banking they offer. They also think customers are reasonably satisfied, judging by the NPS feedback, however more could be done. Excerpts:

EMP1:

- *"I think I am not highly satisfied with the digital banking services we currently provide primarily due to the scope of services we do provide and also lack of mobility in those services.*
- *I would say our digital banking is average at the moment. We make it have a good impact on our customers [...], but I think there is still a lot of room for improvement in terms of the actual services and the speed of those services.*
- *I do not have our NPS with me but the last time I looked we are the second ranking bank in terms of customer satisfaction."*

EMP2:

- *"Currently not very satisfied about where we are with digital banking – but I am excited by the prospect of being part of transforming this.*
- *Our digital banking does the necessary job for customers at the moment and nothing more. I think we are satisfied that we meet their needs. But I want to see single sign on and personalised transaction capability."*

EMP3:

- *"I think it is about customer expectations. I think about myself, I would not move bank unless they have a comprehensive digital banking offering. I like the app my bank provides me. I can pay bills, I can manage my accounts, and it has got all my account information in there.*
- *I would just be satisfied with the prospects of digital banking services we provide to*

customers. [...] we can create a better experience for customers but it is going to take time and money.

- *I think we are at about plus 20 on the NPS scale. Comparable with other banks we are at the very top of that customer satisfaction."*

EMP4:

- *"I think there is more we can do with the digital channels and the type of services that can be done. So to be fully satisfied, I think we should be working towards offering more of that clearly before we can be fully satisfied in what we offer.*
- *I think it is very good for the services that are offered. I think customers are generally quite positive in what they say. We have had NPS of 17 or 18. From the NPS point of view I am sure the number of the satisfaction level is in the score."*

EMP5:

- *"I am fairly satisfied with our digital offering. I do not think at this stage digital banking is our primary channel. We need to push to the point of making it our key primary channel.*
- *I would rate our digital channel as average. I have mentioned the majority of things I would like to see happen (e.g. customisation).*
- *We do NPS and our scores have gone up. Our digital banking services are improving but not a differentiator for us. I cannot remember the NPS, but [...] it looks good."*

The employees reveal their satisfaction level towards the digital banking experience offered to customers. On average they are fairly satisfied. However, they recommend some improvements in m-banking and personalisation to improve customer satisfaction levels, which depend on time and investment. The employees recognise that customers are moderately satisfied. This evidence shows that through the digital banking services the bank offers, the research is able to gauge the employees' feeling on how satisfied customers are with those services. It shows how digital banking experience helps identify both employee and customer satisfaction levels and loyalty outcomes from the employees' views. The result shows that customer satisfaction can be improved by offering high quality services and better experience.

Customer Loyalty

The employees believe that digital banking can be used to improve customer loyalty. They were asked to rate (0 - 10 scale) their perception of digital banking experience, and to recommend how it could be used to maintain customers' loyalty. Their rating reflects being reasonably satisfied with the services they offer. Excerpts:

EMP1:

- *"In terms of digital banking services, I think my rating will be low because other financial services have a better digital capability. I think in terms of brand and things like that it will be strong, but I will give it around 7.*
- *The way you drive loyalty in the digital space, is that once it is there you need to keep refreshing it with new products and also giving customers reasons to use those*

services.

- *Every single service we have we need to make it mobile as well, because mobile service is not strong for existing customers. But when you want to acquire a new customer the internet is better. Until someone has a product from you there is no point downloading your mobile app on their mobile phone.”*

EMP2:

- *“I will rate us maybe 5 out of 10. It is disingenuous to not be able to recommend them even though I am responsible for most of those services. The most important among them that will make me stay loyal and recommend the service is the single log in. A single, robust security model so a customer can log in once and see all products and carry out all transactions safely.*
- *With the appropriate security and customer experience considerations then the vast majority of financial services could be digitally enabled.”*

EMP3:

- *“I would say 7. It is simple, it is available and effective but it does not really wow the customer.*
- *To wow and retain the customer, the first thing is to have an online banking app and secondly to make it really good. It should refresh every night to provide customer information, [...]. You want to be able to make payments, check balance, create direct debit and move money around, etc. All these will make me give it a score of ten.”*

EMP4:

- *“I think in terms of the services that are offered and how well they are executed are reasonably high, so I would think about 8.*
- *I think what would improve it for our company would be, if you think of different type of products that we offer there is no digital place that they can go to look at all their product holding. Probably this will be a key one for improving things for the customers and maintaining their loyalty.”*

EMP5:

- *“I do not think we have invested in digital platforms efficiently to better service, drive loyalty and improve revenue. It has not been our biggest driver.*
- *Our mortgage business is our biggest income generator. Our credit card is the second one, it is growing. That is an improving digital space. I will probably push up to 5 but certainly below 6.”*

Evidence suggests that customer loyalty is achieved through improving digital banking experience. The employees are average on loyalty scales. This is based on a comparison of the digital banking experience they offer and what their competitors are offering. They recommend improvements to make customers stay loyal (e.g. personalisation, single sign-on, frequent product refresh and centralisation of services). They advise investment in new services to improve the customer journey and loyalty. There is a suggestion that e-banking is better for capturing customers, while m-banking is better for retaining them, because only existing customers use mobile apps. The employees accept that customers are reasonably loyal based on the overall NPS. The research is able to gauge the employees' feelings on customer loyalty, through digital banking

experience the bank offers. This also shows how digital banking experience helps to identify customer loyalty levels through the employees' perspectives. To the employees, brand enhances customer loyalty, showing the relationship between them.

Financial Performance

The employees' perception is that digital banking can be used to improve profitability, efficiency, Cost-to-Income ratio, customer loyalty, and reduce manual processes and costs, which improve financial performance. They refer to the profitability impact as a 'bottom line' effect. Excerpts:

EMP1:

- *"Effectively, [...] digital channels have that direct impact to profitability.*
- *I think on the Cost-to-Income ratio basis, the cost to the bank in a transaction through the digital channel is a fraction of the transactions either from the call centres or particularly through the stores. There is a cost element to it but the revenue generation is the most important.*
- *The cost per transaction through the digital channel is tracked and it is less than the cost of transaction through the call centre or branches. So on the cost basis and revenue side the digital channel outperforms all the other channels without doubt."*

EMP2:

- *"The cost of transactions is significantly reduced through digital channels than having to pay for physical premises and staff.*
- *It is a way to introduce a new product line they had not considered if that would be possible, so there is cross selling and even an up selling opportunity. Then, I think there is the advocacy point. If you have a very good experience, people will tell their friends and other customers.*
- *Obviously digital banking can improve profitability if we can push more business through digital channels rather than the contact centre there is an efficiency thing in there. We are not having to process paper cheques and paper work [...]."*

EMP3:

- *"[...] if you provide this kind of banking you do not need people and therefore you can offset costs. That will give people the opportunity to self-serve and get balance.*
- *The way to improve profit is to increase strong relationships with the customer. Because once you have strong connections with customers they tend to be long term. Once they are with a bank they can use the bank's mortgage, loan or credit card.*
- *There is a segment of customers who want to be able to bank digitally and if you can offer the services you can attract those customers. There are efficiencies, however I have not really seen any organisation which has gone digital end to end."*

EMP4:

- *"Digital comes into play in a couple of different ways. It depends, if a customer expects and notices a kind of experience that may determine whether they stick around or not, but the products they have taken from us, and will take from us are equally important I think.*
- *In that case, yes it is making an indirect impact on our profit. Indirect impact is like efficiency drive, if we can offer a self-service experience through customer mobile or online channels then they are not ringing the call centres and you do not have many*

agency staff to answer all the calls. This has a direct impact on the profitability of the bank, if you look at the bottom line effect.”

EMP5:

- *“Certainly knowing more about your customer, knowing what they are looking for on your online site, and then tailoring something for them can make them buy significantly more from you. This can certainly improve sales and profit.*
- *If someone is buying a mortgage, the chances are that they will need home insurance. In doing that you are doing up-sell and cross-sell to the customer.*
- *There is efficiency there, especially in processing it means you do not have to pay for administration and people working behind the scenes. Customers can self-serve instead, so there are huge savings there.*
- *Banks are taking NPS seriously, it can affect their performance. If a customer is not feeling low and is satisfied, he will spend more money in a bank. The bank’s retention will rise and if you retain a customer for a long time you will make more money from the customer.”*

Digital banking takes away administrative costs, which increases efficiency and drives up profit. It is cheaper to serve customers than through branches. Although there are initial costs in building and maintaining digital banking, the long term Cost-to-Income ratio benefit outweighs this initial overhead. Customers can self-serve, thereby reducing labour and branch costs, and improving profit. The employees suggest that when customer experience improves, customer satisfaction and loyalty increases, and over time the bank makes more profit. This shows NPS effect on financial performance through CLV. With digital banking and good customer loyalty, there are chances of up-sell of services to existing customers, which increases sales and profits. The employees assert that if customers are feeling satisfied, they will spend more money. The result shows a strong link between customer experience, satisfaction and loyalty, and financial performance. There is agreement that digital banking impacts positively on financial performance, however the human touch is sometimes necessary.

7.5 Quantitative Results

This section uses summative content analysis to bring further insight from a different perspective. It presents trends, code ranking and frequencies of some key points. Figure 7.1 presents a Word Cloud, showing the ranking order of key words used in the interviews.



Figure 7.1: Most Frequently used Words in the Interview

Figure 7.1 displays about 100 words in varying font sizes, with the most frequently occurring contents in larger fonts. These are key words used by the employees and their priorities in describing the research concepts. Figure 2 shows the ranking order of some key words.

Ranks	Key Words
1st	digital, banking, services, customer(s), think, experience, want, mobile
2nd	channels, online, bank(s), offer, good, current, account, security, app, brand, need, product(s)
3rd	Convenience, NPS, credit, card, brand, offering, satisfied, business, faster, balance, payment, feedback, better, strategy, transaction, trend, investment.

Table 7.1: Key Words Ranking

The words ranked first are among the most noticeable and discussed. The key words show how they relate to the categories and describe the employees' thinking about digital banking and customer experience. Table 7.2 shows the categories, number of content units and percentage frequencies, and their ranking order. The content units are key concepts, which display important meaning to the categories. Figure 7.2 shows a bar chart of the categories, percentage of content coding units and their code ranking.

Categories	Content units Occurrences	% code units	Code Rank
Digital Banking Channels (DBC)	336	13.36	1
Financial Services (FS)	152	6.04	7
Functional Quality (FQ)	130	5.17	10
Perceived Value (PV)	131	5.21	9
Service Convenience (Conv)	64	2.55	14
DB Innovation (DBI)	159	6.32	6
Brand Trust (BT)	39	1.55	17
Perceived Risk(PR)	98	3.90	13
Perceived Usability (PU)	147	5.84	8
Service Quality (SQ)	166	6.60	5
Employee-Customer Engagement (ECE)	60	2.39	15
Service Customisation (Cust)	52	2.07	16
Service Speed (SP)	38	1.51	18
Customer Acceptance Trend (CAT)	101	4.02	12
Customer Experience (CEQ)	323	12.84	2
Customer Satisfaction (CSAT)	220	8.75	3
Customer Loyalty (CLY)	190	7.55	4
Financial Performance (FP)	109	4.33	11

Table 7.2: Coding Results from the Themes

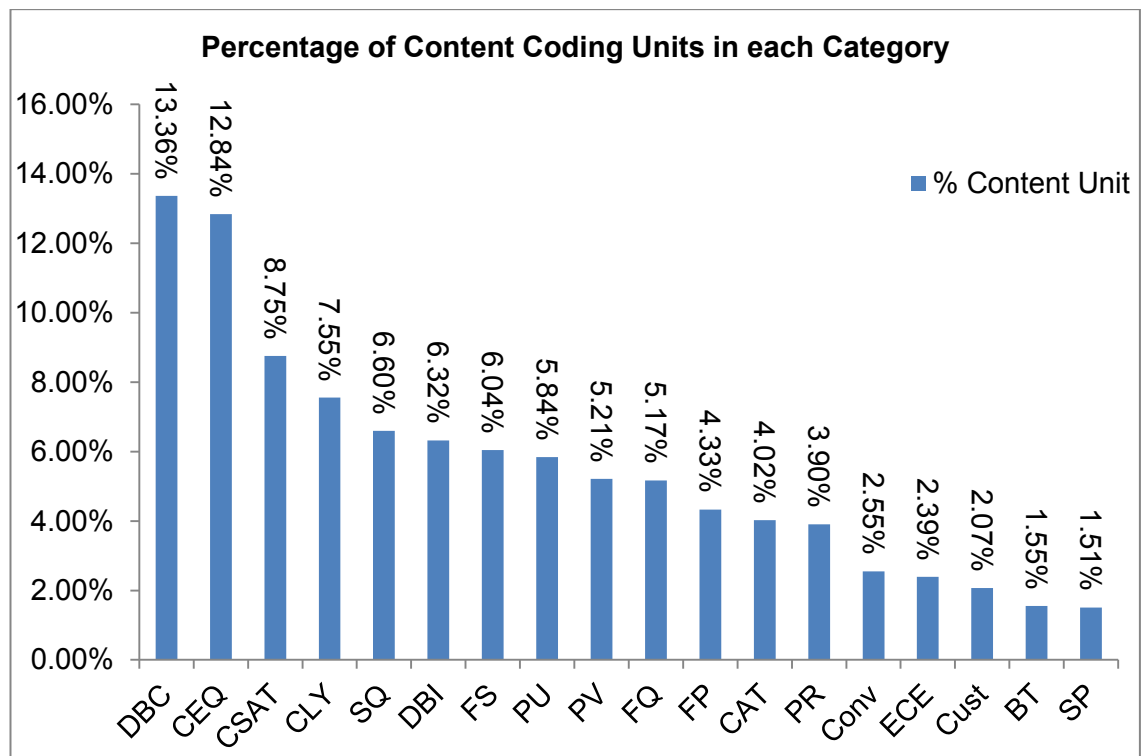


Figure 7.2: Frequency Occurrence of Units from the Themes

The following results give further support, providing a summary view of the categories and examples of key content units. Table 7.2, for instance, depicts 336 occurrences of 'DB Channels' (e.g. telephone, internet and mobile banking, Point-of-Sale, ATM and Cards). It represents 13.36% of the coded content units, showing the importance of these channels in the provision of services. Digital banking is used to offer various 'Financial Services' (e.g. making enquiries, onboarding customers, transferring money, printing statements, checking balance, mortgage, pensions, savings, insurance, paying bills and credit cards), representing 6.04%. This shows the spectrum of services customers access using digital banking.

From the employees' perspective, 'Functional Quality' (e.g. design, wide reaching capability, look and feel, functions, user-friendly and service traffic) is important for a good digital banking experience, representing 5.17%. 'Perceived Value' qualities (e.g. being useful, enjoyable, needed, beneficial, economically valuable, and cost and time saving) make digital banking attractive for customers. This represents 5.21% of the coded content units, showing that digital banking offers great value. Banks seek profitability, while customers expect useful services that save money and time. 'Service Convenience' (e.g. convenience, comfort, hassle-free and 24-hour services) represents 2.55%, as customers accept digital banking due to the convenience of service. 'DB Innovation' (e.g. innovative products, good strategic initiative, investment in innovation, research and development, differentiation and being competitive) can influence digital banking experience. Employees use these key words when talking about innovation, differentiating their products and achieving greater competition. This represents 6.32%.

'Brand Trust' (e.g. brand, trust, image and integrity) represents 1.55%, and is important for serving customers well; retaining them and preventing fraud; maintaining customer experience and loyalty. 'Perceived Risk' (e.g. cyber-attack, security, fraud and cyber-crime) negatively affects digital banking experience, and represents 3.90%. 'Perceived Usability' (e.g. ease of use, intuitive, interactive, simple and flexibility) is important in digital banking experience, and represents 5.84%. 'Service Quality' (e.g. quality, reliability, accessibility, meeting expectations, needs, requirements and availability) represents 6.60%. The employees believe that good service qualities improve experience.

‘Employee-Customer Engagement’ through training, engagement, feedback, communication, knowledge and skill acquisition represents 2.39%. Employees feel that engaging with customers helps them understand their needs and improve their experience. ‘Service Customisation’ (e.g. customisation, personalisation and specialisation of services) for different customer segments helps improve customer experience. This represents 2.07%. ‘Service Speed’ (e.g. faster, quicker, speed of services and access, spontaneous access) represents 1.51%. ‘Customer Acceptance Trend’ (e.g. trend, acceptance, demand for service, adoption, going up, increase in the uptake) represents 4.02%.

‘Customer Experience’ (e.g. meeting user experience, meeting demand/needs, improve acquisition, good customer journey, improving requirements and overall experience) represents 12.84%. ‘Customer Satisfaction’ (e.g. satisfying, satisfaction, delighting customers, treating customers fairly and making customers happy) represents 8.75%. ‘Customer Loyalty’ (e.g. loyal, loyalty, re-purchase, cross-sell, retention, retain, improved NPS and recommendations) represents 7.55%. ‘Financial Performance’ (e.g. reducing costs, Cost-to-Income ratio, and increase efficiency, revenue, profitability, cost savings, sales growth, performance, NPS and returns) represents 4.33%. The results from the employees’ perspective show that the themes investigated determine the effectiveness of digital banking innovation in improving customer experience and financial performance, which should be considered.

7.5.1 Intercoder Reliability and Ranking Results

Of priority to banks and in the code ranking order, ‘DB Channel’ received the highest coding followed by ‘Customer Experience’, ‘Customer Satisfaction’, ‘Customer Loyalty’, ‘Service Quality’ and the rest. This confirms the Word Cloud results. The key words digital, banking, mobile, customer(s), experience, satisfied, needs and channels are the highly ranked ones. Among the digital channels mentioned, m-banking received more focus, which will help other banks in strategy planning. To provide intercoder reliability, a second coder performed the analysis, applying similar rules and the level of agreement was measured (Cohen Kappa=0.883, $p < 0.05$) and considered acceptable (Landis & Koch, 1977; Seuring & Gold, 2012; Neuendorf, 2002).

7.5.2 Digital Banking Rating Results

The employees' rated digital banking provided to customers through the questions: Based on your digital banking perceptions, how likely is it that you would recommend your bank's digital banking to a friend or colleague, on a scale of 0 to 10? And why? The 'why' elements are part of recommendations for improvement, in the 'Customer Loyalty' theme. Figure 7.3 presents their NPS rating.

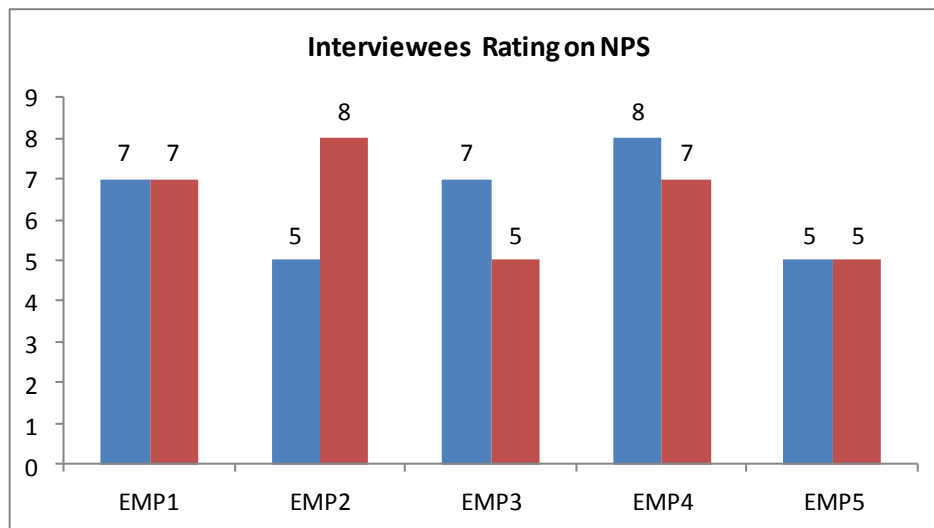


Figure 7.3: NPS Rating from the Interviewees

The average ratings is 6.4, while the NPS is negative (-20), considering Detractors (0 to 6), Passives (7 to 8) and Promoters (9 to 10). As already indicated, on average, the employees are fairly satisfied with digital banking offered to customers, corroborating the average score here. However, they recommend some improvements to enhance experience further (e.g. personalisation, improvement of security, investment in innovation, centralisation of services and more m-banking services).

7.6 Exploring Interrelationships Between the Results

This section explores the relationships among key themes, showing how they relate to each other in answering the research question and creating a model. The results show that attributes: 'Functional Quality', 'Perceived Value', 'Service Convenience', 'DB Innovation', 'Brand Trust', 'Perceived Risk', 'Perceived Usability', 'Service Quality', 'Employee-Customer Engagement', 'Service Customisation', 'Service Speed' and 'Customer Acceptance Trend' affect 'Customer Experience'. This highlights the interrelationships that exist between them, in meeting customers' needs. The results indicate that giving customers better experience improves satisfaction and loyalty,

reduces operational costs, and enhances efficiency, sales and bank profit, showing the relationship among ‘Customer Experience’, ‘Satisfaction’ and ‘Loyalty’, and ‘Financial Performance’. Figure 7.4 shows the model constructed, relating to the employees’ perceptions of the effectiveness of digital banking in enhancing customer experience and financial performance.

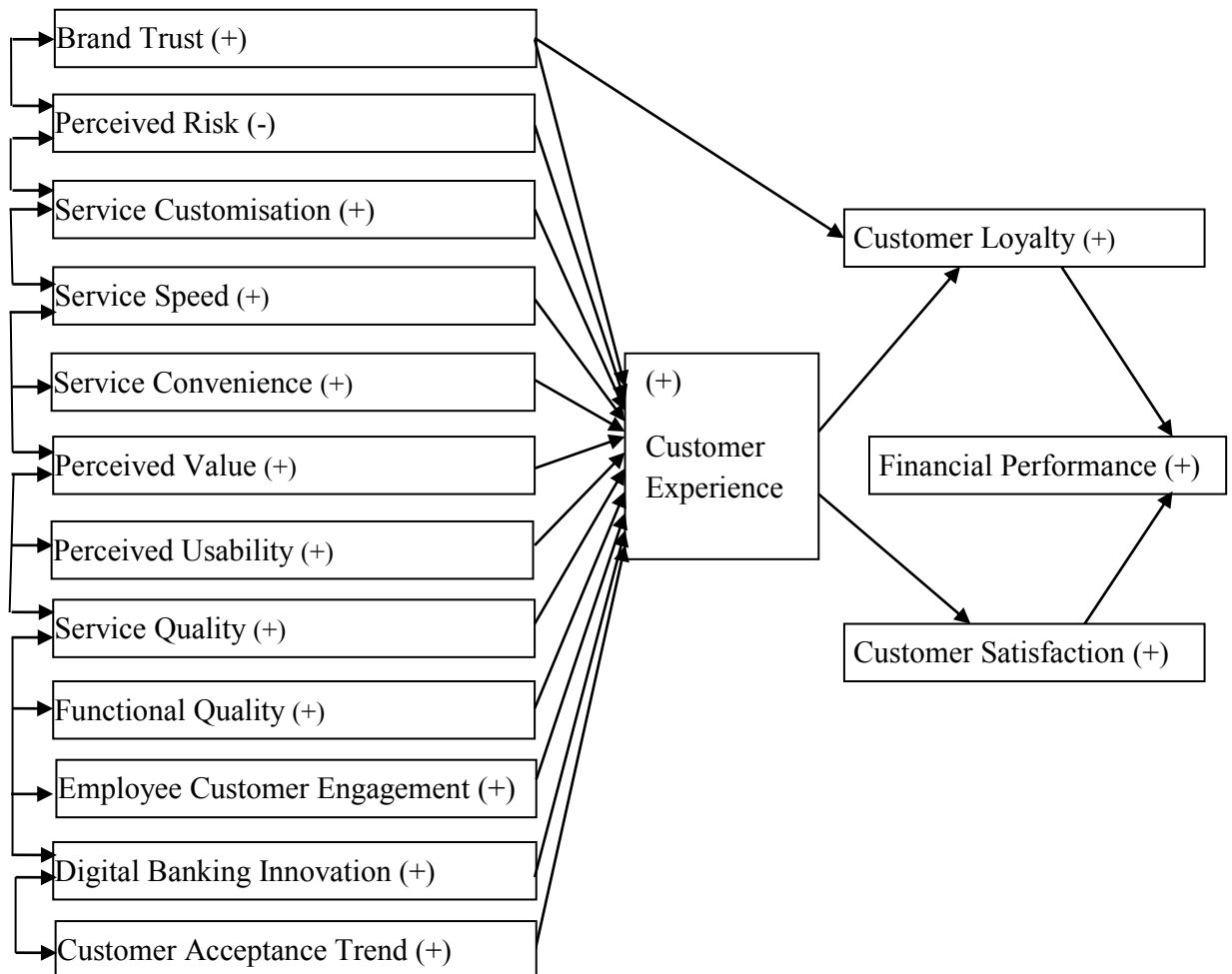


Figure 7.4: Model showing the Relationship between the Interview Themes

Figure 7.4 determines digital banking experience attributes, with the arrows indicating the links between them, while the ‘signs’ indicate negative and positive effect. The results show a relationship between ‘Service Convenience’, ‘Service Speed’ and ‘Perceived Value’. Evidence shows that customers find digital banking convenient because they can access services comfortably and quickly from their homes. Customers get better value, as digital banking saves them time, hassle and money from visiting the branches. There is a relationship between ‘Service Customisation’ and ‘Service Speed’ and ‘Perceived Risk’. Service customisation can improve customer journey and security. With customisation, customers can perform transactions much quicker and security can

be improved, as customers' personal details will enable bank systems to recognise their mobile phones automatically. Banks can then give customers instant access to personalised services, which they might purchase. This can help banks in targeted service marketing.

There is a relationship amongst 'Service Quality', 'Perceived Usability' and 'Perceived Value', as customers will accept good quality design, easy to use and useful digital banking. Poor service quality and design prevent customers from deriving the necessary value. There is a relationship between 'Employee-Customer Engagement', 'Service Quality', 'Functional Quality' and 'DB Innovation'. Employee-customer engagement through feedback and communication is key to meeting customers' requirements, ensuring high quality service and functional experience are offered via digital innovation.

'Brand Trust' and 'Perceived Risk' relate to each other. 'Perceived Risk' like cyber-attack and fraud damage brands and bring losses, so banks invest in security to protect their brand and maintain customers' trust. 'Brand Trust' relates to 'Customer Loyalty'. Evidently, some customers stay loyal because of brand and good digital banking experience. They feel delighted to be associated with the brand due to the trust and image of the bank. 'Customers' Acceptance Trend' relates to 'DB Innovation'. The employees believe that customer attitudes towards digital banking are forcing banks to innovate to meet customers' needs and expectations. They refer to digital banking as being 'trendy' like fashion, requiring constant innovation. The above results will help banks know how these attributes relate to each other and in strategic digital bank marketing.

7.7 Discussion and Implications

The research investigated the effect of digital banking innovation on customer experience and financial performance, to contribute knowledge theoretically, practically and through the methods used. This has implications in service quality improvement, strategic bank marketing and digital banking studies (Amin, 2016), and bank financial performance (Keisidou et al., 2013), which extends knowledge into UK digital banking. There are studies on employee influences in customer experience and satisfaction (Garg et al., 2014; Karatepe & Aga, 2016) and financial performance (Kanyurhi & Akonkwa, 2016; Glaveli & Karassavidou, 2011), but mainly in contact services. There are studies

in service improvement, focussing on the relationship of customer loyalty and profitability, through CLV (Valenzuela et al., 2014; Reichheld, 2003). However, this research extends knowledge by linking digital banking, customer experience and financial performance improvement, which can be used to transform banking business.

The research demonstrates that digital banking uptake has increased in recent years, which confirms other studies (Stone & Laughlin, 2016; BBC, 2016). It examined important themes through employees' perspectives, to incorporate digital banking impact on customer experience as a moderator of satisfaction, loyalty and financial performance, which has implications for future studies.

Practically, the research will help executives, other banks and investors understand issues that affect digital banking from the employees' viewpoint. It identified important factors to consider when designing digital banking. The primary 'DB Channels' (e.g. telephone, internet and mobile) for offering services were highlighted. Many customers are familiar with these devices, especially the middle and younger age groups, making them suitable for delivering services, which is an advantage to banks. Therefore, banks need to concentrate on developing innovative services, deployed over these digital channels. The research also found that these digital channels provide banks with the opportunity to offer value-added 'Financial Services' (e.g. for payments, balance enquiries and transferring funds). This will help other banks to understand the type of services offered.

'Functional Quality' helps determine digital banking effectiveness, therefore banks should consider interactiveness, accessibility features and user interface when designing it. Customers are demanding digital banking due to the 'Perceived Value'. Therefore, giving customers a better experience (e.g. useful, cost and time saving services), making them satisfied and loyal should be banks' fundamental objectives. Customers obtain experiential value through receiving a better service experience (Gentile et al., 2007). 'Service Convenience' makes digital banking experience attractive for customers, therefore banks must offer customers access from anywhere and anytime.

'DB Innovation' helps banks catch up with customers' demand and improve their experience. Therefore, banks need innovation to stay competitive; otherwise customers will go elsewhere and they will lose business. Results show that 'Brand Trust' enhances

customer experience and loyalty, while ‘Perceived Risk’ negatively affects digital banking experience. The employees highlight security challenges and efforts being made to reduce risks, which banks should educate customers on. Customers also have to safeguard their systems and personal details from fraudsters. Results of ‘Perceived Usability’ mean that customers only accept easy to use, simple and user-friendly digital banking, which banks need to consider. For instance, many customers are used to personal computers, internet and mobile, making it easy to perform digital banking on them. ‘Service Quality’ affects digital banking experience (e.g. reliability and accessibility). Customers are happy when their expectations are met or exceeded, so enhancing service and functional qualities, and usability should be considered when designing digital banking services.

‘Employee-Customer Engagement’ helps employees understand customers’ requirements and provide a high quality experience. Therefore, banks should seek regular feedback from employees and customers to help them be attuned to customer needs. ‘Service Customisation’ helps banks personalise services and improve security, enabling bank systems to recognise customers’ mobile numbers and give them access to the banking portal. It helps shorten the customer journey, and in targeted marketing it gives customers straight-through access to certain services, making it an important feature. ‘Service Speed’ can be quicker with digital banking; banks can deploy services faster than branches to a wider audience and many customers can access services simultaneously, which is good feature to exploit to improve experience.

‘Customer Acceptance Trend’ of banking services via digital devices has increased in recent years, affecting experience, making banks play catch-up and innovate to meet customers’ needs. This trend is due to customer demand for digital banking, indicating that customers’ attitude is changing and they are expecting more services from banks. Evidence shows that digital banking changes very quickly, therefore banks should frequently monitor their strategy to ensure it moves with customer demands. All the above attributes are important considerations for banks to determine whether they are offering a good or bad customer experience, showing digital banking’s impact. They can help banks capture and retain customers if they are considered.

Further research findings revealed digital banking attributes which are antecedents of ‘Customer Experience’, and in turn affect ‘Satisfaction’ and ‘Loyalty’, and ‘Financial

Performance'. This shows that giving customers good experience makes them satisfied and loyal. Loyal customers pay premiums, recommend friends, and require less service costs to retain, which improves profit. The results highlight how employees' perceptions can gauge digital banking effectiveness. The employees' ratings reinforce that poor digital banking experience can prevent them and customers from recommending their banks to others. It reduces loyalty, and drives NPS into negative points. The NPS from the employees reflects their 'fairly satisfied' views with the digital banking they offer to customers. However, they recognise that digital banking is the future and impacts positively on profitability.

The result indicates that e-banking is better for acquiring customers, while m-banking is better for retaining customers, helping banks to offer different services to different customer segments, using a suitable channel. It also shows that more customers are shifting towards m-banking, therefore banks should invest and offer more value-added services in the area. The research model highlights the effect of quality digital banking experience on improving customer satisfaction and loyalty, and financial performance, which has implications for banks.

The methods used have demonstrated the strength of interviews, and directed and summative content analysis approaches, enabling the research to support phenomena of interest, allow new concepts to emerge and show key content units. The data gathering and analysis methods have contributed to knowledge, helping provide reliable results and create a model, which can assist future studies.

7.8 Conclusion

This chapter examined the bank employees' perceptions of digital banking, and its effectiveness in improving customer experience and financial performance, using interviews. The research adopted content analysis techniques to draw out the rich context information and provide key construct evidence, frequencies and further support. These methods have complemented each other to make the results more robust and answer the research question. In the research, telephone, internet and mobile were the main 'DB Channels' for offering digital banking experience. The research highlighted the importance of these channels to banks for innovating and marketing different value-added 'Financial Services' to customers.

The research evidence shows that attributes: 'Functional Quality', 'Perceived Value', 'Service Convenience', 'DB Innovation', 'Brand Trust', 'Perceived Risk', 'Perceived Usability', 'Service Quality', 'Employee-Customer Engagement', 'Service Customisation', 'Service Speed' and 'Customer Acceptance Trend' influence 'Customer Experience'. It also shows that 'Brand Trust' affects 'Customer Loyalty'. The research concludes that improving digital banking attributes positively impacts on 'Customer Experience', 'Satisfaction' and 'Loyalty', and banks' 'Financial Performance'. The results demonstrate the effectiveness of these important themes for successful digital banking implementation and customer experience improvement in banking.

These findings have demonstrated the relevance of interviews in tackling banking challenges and analysis methods used, enabling the research to corroborate results, develop a rigorous model and provide digital banking success factors. The research has demonstrated, through employees' (innovators) views, how important digital banking can be in enhancing customer experience and financial performance, helping banks improve.

CHAPTER EIGHT – AN INTEGRATED FRAMEWORK FOR ENHANCING DIGITAL BANKING SERVICES, CUSTOMER EXPERIENCE AND BANK FINANCIAL PERFORMANCE

8.1 Introduction

This chapter investigates an integrated framework for enhancing digital banking, related customer experience and financial performance, incorporating results from Chapters Five, Six and Seven. It addresses the research objective and question:

- *How can the research results be integrated into a framework for enhancing digital banking, related customer experience and bank financial performance, in light of such metrics as profitable growth and economic value-adds?*

Clearly, digital banking has become a major way to offer services and interact with customers, making it important in modern banking, however customer involvement and risk levels influence customer choice, experience and digital channel uptake.

Delivering value in service has led to models aiming to measure service quality from a holistic viewpoint, including their effect on customers, employees and profitability. As indicated in Chapters Two and Three, service quality affects customer satisfaction and loyalty (Jun & Palacios, 2016; Chang & Lin, 2015), and financial performance (Keisidou et al., 2013; Liang et al., 2009), in contact services. This research aims to contribute to knowledge through an integrated framework for enhancing digital banking value for customers and banks, using evidence from Banks', Customers' and Employees' perspectives. These three entities are primarily affected by digital banking, and as discussed earlier, very little is documented about a framework that comprehensively considers their views. An integrated framework will serve as interdisciplinary reference material for banks, enabling them to make better use of digital banking to fulfil customers' needs.

This chapter starts with a discussion of an integrated framework for creating value for all stakeholders. It highlights the framework development viewpoints. Next is the framework's conceptualisation, demonstrating the orchestration of components and how

digital banking can be built and used to offer services. This is followed by how the framework can be used to create and derive value. Finally, there is triangulation of three research results to construct an integrated framework, research discussion, implications and conclusion.

8.2 Framework for Digital Banking Economic Value-Adds

Digital banking as IT, is offered as a service. The increase in marketing focussed on service experience is challenging researchers to take a strategic role in their organisations in designing ways to engage with their customers (Maklan & Klaus, 2011). Hastings (2012) advocates a marketing matrix, which should force firms to share value with customers, engage in a mutually beneficial exchange and lower firms' influence. This research indicates that digital banking has changed the way services are offered, empowering customers, making banks rely on customer experience for their own performance. Banks are depending on customer value for their own financial success.

Previously, businesses have focussed on selecting appropriate virtual channels and revenue models to solve digital experience (Ballon, 2007). In today's digital banking, selecting virtual channels and revenue models is not enough. As argued in the literature review, business and research model attention has shifted towards the integration of virtual activities and experience, and how they affect the parties concerned. The new model topography will enable banks to conceptually capture the real value proposition peculiar to the customer experience environment, to create distinct effects. This is important because the research evidence suggests that customer behaviour is changing due to the advent of digital devices, therefore banks need to change to grow their business.

Research evidence suggests that there is an upward trend in customers' digital banking uptake. The change is accelerated by the way digital banking is substituting human labour, perceived value and level of convenience associated with it, helping banks save money, and increase efficiency and profit. Customers are increasingly using digital devices to perform banking rather than visiting branches. This shows the impact of digital banking, and how it has changed customers' banking perceptions, which demonstrates a major reason for banks closing branches, as found in Chapter Five.

The three research views highlighted perceived value as key to both bank and customer behaviour towards digital banking. It influences digital banking experience and bank performance, confirming that new frameworks should be centred on shared values between banks and customers, as argued earlier. This re-emphasises the importance of expected and perceived service measurement, which determines whether services meet customers' expectations and desired values. In this research, the effectiveness of digital banking is a major value customers derive.

Models that show customer value are generating attention due to modern ways services are offered. Chang and Tseng (2010) note that service quality and customer value are key to firms' survival and customer retention. This echoes Grönroos' (1984) service quality proposal, which states that service marketing and management models must be tied to what customers are seeking in the customer service relationship with firms. Monferrer-Tirado et al. (2016) and Grönroos note that functional quality (how) is a more important dimension of the perceived service than technical quality (what) in most cases in interactive marketing. This research found that good digital banking functional quality helps improve customer experience, making it very effective in interactive marketing.

The growth of the internet has given rise to new models for improving customer services and profit to supplement existing ones. The model concept, as a way to describe business architecture, is linked to the rise of e-commerce (Zott et al., 2011; Piyathananan et al., 2015). In the new environment, the overall aim is to create value through innovation, as digital banking has meant that customers and banks seek value. As argued in Chapter Three, this type of value is advocated in marketing research, and poses a challenge to banks' customer experience and business strategy, in creating economic value-adds, which the framework remedies.

Results in this research show that banks want to improve profit, but have to consider customer experience through digital channels, which have become important revenue sources. As banks expect profit growth, customers are looking for value-added products and comfort, and digital banking has made it easy for them to browse, compare and buy products online. The research shows there is a relationship between customer experience, satisfaction and loyalty, and financial performance. This means it is difficult for banks to make profit without improving customer experience and loyalty. The

evidence extends knowledge in models for enhancing customer experience, satisfaction and loyalty (Klaus & Maklan, 2013; Garg et al., 2014), and financial performance (Keisidou et al., 2013), in digital banking.

The importance of reciprocal gain between stakeholders has made researchers concentrate on models for creating value through innovation. As indicated in Chapter Three, there is a need for models to enhance the understanding of digital banking innovation on economic value-adds and their antecedent variables. Banks have overemphasised financial indicators (e.g. ROA), while under-reporting the indirect and intangible values (e.g. digital technology, executive, employee and customer attributes). However, in modern banking, digital banking designed from the latter values' aspects is important to banks' survival, which is a major contribution this research demonstrates. Digital banking is contactless and intangible, making early research difficult. As found in Chapter Seven, digital banking is 'fashion driven', which means customers' needs and models change quickly. Therefore, the digital banking effects, customer experience benefits and banks' financial and economic value-adds are the integrated framework insights.

8.2.1 Integrated Framework Perspectives

There has been extensive discussion suggesting that financial performance and economic value-adds should be investigated from a wider perspective in Chapters Two and Three. The areas include the importance of employees, service quality, satisfaction, loyalty and innovation in enhancing organisational performance. This research framework contributes knowledge to other models that have recommended expanding the investigative scope. Therefore an integrated framework for enhancing digital banking, related customer experience and financial performance is investigated from different viewpoints, shown in Figure 8.1.

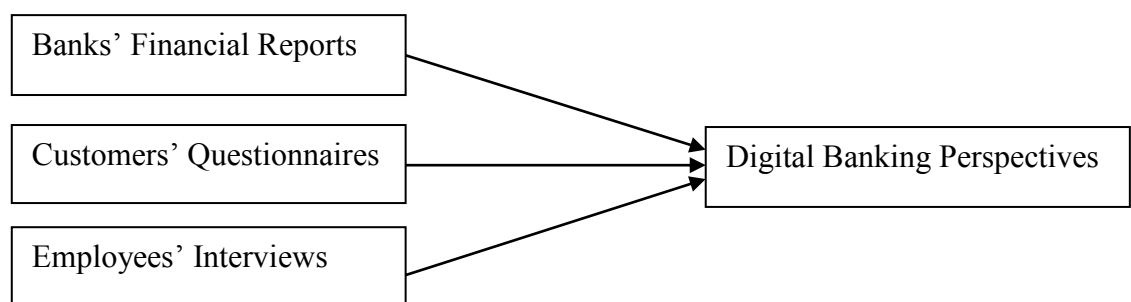


Figure 8.1: Digital Banking Services Research Perspectives

The results indicate that to understand the economic value-adds from digital banking these entities must be considered. They show that banks' financial performance increases through offering good customer experience, having satisfied and loyal customers. Meanwhile, improving customer experience increases customer satisfaction and loyalty. In all three research views, digital banking was found to be convenient, faster and making customers' lives easier than branches. Results from bank reports show that banks are saving money, by closing branches as customer visits decline.

Interview results show that employee satisfaction with their bank's services increases when they are innovating, offering customers the best experience and satisfying them, hence aligning employee and customer satisfaction. These results show a co-production of value between banks and customers, thus contributing arguments to other literature about IT value. This research suggests that digital banking improves customer experience and banks' performance, and there is a value chain between customers, employees and banks, but most importantly between customers and banks. The three research viewpoints show that customers and banks acquire different kinds of digital banking value, which is reflected in the integrated framework.

8.3 Constructing the Integrated Framework

An integrated framework measuring digital banking effectiveness incorporates the perceived improvement in customer experience and financial performance (e.g. profitability, efficiency and other financial ratios). This is usually by collecting customer feedback to ascertain NPS, to indicate how customers are enjoying their experience, which has a bottomline effect on loyalty and profitability via the CLV. The research results show that offering high quality 'Digital Banking Services' improves 'Customer Experience' and 'Financial Performance', hence demonstrating the interrelationships amongst them. Figure 8.2 is the initial framework, showing the link between the components and how intertwined they are in digital banking strategic marketing, innovation, management and value creation.

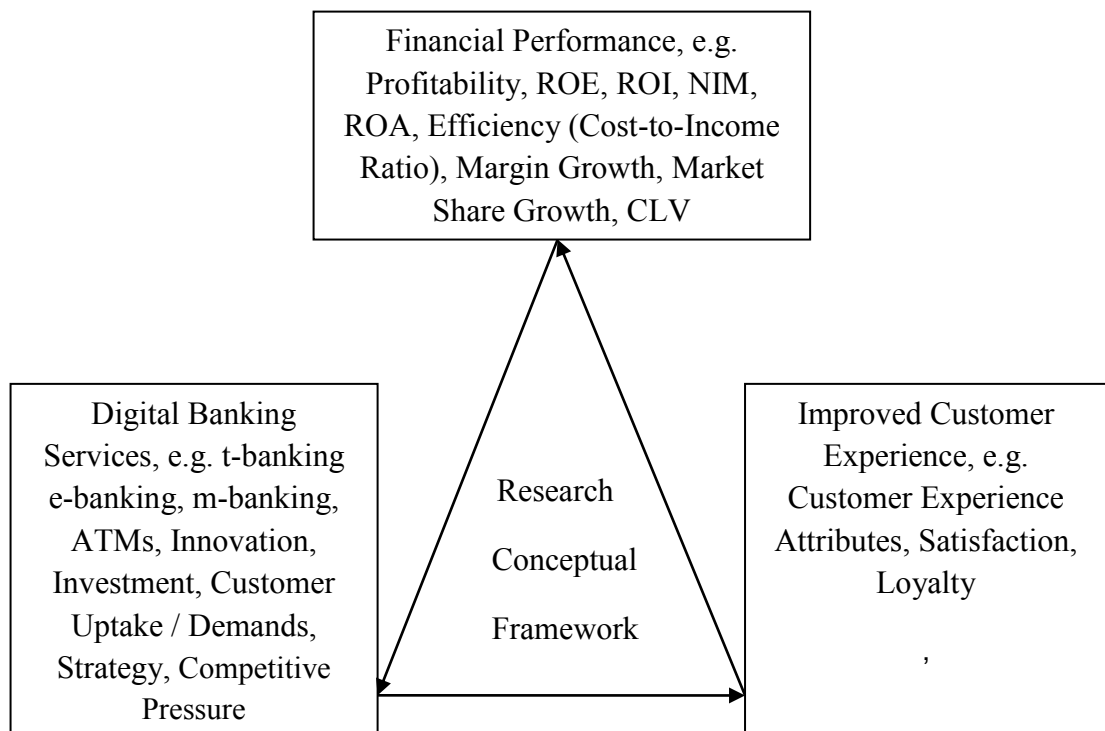


Figure 8.2: Initial Framework of Digital Banking Services (Source: Author)

The results from the employee interviews and bank reports indicate that customers' 'digital banking services' uptake and competitive pressure persuade banks to innovate to meet customer demands, stay competitive and improve customer experience. Therefore, 'improved customer experience' brings about satisfaction, loyalty and 'financial performance'. Similarly, investment in R&D and innovation happens more when banks are profitable. This is described as a 'Virtuous Triangle' model. This means that banks which constantly innovate and improve customer experience stand to have a higher NPS than others. They will outperform their competitors and create value for their customers and themselves through improved financial performance via efficiency, sales, margin, profitable growth and CLV.

The research results suggest that digital banking comprises different facets that enable it to be made available to customers. Figure 8.3 shows the strategic model and the type of services that can be provided through digital channels. This will help banks, employees, researchers and stakeholders understand the technical architecture, strategic marketing and management map underpinning digital banking.

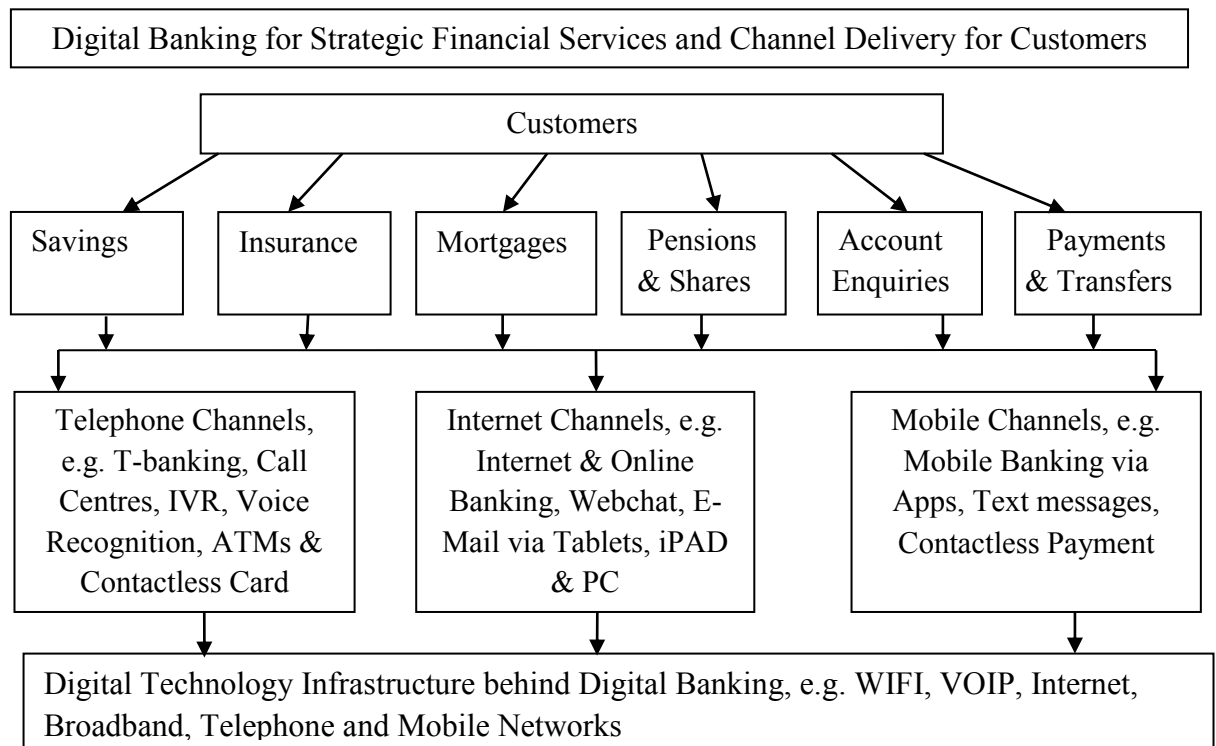


Figure 8.3: Digital Banking Strategic Management Model (Source: Author)

Figure 8.3 shows that services such as savings, insurance, mortgages and pensions are provided via digital banking channels, made possible through underlying digital technology (e.g. Internet and mobile networks). This shows the channels financial products go through before being consumed by customers. In the UK, digital infrastructure has been made accessible by OFCOM, allowing bank employees to innovate in digital marketing. Therefore how well banks utilise this opportunity depends on their investment in R&D and innovative capabilities through differentiation and focussed business strategies. As for customers, evidence shows they are more interested in the services, value and experience from digital channels than the innovation itself.

Research shows that customers are accepting digital banking, however the factors that make a customer choose one bank's digital banking over another are important. The results indicate a compelling digital banking effect on customer experience, therefore banks need to review their strategies and ensure the right approach is pursued, which will encourage customers to choose them, to enhance financial performance. All this evidence highlights important insights from the integrated framework, to help banks understand the components for improving their business.

8.4 Integrated Framework for Digital Banking, Customer Experience and Financial Performance

The research investigated Digital Banking, Customer Experience and Financial Performance from Banks' (reports), Customers' (questionnaires) and Employees' (interviews) perspectives, using qualitative and quantitative research methods to corroborate results. The triangulation of results enables the research to build a framework that is robust and cuts across different views. The central concept of the integrated model is the co-creation of value, incorporating benefits for customers and banks, embodied in all three investigations. The research found that customer demands, banks' digital innovation capabilities, investment in R&D, employee-customer engagement and improvement in customer experience drive this value. The scenarios show that when banks provide quality digital banking, they improve customer experience and financial performance.

Figure 8.4 encapsulates the vital value creation building blocks of the integrated framework in explaining the studied problem domain and tackling the research questions, listed in Chapter One. It shows the strategic map for creating an integrated framework, which captures the major findings in RQ1, RQ2, RQ3, and summarises them to answer PRQ. It shows digital banking effectiveness in improving customer experience, which is valuable for customers in terms of making their life easy, saving time and being convenient, and banks for improving financial performance.

Figure 8.4 shows that telephone, internet and mobile banking channels are the core enablers through which banks offer value-added services to customers. It indicates that banks, customers and employees all benefit from digital banking, with customers and banks being the main beneficiaries. The results show that customers and banks derive direct value, indicating that common value is enjoyed by both. Customers want improvement in digital banking experience, which leads to satisfaction and loyalty, while banks want to increase their financial performance via profitability, ROE, NIM, Market Growth and CLV. The arrows indicate that better employee insight through customer engagement, knowledge, investment, R&D and innovation help to enhance customer experience, satisfaction and loyalty, which in turn improve financial performance. These also increase employees' satisfaction and fulfilment levels with the digital banking they offer.

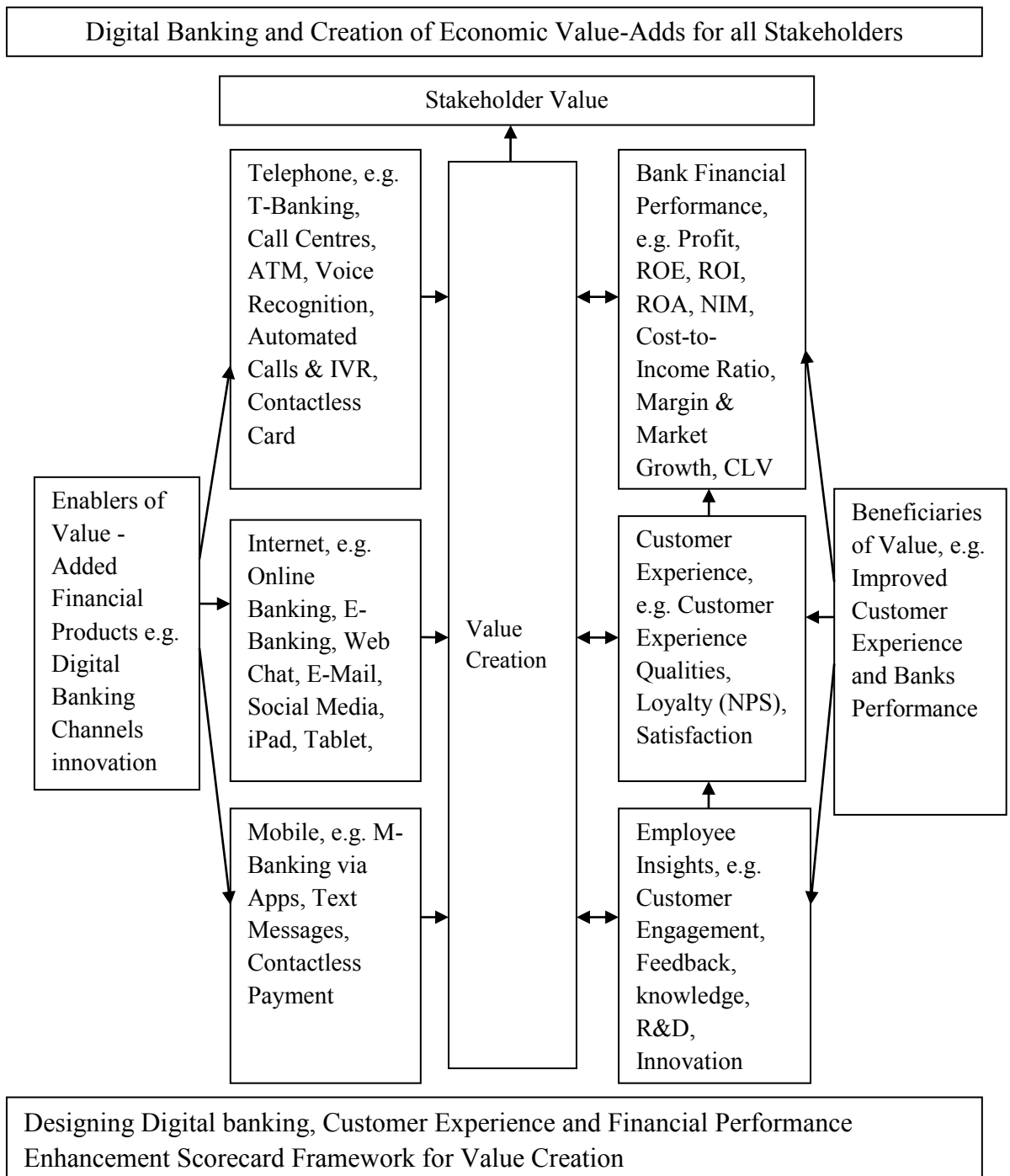


Figure 8.4: Strategic Map for Integrated Digital Banking, Customer Experience and Financial Performance Enhancement Framework (DiBCEFPEF) (Source: Author)

In the interviews, the employees felt fairly satisfied with the level of digital banking offered to customers. They made some recommendations like offering more m-banking services, innovation and personalisation of services to improve customer experience and their own satisfaction level. The financial reports also show how banks have used digital banking to maintain a higher NPS than the branches. The stakeholder banks can

be existing or new banks, customers can be private or business, and employees can be managers, directors or executives who stand to gain from the research.

To integrate the research into a final framework, results from the three investigations are considered. The analysis methods adopted enabled the research to summarise some relevant information for stakeholders. Table 8.1 shows a triangulation matrix of findings from the three research questions, being assembled to build the framework and answer the principal question. Tick marks indicate that the factor was significant in a particular investigation. Apart from ‘Financial Services’ and ‘DB Channels’, the rest are found to be qualities affecting the effectiveness of digital banking on customer experience and financial performance.

Factors (Important Definitions)	Bank View	Customer View	Employee View
DB Channels (e.g. telephone, Internet/online, mobile, point-of-sale, ATM, Contactless Card)	✓	✓	✓
Financial Services (e.g. current account, standing order, savings, mortgage, insurance, credit card, onboarding, pensions, transfers, payment, shares, account enquiries)	✓	✓	✓
Functional Quality (e.g. design, reach, look and feel, user-friendly, functional attributes, better control, access, traffic, volume transaction)	✓	✓	✓
Perceived Value (e.g. useful, value, needs, save time, cost savings, important, helpful, benefit, enjoyment)	✓	✓	✓
Service Convenience (e.g. convenience, comfort, choice, hassle-free, 24-hour service, handy, anywhere and anytime, self-service)	✓	✓	✓
DB Innovation (e.g. innovation in strategy, investment, R&D, making change, digitally aware, opportunity, competition, modernisation, implementation, differentiation, automation)	✓		✓
Brand Trust (e.g. brand, trust, image, integrity)	✓		✓
Perceived Risk (e.g. cyber-attack, security, fraud, cyber-crime, risk, security breach and protection, hack, financial losses, authenticating)	✓	✓	✓
Perceived Usability (e.g. usability, ease of use, simple, intuitive, interactive, flexible, easy to navigate & access)	✓	✓	✓
Service Quality (e.g. quality, expectation, requirements, needs, availability, reliable, effective, optimisation, excellence, accessibility, refresh, search product, accuracy, robust, attractive)	✓	✓	✓

Employee-Customer Engagement (e.g. training, engagement, educate, meeting requirement, feedback, communication, skill, knowledge, awareness)	✓	✓	✓
Service Customisation (e.g. Customisation, personalisation, specific, specialisation, tailor, serve age group, demographic group, individualisation)	✓	✓	✓
Service Speed (e.g. speed, fast, quick, instantaneous, response rate)	✓	✓	✓
Customer Acceptance Trend (e.g. uptake trend, technology changes, acceptance, adoption, increase in demand, societal change)	✓	✓	✓
Customer Experience (e.g. meeting demand, better, quality, good experience, bad experience, enhancing experience, excellent, wonderful, great, user experience, customer journey, advocacy)	✓	✓	✓
Customer Satisfaction (e.g. satisfaction, satisfy, keep satisfied, keep happy, good relationship, delight, treating customers fairly)	✓	✓	✓
Customer Loyalty (e.g. loyalty, NPS, retention rate, make customer stay, cross-sell, recommendations, acquiring, capturing, up-sell, attracting customers)	✓	✓	✓
Financial Performance (e.g. Cost-to-Income ratio, cost-ratio, cost savings, profit, efficiency, ROI, CLV, ROE, NIM, income, performance, cheaper, sales and revenue growth, market share, productivity)	✓	✓	✓

Table 8.1: Triangulation Matrix of Results from Banks, Customers and Employees

The results show that ‘DB Innovation’ and ‘Brand Trust’ were not found to be significant for customer experience in the customers’ questionnaire. The research shows how value-added financial services are offered through core digital channels. The results corroborate the majority of factors using three different data viewpoints. They show important references in the integrated framework, to be considered when implementing digital banking. These definitions should serve as a guide for developing digital banking, improving customer experience and financial performance.

The majority of factors were found to be effective and were reported in the three research views. Some of the main factors in the customer and employee research were subthemes in the bank report investigation, because they were not dominant. This finding indicates that bank reports do not have detailed information about digital banking’s effect, unlike the employees and customers. Therefore, the majority of those

subthemes were merged under customer experience. For instance, customisation, which was crucial for employees and customers was not a dominant theme in the banks' report investigation. This shows that banks should consult with employees and customers to keep abreast of their requirements, as important additional information emerged from them. Using the results from the three investigations, a final framework is constructed. Figure 8.5 shows an integrated framework for enhancing digital banking, related customer experience and financial performance, in light of such metrics as profitable growth and economic value-add.

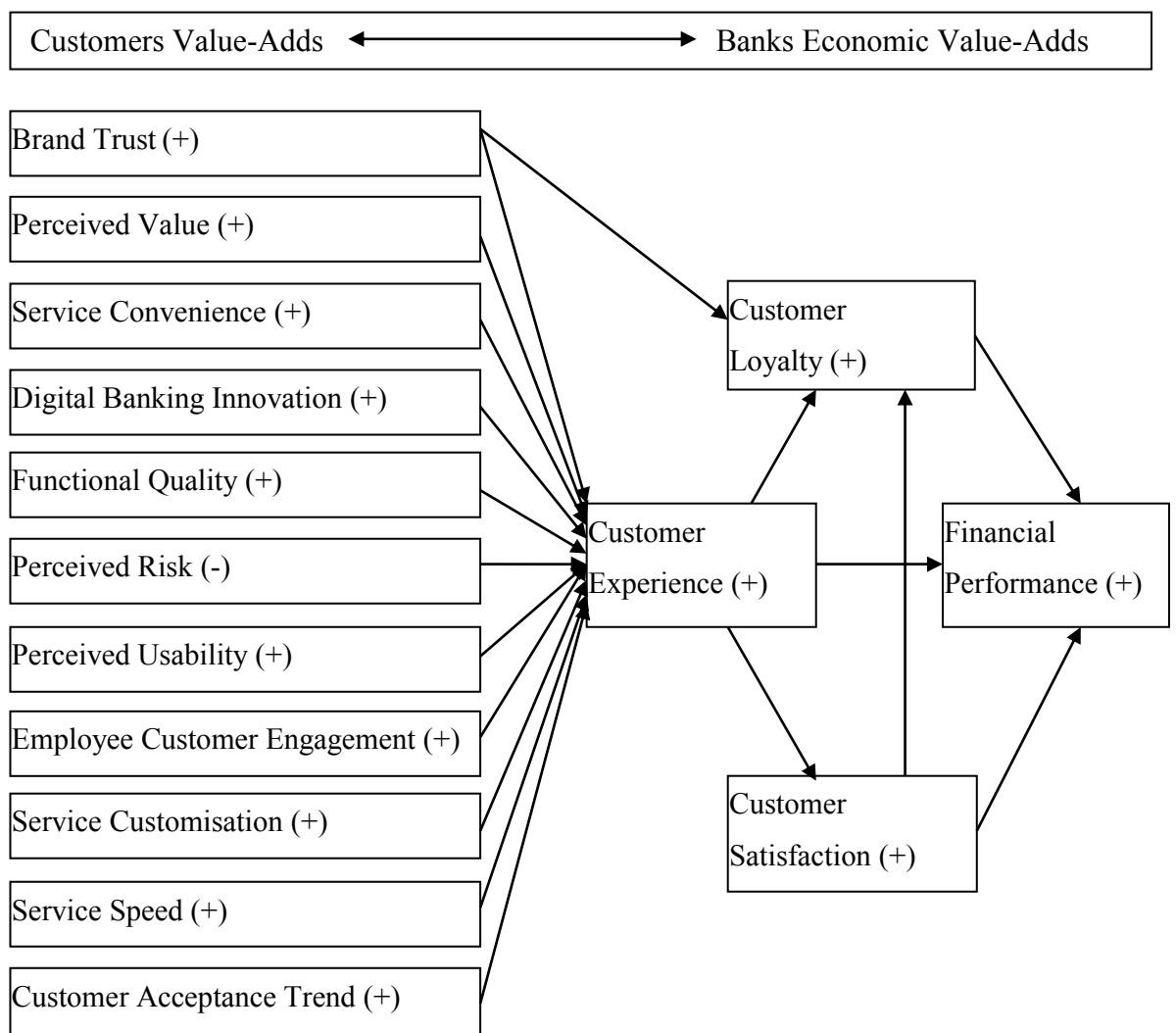


Figure 8.5: Integrated Digital Banking, Customer Experience and Financial Performance Enhancement Framework (DiBCEFPEF)

Figure 8.5 shows the DiBCEFPEF. The arrows show the relationships between the factors investigated. The three research results indicate that qualities: 'Functional Quality', 'Perceived Value', 'Service Convenience', 'DB Innovation', 'Brand Trust', 'Perceived Risk', 'Perceived Usability', 'Service Quality', 'Employee-Customer

Engagement', 'Service Customisation', 'Service Speed' and 'Customer Acceptance Trend' are effective in determining digital banking 'Customer Experience'. The employee interviews show that 'Brand Trust' is directly related to 'Customer Loyalty'. The customer questionnaire research shows a relationship between 'Customer Satisfaction' and 'Loyalty'. The relationships amongst the factors are demonstrated in the three investigations. The results show that meeting these attributes can improve customer experience.

The results show the relevance of NPS for monitoring customer experience, satisfaction and loyalty, and evidence shows that digital banking improves financial performance through profitable growth, economic value-adds, efficiency, market and sales growth, Cost-to-Income ratio, NPS, CLV, ROE and NIM. The bank can cross-sell products to loyal customers, as well as customers self-servicing, which reduces labour, advertising costs and overheads. The results highlight that giving customers a better experience improves satisfaction and loyalty, reduces costs, and improves sales and banks' profits, showing the relationship between 'Customer Experience', 'Satisfaction', 'Loyalty', and 'Financial Performance'. The framework demonstrates that banks can derive economic values such as customer loyalty, sales and profitable growth by meeting customers' values via considering the factors identified.

8.5 Discussion and Implications

The growth in customer service has spurred research and models (Klaus & Maklan, 2013; Heskett et al., 2008), looking to improve customer experience, satisfaction, loyalty and organisational performance. The research examined an integrated framework for improving digital banking, customer experience and financial performance. Theoretically, this research model makes a contribution to knowledge in digital banking where customers self-serve and the determinants of services are contactless. There are research models on e-banking uptake, adapting intention to use innovation theories (Hanafizadeh et al., 2014; Lee, 2009). However, this research developed a more comprehensive framework, showing digital banking effectiveness in improving customer experience and financial performance, which has theoretical and practical implications for future research.

Other research models have attempted to understand customer experience, satisfaction and loyalty, without financial performance (Garg et al., 2014; Chahal & Dutta, 2015).

Demonstrating how these items relate to financial performance has theoretically extended knowledge in digital banking. Other research models have investigated the relationship between customer satisfaction and loyalty and financial performance (Keisidou et al., 2013). This research investigated digital banking customer experience, which has received little attention. There is evidence that banks and customers are demanding digital banking due to changing attitudes towards digital devices. Customer experience relies on digital banking effectiveness. Nevertheless, there are qualities that make a customer choose their bank's digital banking over another and the loyalty and profitability attached are still poorly documented. This research has fully documented the impact of digital banking on customer experience, satisfaction, loyalty, and financial performance, which has implications for UK banks.

As earlier discussed, service quality models propose the importance of interactive marketing through the functional quality of services. Research shows that service quality in e-banking (Amin, 2016) and m-banking (Jun & Palacios, 2016), and information quality in e-banking (Lee & Chung, 2009) lead to customer satisfaction in other countries. This research has further documented how functional and service qualities can aid in interactive marketing in UK banks, improving customer experience, and added other digital banking attributes in the integrated framework, which can help future studies.

The research noticed a shared value between customers and banks, with customers having the upper hand, as banks are playing catch-up and relying on better customer experience for their own profitability. Digital banking is creating value for customers through value-added financial services. This research adds new knowledge by demonstrating the interchangeable value that exists between customers and banks in digital banking. It has contributed to knowledge in e-commerce studies based on value proposition (Piyathasanan et al., 2015), and Hastings' (2012) argument on the mutual benefit of customers and firms, and customer value studies (Chang & Tseng, 2010). Banks need to consider this to succeed in business.

The research has practical and further theoretical implications. The notion from the Banks' reports is that through innovation banks can develop services, which will improve customer experience. This research shows that demand for digital banking is driven by customers, while banks play catch-up to meet customer needs. Therefore

digital banking innovation should be done in conjunction with customer feedback. Results from the open-ended questions in Chapter Six show that customers want banks to consult them when designing digital banking that will affect them. To support this evidence, employee-customer engagement was found to have a positive impact on customer experience. This evidence has extended knowledge in the employee engagement effect on customer satisfaction and loyalty (Glaveli & Karassavidou, 2011), to digital banking experience.

The results also revealed that employees feel satisfied when they are innovating and offering better digital banking to customers. The implication for banks is that employees' views on services offered to their customers are important and their satisfaction level affects customer satisfaction level. The employees may be customers of other banks, and compare the services their banks offer with what they get elsewhere. They will be quick to point out any difference from competitors. This result has contributed to other research, which shows that employee satisfaction leads to better services and customer satisfaction (Yee et al., 2010; Kanyurhi & Akonkwa, 2016).

This research investigated digital banking's effect on customer experience, satisfaction, loyalty and financial performance using financial indicators (ROE, Cost-to-Income ratio and NIM), and NPS which evaluates the CLV. This is a contribution to knowledge, as this approach has not been combined in research with UK banks. This research corroborated customers' NPS with banks' financial indicators. The result shows there is a relationship. Therefore banks need to pay attention to measuring digital banking NPS separately, enabling them to ascertain more about their loyal customers and the profitability attributable to them. This research demonstrates that different digital banking experience qualities and separate NPS can be analysed. This evidence extends knowledge in other non-digital banking studies in customer satisfaction and loyalty, and financial performance using financial indicators (e.g. ROE, NPM) (Keisidou et al., 2013; Chi & Gursoy, 2009) and CLV (Valenzuela et al., 2014; Reichheld, 2003). These results demonstrate that banks' financial performance clearly depends on both measures. These are new practical insights the stakeholders stand to gain.

This research has used a triangulation method by reviewing digital banking from the three major stakeholders most affected, making the framework developed very robust and a major contribution to knowledge. Combining qualitative and quantitative analysis

techniques in the investigation also extends knowledge. This means that all important information from the rich contextual and quantitative contents were captured. This analytical approach also makes the research very rigorous and increases the validity of the framework. The implication of these viewpoints and methods is that bank executives should see digital banking requirements from both the customers' and employees' perspectives. The bank directors responsible for investment can understand employees' and customers' feelings, which will help them in decision-making, digital banking design, strategic marketing and enhancing business performance. This will also make banks be attuned to customers' current and future needs.

8.6 Conclusion

This chapter investigated an integrated framework for enhancing digital banking, related customer experience and bank financial performance regarding profitable growth and economic value-adds, via bank financial reports, customer questionnaires and employee interviews. The insights from the results are assembled into an integrated framework, which shows that enhancing qualities: 'Functional Quality', 'Perceived Value', 'Service Convenience', 'DB Innovation', 'Brand Trust', 'Perceived Risk', 'Perceived Usability', 'Service Quality', 'Employee-Customer Engagement', 'Service Customisation', 'Service Speed' and 'Customer Acceptance Trend' can affect 'Customer Experience'. 'Brand Trust' is shown to mediate 'Customer Loyalty'. The framework shows a relationship among 'Customer Experience', 'Satisfaction', 'Loyalty', and 'Financial Performance' relating to profitable growth and economic value-adds (e.g. efficiency, sales growth, loyalty (NPS), CLV, ROE, NIM, Cost-to-Income ratio). Therefore, banks should pay attention to these key factors for enhancing digital banking experience and business performance.

The models in the chapter show that in digital banking, banks must create value to derive economic value-adds. Therefore, banks' main priority should be to meet customer needs through offering better customer experience, which will invariably help them to meet their own business performance objectives. The integrated framework shows how banks can achieve this, by paying attention to these important factors. The research found three major digital channels such as telephone, internet and mobile to be effective in delivering financial services. There is evidence that customers are demanding digital banking due to perceived value, convenience, enjoyment and fulfilment from the service. Therefore, banks should devise new business models that

incorporate the framework and digital banking qualities into their marketing strategies. They should improve these qualities that deal with interactive functions, which have become more important than branch methods.

The research underlines variation in opinion among the three investigations. The bank report is good in financial indicators, which mainly reflect benefits to shareholders. The effect of digital banking, customer experience and financial performance seems to be reported at a high level, while the employee interview and customer questionnaire information are closely related with detailed insights into customers' needs and how these can be improved. Most of the improvements customers are advocating (e.g. security, more m-banking services, shortening customer journey and service customisation), also featured prominently during the employee interviews. This shows the importance of employee-customer engagement for improving customer experience, which will help future research. Therefore, banks should encourage employees to engage more with customers, and support them in digital innovation, investment, and knowledge for better customer experience.

The research makes a contribution to knowledge through the three critical perspectives, which bring to bear the strong research methods used, helping create a rigorous integrated framework for enhancing digital banking, related customer experience and financial performance. The framework process offers information on how banks can create digital banking, the type of services offered, and how it can be adapted to derive value and improve banks' business.

CHAPTER NINE - CONCLUSIONS AND RECOMMENDATIONS

9.1 Introduction

Digital banking (DB) has enabled banks to market products through telephone, internet and mobile channels. The increase in customer use of digital devices and their demand for financial services through them has become a challenge to banks. This customer behaviour means they are expecting a better experience from banks, however banks need to make a profit, which demands a new way to manage the changing climate. The research in the thesis has investigated the effectiveness of digital banking in enhancing customer experience and financial performance in UK banks, to help address the challenges and contribute to knowledge.

Literature in Chapters Two and Three suggests that banks are offering services using digital banking, because their customers are changing the way they communicate. This shows that banks can harness the digital banking benefits if they meet customers' needs, making this research necessary. Literature also identified that research has not tackled all the problems related to digital banking utilisation, and a broader approach to yield a better result and framework is required. Therefore, it is believed this research investigation from different viewpoints will produce a similar result and solve the problem posed. The thesis uses bank financial reports, interviews and questionnaires involving qualitative and quantitative research methods in various chapters to meet its objectives.

Chapter Five investigated banks' opinions of digital banking innovation with regard to customer experience and financial performance, analysing UK banks' financial reports to address RQ1. Chapter Six used customers' opinions about their digital banking experience and uptake, to investigate the links between digital banking, perceived customer experience improvement, and bank financial performance. This involved the analysis of questionnaires distributed to UK bank customers to address RQ2. Chapter Seven used employees' perceptions of digital banking innovations, to investigate digital banking effectiveness in enhancing customer experience and bank financial performance. Interviews of a major UK bank's employees were analysed to address

RQ3. Chapter Eight examined an Integrated Framework for enhancing digital banking, related customer experience and bank financial performance, as regards profitable growth and economic value-adds. It used results from RQ1 to RQ3 to construct a framework, which addresses PRQ. The research methods used made it possible to answer the research questions and address the challenges facing banks.

The thesis concludes by making reference to major results and the main contribution to knowledge. The empirical results reported in this thesis have addressed the research questions indicated in Chapter One, and based on the investigations, a number of conclusions have been drawn. These questions were based on literature reviews, theories and issues of concern around the research. This chapter starts with the summary of research findings and key contributions to knowledge. Next is the presentation of the main results from each research question. It outlines some of the theoretical and practical implications, practical suggestions to all stakeholders, limitations of the research and areas of future study.

9.2 Relating Research Findings and Contributions to Knowledge

The objective of a doctoral thesis is to make an original contribution to knowledge. The research in the thesis has critically investigated and evaluated the chosen topic. This section presents the relationship of the findings with the conceptual frameworks and how they answered specific research questions and closed related gaps in knowledge, thereby making meaningful contributions. Table 9.1 summarises the four research questions examined and their corresponding findings and key contributions to knowledge.

RQs	Contributions to Knowledge
RQ1: What are the banks' general perceptions of DB services innovation in terms of customer experience and financial performance?	Theoretical: The research contributes to theory in DB marketing (Jun & Palacios, 2016) and financial performance improvement (Kaplan & Norton, 1996b; Keisidou et al., 2013), and DB uptake (Chong et al., 2010) related studies, in UK through banks' perceptions. It demonstrates DB's impact on banks and how they are utilising DB to provide services, and improve customer experience and satisfaction, profitability, sales growth and CLV via loyalty. This result, constructed into a model, highlights DB channels, services offered, acceptance trends, DB innovation and risks (e.g. security), and their effect on customer experience and financial performance, to assist future studies. It shows how investment in innovation helps banks improve security, competition, customer experience and profit, extending knowledge on value creation via innovation (Dootson et al., 2016; Zott et

	<p>al., 2011), and security's effect on e-banking uptake (Martins et al., 2014), in UK DB. The result shows that banks and customers seek and derive value from DB, making them drift towards it, and hence banks are closing branches to save money. This contributes to other studies (Stone & Laughlin, 2016), by highlighting why UK banks are closing branches and DB's impact on banks' performance.</p> <p>Practical: The research demonstrates how banks can use DB to improve customer journey, acquisition, retention, experience, and satisfy different customers' needs, and improve financial performance via profitability, cost saving, efficiency, ROA, ROI, Cost-to-Income ratio, revenue and sales growth. The research informs customer attitude towards DB, which needs considering to improve profit. It highlights the upward trend in investment in innovation and DB uptake by banks and customers, showing the economic potential of DB for banks. This result indicates how DB innovation enables banks to deploy value-added services, differentiate themselves, increase sales, improve competitiveness and customer experience, and respond to growing customer demands via digital devices. The research highlights the operational and security risks of DB, which affect banks' brand and reputation, customer trust, customer experience and profit, and need mitigating. It shows that employee and customer engagement enables banks to understand customer needs and innovate to meet them. The result shows how banks can improve customer experience, satisfaction and loyalty, and financial performance via DB.</p> <p>Methodological: The ability to analyse and document DB's effect on customer experience and financial performance, using different UK bank reports and content analysis techniques. This improves understanding of DB and corroborates knowledge of UK bank branch closures.</p>
<p>RQ2: How do DB services generally affect customer experience and bank financial performance?</p>	<p>Theoretical: The research theoretically offers insight into DB's impact on customer experience, satisfaction, loyalty, and financial performance via financial ratios (NIM, Cost-to-Income ratio and ROE) and NPS (CLV), through a model. The identified factors (e.g. service quality and perceived usability) enhance knowledge of customers' DB uptake and experience, contributing to theories on DB uptake intentions (Alalwan et al., 2016; Davis, 1989), customer experience (Klaus & Maklan, 2013), service marketing (Parasuraman et al., 1988) and organisational performance (Kaplan & Norton, 1996b), in UK DB. The research applies organisational performance measurement (Keisidou et al., 2013) to extend knowledge of banks' performance, and the relationship between operational performance (e.g. sales growth, efficiency and CLV) and financial performance (e.g. ROE) in DB. This offers a theoretical link between customer relationship management and banks' performance (Reichheld, 2003; Valenzuela et al., 2014), in DB for future studies.</p> <p>Practical: The demonstrated factors show how banks can use DB to improve customer experience and financial performance. They will help banks understand customer requirements, prioritise resources, create value-</p>

	<p>added services, acquire and retain customers. Banks will know what customers want from DB to improve their experience and loyalty. Factors affecting customer uptake and experience will assist banks to develop and market future services. The findings offer insight into DB's effect on customer experience and financial performance, necessary for appraising and optimising banks' current DB position. The relationships between customer profiles and factor results will help banks in targeted marketing (e.g. selecting customers based on profile, needs, demography and benefit derived and sensitive factors to enhance their experience). They provide information to consider in building better DB, customer relationships and analytics. The research establishes relationships between customer experience, satisfaction and loyalty, and financial performance, useful for improving banks' performance.</p> <p>Methodological: The research applies analytical triangulation, using different techniques (e.g. Regression and SEM) to rigorously analyse customer information. It uses parsimonious analysis to identify the most significant predictors of customer experience and extends knowledge in financial performance measures into DB.</p>
<p>RQ3: What are the employees' perceptions of DB innovation in the studied bank, and how effective is the bank's digital banking in enhancing customer experience and financial performance?</p>	<p>Theoretical: The research contributes to DB marketing (Amin, 2016), service improvement (Heskett et al., 2008) and financial performance (Keisidou et al., 2013) theories, in UK DB via employees' views. A model of DB attributes is created, which has theoretical implications for bank marketing and future studies. It demonstrates DB's effect on customer experience, satisfaction, loyalty and financial performance (e.g. revenue and sales growth, profitability, efficiency, Cost-to-Income ratio and CLV via NPS), extending customer experience studies (Klaus & Maklan, 2013). The research highlights the relevance of employee-customer engagement and DB innovation, which ensure banks' marketing strategy improves customer experience. This extends knowledge of employee influences in customer satisfaction (Karatepe & Aga, 2016), innovation (Baba, 2012) and financial performance (Glaveli & Karassavidou, 2011) studies, into DB experience. It demonstrates how DB creates value, extending knowledge on Dootson et al.'s (2016) finding that perceived value draws customers towards services, in DB. The research highlights customers' DB trends, and how banks can adjust to customer behaviour via innovation and its impact on customer experience and performance, extending innovation's benefit (Patsiotis et al., 2012), in DB. It shows how operational performance enhances financial performance (Hult et al., 2008), extending knowledge of DB's effects on organisational performance theory. The research relates DB, customer experience and financial performance, helpful for transforming banks and future theory testing.</p> <p>Practical: The research reveals attributes affecting customer experience, which banks need to consider to improve performance. The employees' thinking about their DB reinforces banks' and customers' views, and offers recommendations (e.g. personalisation, security and more m-banking) for</p>

	<p>improvement, providing new knowledge to banks. The research confirms the importance of employee-customer engagement in improving customer experience and banks' performance. This guarantees customers' requirements are met and better experience is offered via DB innovation. The research demonstrates the interrelationships between these attributes (e.g. 'Brand Trust' and 'Perceived Risk'; Brand Trust' and 'Customer Loyalty'), useful in meeting customers' needs, strategic and segmental DB marketing. This will help banks improve services (e.g. in the marketing mix, serving customers and enhancing their experience), and in cross-selling, targeted product marketing and building better customer insights. The research reaffirms how DB innovation helps in differentiation, being competitive and creating value for banks and customers. It shows major DB channels for offering value-added services, and that e-banking is good for capturing customers, while m-banking is good for retaining them. This will assist banks to create services and value for different customers using appropriate channels. The research gives appraisal of how banks meet customers' needs and confirms factors influencing DB experience, important for banks' performance. It demonstrates that DB can improve customer experience, satisfaction, loyalty and financial performance.</p> <p>Methodological: The ability to gauge DB experience as perceived by bank employees, using content analysis techniques, highlighting DB effectiveness, which is important for multi-channel marketing and improving financial performance. The study uniquely demonstrates both employee and customer satisfaction levels and loyalty outcomes.</p>
<p>PRQ: How can the research results be integrated into a framework for enhancing DB, related customer experience and bank financial performance, in light of such metrics as profitable growth and economic value-adds?</p>	<p>Theoretical: The research integrated framework (DiBCEPEF) relates DB, customer experience, satisfaction and loyalty and financial performance, which contributes to theory in e-banking uptake (Harrison et al., 2014), DB marketing (Amin, 2016), service (Heskett et al., 2008) and financial performance (Kaplan & Norton, 1996b) related studies. This extends knowledge of customer satisfaction and financial performance (Keisidou et al., 2013), and customer experience (Klaus & Maklan, 2013; Garg et al., 2014) studies, into DB. It corroborates different understandings to show that DB positively affects customer experience, satisfaction, loyalty and financial performance (e.g. efficiency, market share, and sales growth, profitability, Cost-to-Income ratio and CLV), contributing to DB theory. The research shows DB's relevance in creating shared value and economic value-adds, extending knowledge in e-commerce (Chang & Lin, 2015) and innovation (Patsiotis et al., 2012) studies. It extends customer relationships and banks' performance theories (Reichheld, 2003), in DB. The research provides a broad insight into DB's effectiveness in improving customer experience and financial performance from three major perspectives. It highlights DB's impact from a holistic approach; assembling the affected parties' views and all theories considered to create a framework, helping banks and customers derive value from DB. This contributes to DB marketing theory, useful for customer capture and retention, enhancing</p>

	customer experience and financial performance, and further studies.
	<p>Practical: The research developed an integrated framework for improving DB, customer experience and financial performance, to help banks and customers benefit from DB. It highlights factors that affect customer experience, satisfaction and loyalty, helping banks develop better marketing strategy, customer insights, and capture and retain customers. These are important considerations in building better DB services, customer relationships and targeted marketing. This will help banks design DB that is attuned with customer needs, and improve service marketing and performance. The framework provides insight into employee-customer engagement relevance in DB implementation, and for bank marketing and improving customer experience. It demonstrates DB's relevance in creating economic value-adds and improving profitability, and how banks can use DB channels to create innovative services to stay ahead of competitors and make a profit. The research demonstrates a DB framework for creating value for customers and banks. Customers' values are improved customer experience and satisfaction, while banks' values are improved customer loyalty and financial performance. The two values are interrelated, banks' value is dependent on customer value. Thus, banks' priorities should be to meet customer values, to achieve their own business objectives. The framework informs how banks can offer value-added services to improve customer experience, satisfaction and loyalty, and financial performance. It will help banks to adjust their marketing strategy around growing DB customers, to improve their experience and performance.</p>
	<p>Methodological: The research consolidates knowledge of banks', employees' and customers' DB uptake, to highlight factors that affect experience and uptake of DB, providing comprehensive information for new and existing banks. The methods undertaken show the robustness of the created framework which highlights key drivers and outcomes of customer experience, beneficial for capturing and retaining customers, and enhancing banks' performance, extending knowledge of mixed-method research (Johnson et al., 2007), into DB. They offer insight into triangulation from a holistic study of UK DB, from three different views to corroborate results, increase validity and contribute to knowledge.</p>

Table 9.1: Research Questions and Contributions to Knowledge

The thesis' contributions to knowledge help close the gap in digital banking uptake, service, strategic management, marketing, business innovation and organisational performance improvement literature, especially on how UK banks can utilise digital banking to offer services, improve customer experience, satisfaction, loyalty and financial performance. It creates a better understanding of the challenges and critical success factors of digital banking implementation for providing value-added services.

The thesis reinforces as well as contributes to the use of digital banking to create value for both customers and banks. Additionally, it contributes to the determination of the best theories for studying digital banking, customer experience and financial performance. There is an indication from the findings that service improvement and organisational performance, adopted by SPC and BSC offer the most comprehensive theories, as they provide the holistic nature of a bank's vision from customer, employee, innovation, service, and quality improvement to driving efficiency and financial performance. However, they have not emphasised digital banking which is a drawback, making theories like TAM and IDT indispensable. Hence, each theory played a role, some contributed more than others, as identified in Chapter Three, but they have all been key in the research investigation and in closing knowledge gaps that exist in them.

9.3 Main Research Results by Research Questions

In addition to other findings, the major contributions are the documented gaps in theories, literature reviews and findings in Chapters Five, Six, Seven and Eight. The thesis has also contributed through theoretical implications and practical benefits. The summary of the main results has been written around the research questions.

RQ1: What are the banks' general perceptions of digital banking services innovation in terms of customer experience and financial performance?

Chapter Five investigated the banks' perceptions through their financial reports to highlight themes summarising banks' opinion of digital banking concerning customer experience and financial performance. Sections 5.4 and 5.5 discussed these results in detail. The result shows that the most commonly used 'DB Channels' are telephone, internet and mobile, through which various services are offered. Through these channels, customers can access services conveniently, which improves their experience. There are others like ATM and Contactless Card, which customers use to perform electronic transactions. Results show that banks offer different value-added 'Financial Services' using the channels (e.g. savings, mortgage, current account and insurance). The limit to what banks can offer depends on their investment and innovation tendencies. Evidently, customers derive value through digital banking and product offers (e.g. text message alerts) which prevent them going overdrawn.

Results show that ‘Innovation in DB’ channels enables banks to develop services to differentiate themselves, stay ahead of competitors and improve customer experience. It leads to various new banking applications being introduced, which offer value-added services and improve customer experience. Evidence shows that the ‘Trend in Investment and Acceptance of DB’ are both on the increase. There is a shift of customers’ attitude towards digital banking, evident in the number of customers currently banking through it, presented in section 5.5. Banks see digital banking as a way forward, therefore they are increasing investment in innovation, which has been rewarded with an increase in customer uptake. They are reducing branches as a consequence. Evidence shows that banks are investing in digital banking innovation to ‘Improve Customer Experience’. Results indicate that digital banking is improving customer experience, satisfaction, loyalty and profit through CLV. Banks are developing innovative services, making banking convenient, accessible, easy to use and useful, and customers’ lives easy. With digital banking, customers can access services quicker than branches. They can bank from their homes, which saves time and money, reduces effort and stress, and improves experience.

The results indicate that banks are using digital banking to ‘Improve Financial Performance’ via efficiency, Cost-to-Income ratio, ROA, revenue growth, improved balance sheet, sales growth and profitability. Banks are closing branches, which is having a positive effect on their profit through cost savings, and manual processes and efficiency ratio reductions. Some banks have increased profit through customer loyalty via CLV. The results show that banks are exposed to digital banking ‘Operational and Security Risks’ (e.g. cyber-attack, fraud and privacy issues), which could negatively affect customer experience and financial performance, if not mitigated. However, banks invest in security to keep customers’ money safe, prevent financial losses associated with brand damage and fines, and maintain customer confidence. This is important information for customers. Results also show that ‘Employee and Customer Engagement’ through training, feedback and communication are important to meeting customers’ requirements and improving experience.

The banks’ views highlight that ‘Investment in R&D and User Acceptance of DB’ lead to ‘Innovation in DB’, which enables value-added ‘Financial Services’ to be created, while proper ‘Employee and Customer Engagement’ leads to better ‘Innovation in DB’ and ‘Reduced Operational and Security Risks’. The research demonstrates that

‘Employee and Customer Engagement’, ‘Reduced Operational and Security Risks’, value-added ‘Financial Services’, ‘Innovation in DB’, ‘Investment in R&D and User Acceptance of DB’ lead to improved ‘Customer Experience’, which leads to improved customer satisfaction and loyalty, and ‘Financial Performance’. A model describing the relationship of these themes is presented in Section 5.6.

In summary, the banks believe that different services are offered using digital channels. Through investment and innovation, services are developed to differentiate themselves, and improve customer experience and financial performance. Although digital banking improves customer experience, there are security and operational risks to be considered. There is also a belief that employee and customer engagement is important for digital banking innovation, and improving operational and security risks, customer experience and financial performance. The content analysis coding result indicates that ‘Financial Performance’ ranked first, followed by ‘DB Channels’ and ‘Customer Experience’, and the rest, as shown in section 5.5.3. These themes ranked quite high in the financial report discussions, highlighting their importance to banks’ survival. The banks’ general perceptions are that digital banking offers value-added services, improves customer experience and financial performance, through proper strategy in investment, employee and customer engagement, digital innovation and risk mitigation.

RQ2: How do digital banking services generally affect customer experience and bank financial performance?

Chapter Six employed different analysis techniques to examine customers’ opinions through open and closed-ended questions in a questionnaire. The results also identified telephone, internet and mobile banking as the main ‘DB Channels’ through which customers can conveniently access services. Most customers use e-banking, followed by m-banking and then t-banking services. Customers can access value-added ‘Financial Services’ through these channels (e.g. savings, checking balance, paying bills, printing statement, transferring funds, current account and mortgages). Most customers use digital banking to check balance, followed by fund transfer, current account, pay bills and the rest. This result is presented in section 6.4.1, and will help banks in their marketing strategy, and in choosing digital channels and services to offer customers.

The results highlight factors summarising customer perceptions of how digital banking affects customer uptake, experience and financial performance. The results support a significant relationship between ‘Convenience’, ‘Functional Quality’, ‘Perceived Value’, ‘Brand Trust’, ‘DB Service Quality’, ‘Employee-Customer Engagement’, ‘Perceived Risk’, ‘Perceived Usability’, ‘Customer Experience’, ‘Customer Satisfaction’, ‘Customer Loyalty’, and ‘Customer Uptake’. ‘DB Innovation’ was not significant. This result is illustrated in section 6.7, and shows that digital banking must add value and be convenient. The functional quality, service quality, security and usability, coupled with the bank’s brand and trust must be good to attract customers. It also means that proper employee-customer engagement helps deliver better digital banking. Customers accept digital banking if the overall experience is good, and when the experience meets expectations, they are satisfied and loyal. Therefore in digital banking uptake, banks should consider these factors.

The results also support a significant relationship between ‘Functional Quality’, ‘Perceived Value’, ‘DB Service Quality’, ‘Employee-Customer Engagement’, ‘Perceived Risk’, ‘Perceived Usability’, and ‘Customer Experience’. They are generally found to affect ‘Customer Experience’, in both Regression and SEM analysis methods. These factors were parsimoniously tested, and with regard to hierarchy ‘Functional Quality’, ‘Employee-Customer Engagement’ and ‘Perceived Usability’ are the most significant predictors of ‘Customer Experience’. There is a positive relationship amongst ‘Customer Experience’, ‘Satisfaction’ and ‘Loyalty’; also, between ‘Customer Satisfaction’ and ‘Customer Loyalty’. In FP2, the research uses NPS to test CLV, while using financial ratios (ROE, Cost-to-Income ratio and NIM) in FP1. The result supports a positive relationship between ‘Customer Loyalty’ and banks’ ‘Financial Performance’ on FP1 and FP2. Models describing the results are presented in sections 6.8 and 6.10.

Additional results illustrate how customer profiles are affected by their digital banking experience. For instance, there is a positive relationship between ‘Frequency of DB Use’, ‘Age Groups’, ‘Length of DB Usage’, and ‘DB experience’; also, between ‘Frequency of DB Usage’, ‘Age Groups’, ‘Length of Bank Loyalty’ and ‘Length of DB Usage’, and NPS value. This result means that certain age groups of customers, who use digital banking frequently and for a long time are having a good experience. The same set of customers will stay loyal and rate their bank’s NPS high, showing how certain

customer profiles can help banks determine whether an individual is a Promoter, Passive or Detractor customer.

The research provides additional results to show the relationship between all the above factors influencing customer experience, and customer profiles. For example, there is a significant positive relationship between 'Age Group', 'Type of Bank', 'Frequency of DB Usage', 'NPS', and 'Perceived Value'; also, between 'Frequency of DB Usage' and all the factors. There is a significant positive relationship between 'Length of DB Usage' and all the factors, except 'Perceived Risk' and 'Employee-Customer Engagement'. All the factors are generally affected by most customer profiles, apart from 'Educational Level' and 'Gender'. Detailed results are listed in section 6.9. These results show how customer characteristics are influenced by customers' perception factors, therefore banks should focus on the accepted hypotheses for capturing and retaining customers. They will help banks know how these factors affect individual or groups of customers' experience, and in strategic marketing, so certain customer profiles can be targeted based on the factors they are sensitive to.

Through the open-ended question, additional results suggest that 'Functional Quality', 'DB Service Quality', 'Perceived Usability', 'Perceived Value', 'Service Convenience', 'Perceived Risk', 'Employee-Customer Engagement', 'Service Customisation', 'Service Speed' and 'Customer Acceptance Trend' affect 'Customer Experience'. Customers believe that 'Functional Quality' gives them more control and flexibility, and they can perform different transactions. Nevertheless, they are asking for more services (e.g. paying cheques and text alert) through mobiles. Some customers believe that 'DB Service Quality' is reliable, accessible and available, while some are calling for better qualities, showing a mixed reaction. Some customers think that 'Perceived Usability' of digital banking is quite good (e.g. being easy to use and intuitive), while some want better layouts and easy navigation. Many customers think there is a 'Perceived Value' (e.g. being enjoyable, useful, time and cost saving, and making life easy) for them. This extends knowledge to other literature on value creation, discussed in Chapter Three.

Many customers think 'Service Convenience' is important (e.g. taking hassle out of banking and offering 24-hour services), while some customers are asking for better services. Customers think that 'Perceived Risks' (e.g. fraud and cyber-crime) are major issues. 'Employee-Customer Engagement' is relevant, as some customers think that

banks should gather feedback from them when developing digital banking. In digital banking, access to services is faster and instantly available, making 'Service Speed' important, while some customers want the login process to be improved. Customers want more 'Service Customisation', so bank systems can recognise them automatically and give them access to certain personalised services. The 'Customer Acceptance Trend' seems to be increasing, as customers are demanding more digital banking services than banks can provide, especially through their mobile. All these relevant factors affect customer experience.

Many customers believe they are getting excellent 'Customer Experience', while some expect improvement to perfect their experience. The result shows that e-banking is good for acquiring customers, while m-banking is good for retaining and offering existing customers new services. It also shows that better digital banking experience improves 'Customer Satisfaction'. Some customers think they are satisfied and happy with their digital banking, while some expect an improvement in security. Evidence shows that customers' demand for digital banking, service speed and customisation affect their experience, making additional factors ('Customer Acceptance Trend', 'Service Customisation' and 'Service Speed') emerge in the open-ended questions, which brings new insight. Most of the results from the closed and open-ended questions corroborate each other, providing further support and validation.

The final results, by combining both question types, highlight how digital banking' attributes: 'Functional Quality', 'Perceived Value', 'Service Convenience', 'DB Service Quality', 'Employee-Customer Engagement', 'Perceived Risk', 'Perceived Usability', 'Service Customisation', 'Service Speed' and 'Customer Acceptance Trend' generally affect 'Customer Experience'. 'Customer Experience' affects 'Customer Satisfaction' and 'Customer Loyalty', which in turn affects banks' 'Financial Performance'. Therefore banks should consider all these factors to enhance customer experience, satisfaction, loyalty and financial performance. Evidently, despite the good attributes (e.g. convenience, perceived value), some customers still see digital banking as supplemental rather than a complete alternative to branches. They feel that digital banking cannot meet all their requirements (e.g. personal touch, cheque and cash payment). Some customers are conscious of security, therefore banks should create awareness of the efforts being made to improve it, to convince them. The results suggest

that digital banking positively affects customer experience and financial performance, and banks should consider these factors to meet various customers' needs.

RQ3: What are the employees' perceptions of digital banking innovation in the studied bank, and how effective is the bank's digital banking in enhancing customer experience and financial performance?

Chapter Seven examined the employees' perceptions through interviews, to highlight results of their bank's digital banking innovation effectiveness in enhancing customer experience and financial performance. Detailed results of themes investigated are shown in sections 7.4 and 7.5, while the relationship between them is discussed in section 7.6. The results confirm that telephone, internet and mobile banking are the primary 'DB Channels' for offering innovative services to customers and improving their experience. The employees also classified ATM, Point-of-Sale and Cards as digital channels. Many customers are used to these channels, making them attractive for providing services. The result also confirms different value-added 'Financial Services' offered through these channels (e.g. current account, savings, insurance, credit card and pension). A full list is presented in section 7.5, helping banks understand services to offer using digital channels.

The result highlights that attributes: 'Functional Quality', 'Perceived Value', 'Service Convenience', 'DB Innovation', 'Brand Trust', 'Perceived Risk', 'Perceived Usability', 'Service Quality', 'Employee-Customer Engagement', 'Service Customisation', 'Service Speed' and 'Customer Acceptance Trend' are effective in enhancing 'Customer Experience'. It indicates that 'Functional Quality' (e.g. interface design, look and feel, functions and user-friendliness) and 'Perceived Value' (e.g. usefulness, enjoyment, economic value, cost and time savings) are important for improving experience. 'Service Convenience' (e.g. 24-hour banking) helps make digital banking more attractive and improves experience. 'DB Innovation', through good strategy and investment in innovation, helps banks meet customers' demands and improve their experience. Banks can innovate in new services, create opportunities, beat competition and differentiate themselves, enabling them to offer distinct products and better experience. The result shows that 'Brand Trust' makes customers accept digital banking and stay loyal. This shows how important brand name, reputation, trust and integrity are in maintaining 'Customer Loyalty'.

The result shows that ‘Perceived Risk’ (e.g. cyber-attack and security) affects experience. Financial losses and reputational damage due to security breaches affect banks’ profit. Customers are concerned about security, therefore it is high in the bank’s strategy. ‘Perceived Usability’ (e.g. easy to use, intuitive and simple) is helping improve experience. Customers use digital banking that is easy to navigate and find information, making design important. ‘Service Quality’ relating to reliability, availability, optimisation and being able to meet customer expectations, is key to improving experience. Customers seem happy when their expectations are met, therefore enhancing digital banking quality is important. ‘Employee-Customer Engagement’ (e.g. training and regular feedback) helps understand customers’ requirements, enabling employees to innovate and provide high quality services and improve customer experience.

Evidence shows that through ‘Service Customisation’, services can be personalised to help improve security and experience. It can shorten the customer journey and help in targeted service marketing, making this an important feature. The result suggests that access to digital banking services is faster, making ‘Service Speed’ an important quality that improves experience. Customers can access services anytime without queuing at branches. The result indicates that ‘Customer Acceptance Trend’ helps determine customers’ needs, expectations and experience. The current trend shows that customers are shifting towards digital devices and demanding a better digital banking experience than banks can provide. Therefore, banks should monitor customers’ acceptance trend as this goes with their attitude.

All these attributes of digital banking show how effective they are in enhancing the bank’s ‘Customer Experience’. This confirms the majority of results from the bank reports and customer questionnaire investigations, however employee interviews provided more detailed information. The result also shows that offering effective digital banking makes customers happy and brings ‘Customer Satisfaction’. It also brings employee satisfaction when they are given the opportunity to innovate and satisfy customers. The result demonstrates how employees’ perceptions provide insight into customer satisfaction and loyalty, based on their feelings about digital banking offered to customers. The result identifies a link between employee and customer satisfaction levels. There is a belief that through offering effective digital banking, customers stay loyal and buy more products. This reduces labour costs, and increases cross-selling,

sales, retention rate and NPS, as customers recommend products to colleagues and friends, showing how digital banking experience improves ‘Customer Loyalty’ and ‘Financial Performance’ through CLV.

The results indicate that meeting all these attributes enhances ‘Customer Experience’, which in turn improves ‘Customer Satisfaction’ and ‘Customer Loyalty’, and the bank’s ‘Financial Performance’. They show that by using digital banking effectively, banks increase financial performance through improved Cost-to-Income ratio, efficiency and cost savings, profitable growth, recurrent revenue and re-purchase and sales growth. A model describing the relationship among these themes is presented in section 7.6.

The result from content analysis offers further support and presents the themes in frequencies, indicating their rank in the employees’ agenda. ‘DB Channels’ ranked first, followed by improving ‘Customer Experience’, ‘Financial Performance’ ranked 11th, as shown in section 7.5. The result shows that personalisation, improvement of security, centralisation of services and more mobile services are currently vital for banks to continue improving experience. The final result from the employees’ perceptions shows that for digital banking innovation to be effective it must have all the above attributes, capable of enhancing customer experience, satisfaction, loyalty, and financial performance. This confirms most of the results from customers and banks’ reports.

PRQ: How can the research results be integrated into a framework for enhancing digital banking, related customer experience and bank financial performance, in light of such metrics as profitable growth and economic value-adds?

Chapter Eight investigated an integrated framework for enhancing digital banking, customer experience and financial performance, comprising results from bank reports, customer questionnaires and employee interviews. The results were assembled into a framework to assist banks and customers to take advantage of digital banking. Results from the three investigations found that in recent years, customers’ and banks’ digital banking uptake have increased, and ‘Perceived Value’ is the main factor driving it.

The results indicate that customers expect value-added services through digital banking that is intuitive, convenient, personalised and secure, which improve their experience,

satisfaction and loyalty to a bank. Similarly, banks want to increase financial performance through profitability, sales and market share growth, and ROE, ROI, NIM, ROA, efficiency, Cost-to-Income ratio and CLV using loyalty. This phenomenon is represented in a ‘Virtuous Triangle’ between ‘Digital Banking Services’, ‘Customer Experience’ and ‘Financial Performance’, an initial framework, presented in Figure 8.2. This shows how service innovation using digital channels helps banks to improve services and profitability. Results show that digital banking innovation is caused by customers’ demands and competitive pressure. Therefore, banks must ‘invest and innovate’ to meet customers’ needs. This should improve customer experience and satisfaction, before banks can be rewarded with customer loyalty, operational efficiencies and improvement in financial performance. The interview research revealed that the demand for digital banking is precipitated by customers, which banks have obligations to meet for the assurance of their own performance.

To describe the architectural phenomenon required to build effective digital banking services, the three investigations were utilised to construct a ‘DB Strategic Management Map’, a second framework, presented in Figure 8.3. It highlights the type of services provided via digital banking, the channels, and the digital technology infrastructure required. Other results are used to show how value is created for all stakeholders (e.g. Employees, Customers, Banks and Shareholders), a third framework, depicted in Figure 8.4. However, the most important beneficiaries in the ‘Value Creation’ chain are customers and banks. It shows the effectiveness of digital banking in enhancing customer experience, which is the value derived by customers regarding making life easy, enjoyment, time saving and convenient, and banks in terms of improving financial performance. Through an improvement in financial performance, shareholders benefit from ROE and ROI. The framework describes how the main digital channels are enablers for banks and employees to innovate, and develop internet and mobile apps, online chat and mobile payment for offering value-added services, better customer experience, and enhancing economic value-adds.

A triangulation matrix of results evaluation from the three research perspectives is described in Table 8.1. It shows how the results have corroborated or differed from each other. By integrating the results, the main ‘DB Channels’ are telephone, internet and mobile, through which various ‘Financial Services’ can be marketed to customers. There is consensus from the three investigations that ‘Functional Quality’, ‘Perceived

Value', 'Service Convenience', 'DB Service Quality', 'Employee-Customer Engagement', 'Brand Trust', 'DB Innovation', 'Perceived Risk', 'Perceived Usability', 'Service Customisation', 'Service Speed' and 'Customer Acceptance Trend' affect 'Customer Experience'. The exceptions were 'DB Innovation' and 'Brand Trust', which were not significant in the customer questionnaire. 'Brand Trust' was highlighted in the interview and bank report results.

The employees think that maintaining their brand, trust and integrity helps attract customers to digital banking, and make them stay loyal. The interview result shows that 'Brand Trust' is related to 'Customer Loyalty'. Banks also think in their reports that brand and trust are important, so they avoid damaging their reputation and reducing customer confidence via a security breach. Employees and banks see 'DB Innovation' as key to creating distinct value and products, meeting customers' expectations and being competitive. The results indicate that although the innovation outcome is important to customers, they are more interested in using services that offer them better experience than how they are developed. However, they want more dialogue with employees.

The three research results show that 'Customer Experience' moderates 'Customer Satisfaction' and 'Customer Loyalty', which in turn positively affect 'Financial Performance'. With the results, an integrated framework (DiBCEFPEF) for enhancing digital banking, related customer experience and financial performance, in terms of profitable growth and economic value-adds, is presented in Figure 8.5. The framework offers insight into digital banking creation, services offered, and how it can be used. It can transform banks and be adapted depending on the bank's interest. The framework shows holistic digital banking research involving banks', customers' and employees' views on the factors to consider for improving customer experience, satisfaction, loyalty and bank financial performance. The results from different perspectives help to investigate, validate and evaluate the research, which increases the robustness.

9.4 Theoretical and Practical Implications and Contributions to Knowledge

Digital banking growth has given rise to research in the area, due to its relevance in banking services, with many studies using TAM and IDT as theoretical models. This research contributes to such studies. Also, to improve services and organisational performance, different models and theories (e.g. SPC, SERVQUAL and BSC) for

measuring customer satisfaction and financial performance have emerged, as discussed in Chapters Two and Three, which served as bases in this research. Many of these theories originate via contact with customer service personnel, where tangible qualities are core service determinants, unlike digital banking where customers self-serve, hence changing their service experience and banks' performance determinants. This thesis enhances the understanding of such aspects.

Theoretically, this thesis closes gaps in and extends knowledge by producing attributes of digital banking and their impact on service quality improvement and management, service marketing and improving banks' performance. The research framework supports further study in digital banking, customer experience and financial performance, given that no such comprehensive studies were previously done along these lines in the UK, with a few fragmented studies in other countries (Amin, 2016; Jun & Palacios, 2016; Keisidou et al., 2013). While there are other studies in banking services (Liang et al., 2009; Ladhari et al., 2011), and customer experience (Klaus & Maklan, 2013), this thesis' results provide UK-based digital banking's influences through three key important stakeholders. The research contributes knowledge to other e-banking studies in the UK (Howcroft et al., 2002; Harrison et al., 2014; Stone & Laughlin, 2016).

The research in this area is still evolving, hence its uniqueness. The thesis contributes to knowledge of digital banking's effect on customer experience, satisfaction, loyalty and financial performance. The managerial implication is that to improve financial performance, banks should pay attention to the findings and customer experience attributes identified, while theoretically they can serve as building blocks for further research. The thesis results reflect some similarities and differences to other research, thereby making further contribution to knowledge.

There are research models that attempted to understand customer experience, satisfaction and loyalty without relating them to financial performance (Klaus & Maklan, 2013; Garg et al., 2014; Piyathasanan et al., 2015). Other research models investigated the relationship among customer satisfaction and loyalty and financial performance, excluding customer experience (Keisidou et al., 2013). Demonstrating how customer experience, satisfaction and loyalty relate to financial performance has theoretically extended knowledge in digital banking.

Garg et al. (2014) found convenience, customisation, value addition, speed and employees' attributes to affect customer experience in Indian banks. Their findings relate to this research's results in UK digital banking. Jun and Palacios (2016) and Knutson et al.'s (2007) research also found that convenience affects customer experience. This research differs from Garg et al.'s (2014) study which considered offline and online service activities, and did not predict financial performance. The findings in this research also suggest that 'Service Convenience' is associated more with uptake and location than operation of digital banking, as customers can access it from anywhere. This research makes a contribution in validating and extending knowledge in this area.

This research found that 'Brand Trust' positively affects customer experience and customer loyalty in the employee interviews and bank report investigations, but not in the customer questionnaire. It extends knowledge in other studies that found brand to improve customer satisfaction and loyalty (Liang et al., 2009; Levy & Hino, 2016). Keisidou et al. (2013) also found image to be positively related to customer loyalty, which is close to 'Brand Trust' and has implications for future studies and theory. The findings in 'Brand Trust' may suggest that it relates more to customer satisfaction and loyalty than digital banking experience, which is more about the application interfaces, bringing new insight for future study. Therefore, 'Brand Trust' and customer experience need to be explored further from the customer perspective.

Keisidou et al. (2013) also found relational and service qualities, and value to be positively related to satisfaction in Greek banks, but not functional quality or service convenience. This research found 'Service Convenience' to influence customer experience in the customer open-ended questions, employee and bank investigations, but not in the closed-ended questions in the questionnaire investigation. 'Functional Quality' and 'Perceived Value' were found in all three investigations to be significant for UK customer experience. Functional quality affects customer satisfaction and loyalty in Spanish banks (Monferrer-Tirado et al., 2016). Service quality affects customer satisfaction and loyalty in Israel banks (Levy & Hino, 2016), e-banking in Saudi Arabia (Amin, 2016) and m-banking in the USA (Jun & Palacios, 2016). However, this thesis highlights that 'Service Quality' affects customer experience, and consequently leads to customer satisfaction and loyalty, and financial performance, hence offering further theoretical insights across countries in digital banking.

Nevertheless, it is worth noting that ‘Service Convenience’ was found not to be significantly related to customer experience and satisfaction from these two independent quantitative researchers as indicated above, but in the qualitative research, it was found to affect customers’ digital banking experience and uptake. This shows the significance of mixed methods research, which has implications for further studies. Results in ‘Perceived Value’ is consistent with service marketing theory and corresponds to Dootson et al.’s (2016) finding that expected value draws customers towards performing an action. This extends knowledge in digital banking to other studies that found virtual experience to be influenced by economic and social values in Indian e-commerce (Piyathasanan et al., 2015), and experiential values to influence customers in the Taiwanese leisure sector (Chang & Lin, 2015).

‘Perceived Usability’ affects telebanking experience in Jordanian banks (Alalwan et al., 2016) and e-commerce experience (Klaus, 2013). Similarly, in UK digital banking, this factor affects bank customer experience, which extends knowledge. Banks benefit from interactive service innovations (Dootson et al., 2016), however the research finding in ‘DB Innovation’ indicates that customers are more interested in the benefits than the innovation itself. This suggests that ‘DB Innovation’ should focus on the perceived value derived by customers, and confirms Patsiotis et al.’s (2012) study which suggests that understanding the impact of innovation on customers is of potential benefit to banks.

The research found that ‘Customer Experience’ mediates ‘Satisfaction’ and ‘Loyalty’, and ‘Satisfaction’ affects ‘Loyalty’. The result between ‘Customer Satisfaction and Loyalty’ alone relates to Jun and Palacios’s (2016) findings in m-banking and Amin’s (2016) study of e-banking, hence showing similarity of customers across countries. Klaus and Maklan (2013) found similar results in UK high contact services using questionnaires distributed to mortgage and luxury goods customers, but this thesis demonstrates customer experience, satisfaction and loyalty moderators in digital banking, which extends theory.

The lack of information on customer experience in the virtual world (e.g. digital banking) was highlighted by Piyathasanan et al. (2015, p.126). “*Many businesses use virtual experience (VE) to enhance the overall customer experience, though extant research offers little guidance for how to improve consumers’ VE*”. This thesis offers those guidelines. It extends knowledge in other studies on customer satisfaction and

financial performance (Liang et al., 2009; Kearney et al., 2013; Evanschitzky et al., 2012), and defines the relationship between customer experience, satisfaction, loyalty and financial performance in digital banking.

The importance of employee engagement, training and satisfaction in the improvement of customer service and profitability has been studied (Glaveli & Karassavidou, 2011; Karatepe & Aga, 2016; Acheampong & Asamoah, 2013; Yee et al., 2010). This research has supported and added further evidence that ‘Employee-Customer Engagement’ through feedback, training and communication, influence their ability to design digital banking that improves customer experience and financial performance. This highlights the relevance of customer feedback in influencing positive customer behaviour. It also highlights that through the services employees offer to customers, banks can gauge employee satisfaction and customer experience, which extends knowledge in employee engagement’s effect on customer satisfaction and loyalty to digital banking.

Most studies investigated customer loyalty’s effect on financial performance using financial indicators (e.g. Net profit, ROE, ROA, NIM and NPM) (Keisidou et al., 2013; Chi & Gursoy, 2009) and CLV (Valenzuela et al., 2014; Reichheld, 2003; Schneider et al., 2006). This thesis extends knowledge of digital banking’s effect on financial performance using financial indicators (ROE, Cost-to-Income ratio and NIM) (FP1), and NPS (FP2) which measures the CLV. Cost-to-Income ratio was used due to the impact digital banking can make on efficiencies. Keisidou et al. (2013) used ROI/ROA, NPM and ROE to test financial performance. While NPM is good, the measure is not consistent when banks report in different currencies. This research used indicators reported in percentages, which are consistent across banks and will help further studies.

This research uses a broad financial performance measure suggested by Hult et al. (2008), which combines efficiency savings, sales growth and recurrent revenue through an improved digital banking experience. Results show that customer loyalty has a positive effect on financial performance on both FP1 and FP2 indicators. This is a contribution to knowledge by combining these performance indicators in digital banking research in UK banks. The research contributes to studies above that relate loyalty to profitability, by showing that a positive NPS increases financial performance through the CLV, hence offering theoretical links between customer relationships and

service marketing. This thesis demonstrates that banks are reducing branches and saving money using digital banking, extending knowledge in studies that found UK banks are closing branches (Stone & Laughlin, 2016; BBC, 2016), deemed unprofitable due to declining customer visits. Some customers want branches to remain open, corroborating studies that cautioned ignoring branch services (Bapat, 2017), to the UK.

This thesis examined an integrated framework for digital banking's effect on customer experience and financial performance, as regards economic value-adds and profitability. This involved research into the banks', customers' and employees' perceptions, so that a useful framework with broad views could be created. In the thesis, this contribution has been accomplished. An integrated Framework (DiBCEFPEF) for creating value for UK customers and banks, which will assist them to improve customer experience and financial performance, has been developed. The framework extends knowledge in other studies on customer experience, satisfaction and loyalty (Klaus & Maklan, 2013; Garg et al., 2014; Chahal & Dutta, 2015), and financial performance (Keisidou et al., 2013; Chi & Gursoy, 2009; Liang et al., 2009). This thesis framework extends knowledge through establishing the relationship between customer experience, satisfaction and loyalty, and bank financial performance in UK digital banking.

The thesis adds new knowledge by demonstrating the mutual value that exists between customers and banks, the main beneficiaries, in digital banking. It incorporates value as regards employee satisfaction when they improve customer experience. It shows that improving customer experience through perceived value, service quality and convenience, and bank financial performance are key drivers for digital banking uptake. Therefore, customers' values are improvements in customer experience attributes and satisfaction, while banks' values are improvements in customer loyalty and financial performance relating to profitability and economic value-adds, demonstrated in the framework. The implication for banks is that their business performance depends on the value they give to customers via digital innovation, offering multi-channel services. The thesis reinforces that through proper digital banking usage, banks and customers can derive value, which is important new knowledge offered by the framework.

This research confirms Hastings' (2012) proposal about the reciprocal benefit to customers and firms of a marketing matrix, showing how digital banking utilisation

creates value for all stakeholders. Other researchers (e.g. Chang & Lin, 2015; Gentile et al., 2007) highlight experiential values derived through receiving a better customer experience. Piyathasanan et al. (2015), Zott et al. (2011) and Chang and Tseng (2010) indicate value creation via online business innovation and values derived by customers and firms through offering good e-commerce services. These types of value are expected to be derived utilising the new framework, which extends knowledge and theory in digital banking.

There is research on e-banking uptake, anchoring on theories about the intention to use technology (e.g. TAM). Lee (2009), Martins et al. (2014), Jun and Palacios (2016) and Hanafizadeh et al. (2014) found 'Perceived Risks' like security to affect uptake, which reflects this research. This thesis investigated digital banking and broadened the perceived risk to include fraud, cyber-attack, fines, data protection, privacy and reputational damage, and other factors that determine customer experience and uptake. The implication is that banks should take security and other factors very seriously, because some customers are still concerned about security. Xue et al. (2011) found that service demand and customer behaviours influence e-banking uptake, while this research found 'Customer Acceptance Trend' affects customer experience. Customers are forcing banks to improve their service offerings through their demands for products and services. This thesis widens the scope of digital banking studies to customer experience and financial performance, which contributes to knowledge.

The thesis makes a practical contribution. It has established the major digital banking channels through which services are offered (e.g. telephone, internet and mobile). The research found that banks can use these channels to develop innovative services and market products, which improve customer experience and financial performance. Banks can concentrate on a particular segment of service (e.g. Barclays Pingit), which puts them ahead in mobile payments. The implication is that banks can use digital innovation to differentiate themselves, create new services and value, improve customer retention and operational efficiency, and reduce customer acquisition costs, which increase their profit. Banks should focus more on developing a unique value proposition to acquire customers, offer value-added services and stay competitive. They can adapt their strategy around serving different customer segments well and offering them good services, with appropriate customer experience attributes, as outlined in the thesis.

The research shows that customers' demand for digital banking through their digital devices has increased over the years. Therefore, banks need to constantly research the trend in customers' uptake on these devices as they evolve and the type of services that can be offered. This is recommended as the employees' interview findings show that demand for digital banking is precipitated by customers, while banks play catch-up. They want flexible banking and are requesting more services through their mobile than telephone and internet. This information will help banks know where to concentrate, and introduce more services in their marketing campaign.

Results show that e-banking is good for acquiring customers, while m-banking is good for retaining them. This can help banks in customer acquisition and retention, identifying the type of services to offer specific customer groups and the channels to use. This thesis offers banks the opportunity to know why customers would prefer one bank's digital banking services over another, which will assist them in improving customer experience. Considering the identified factors when implementing digital banking will help capture and retain customers; making them accept digital banking and stay loyal, leading to better financial performance. Perceived values (e.g. cost saving, better deals, online interaction, enjoyment and time saving) play a crucial role. To improve customer experience, banks should offer value-added services, enhance service and functional qualities, and security. Additionally, bank employees should constantly engage with customers to understand their requirements and meet their needs.

As demonstrated earlier, this thesis shows the positive impact of digital banking on customer experience, satisfaction, loyalty and financial performance using financial indicators and NPS (CLV). Therefore, banks should pay attention to providing effective digital banking to increase customer loyalty. They have treated digital banking as an IT asset, making it difficult to ascertain the profit attributable to it. This thesis will help banks to measure NPS regularly to determine the loyalty of digital banking customers, and how they contribute to their financial performance via CLV and financial ratios, as demonstrated. These are new insights and knowledge that banks stand to gain.

Methodologically, this thesis has investigated digital banking experience and financial performance in UK banks, which have received little attention. It used a triangulation research method by studying bank, customer and employee perspectives, hence investigating the three major stakeholders most affected by digital banking. The

methodological approach is a major contribution to knowledge, which will make results and frameworks developed more robust and reliable than other studies, as suggested by researchers that have used mixed methods (Johnson & Onwuegbuzie, 2004; Trauth & Jessup, 2000; Tashakkori & Teddlie, 2010). This is also the best practice in organisational studies, adopting a broad approach (Hoque, 2014), hence making contributions.

The research also combined qualitative and quantitative analysis techniques in digital banking investigation, which contributes to knowledge. This means that all the in-depth, contextual and quantitative content was captured to give more meaning and corroborate results. The analysis indicated that employees and customers provided more detailed information than financial reports. Using different research and analysis methods increases the results validity and makes contributions. The implication of the research methods is that bank executives should see digital banking requirements from both the customers' and employees' perspectives, helping them in decision-making, marketing and enhancing customer experience and business performance. It will help banks be aligned with customers' needs and understand how to meet them. The research methods, strategy and analysis techniques have been relevant in helping solve digital banking challenges facing banks.

9.5 Suggestions and Implications for all Stakeholders

The thesis will benefit key stakeholders like banks and academics, and will help in the implementation of policies, future research and enhancement of practices. The thesis identifies how digital banking attributes improve customer experience, satisfaction and loyalty, and bank financial performance. This information is important for existing and new banks for improving business. The thesis has reviewed various literature, documented results and models through different perspectives, and has finally created an integrated framework. The thesis makes a contribution to knowledge through theoretical and practical implications, and suggestions and methods used, which bring new insight and benefits to all stakeholders.

Banks: Through the thesis, banks will be more equipped with clear requirements in digital banking utilisation to provide services and survive 21st Century competition when fraud and fines are common, and margins are tight. 'Perceived Risk' affects digital banking experience. Internet crime and security breaches result in financial

losses and brand damage, which negatively affect customer experience and financial performance. The research shows that with investment and innovation banks can protect their digital platforms and minimise these risks. It also shows that enhanced security can be achieved through ‘Service Customisation’ on digital devices, which can shorten customer journeys. Customers want quick and easy access to their digital banking rather than a long log in process. This evidence shows there is a clear trend in customer needs emerging, which recognises that every customer is unique and should be treated individually through service personalisation to improve security and experience. These are important demands and issues banks should consider.

The research shows that banks and customers derive different digital banking value. ‘Perceived Value’ is a key driver for customer uptake and better experience, while banks want to increase ‘Financial Performance’. It shows that banks need to provide value to customers in respect of improved customer experience and satisfaction, before being rewarded with customer loyalty and improvement in financial performance. Therefore, banks can innovate in digital channels to offer a better, value-added and efficient service to maintain competitive advantage. For instance, offering better deals online, and online chat and text alerts which prevent customers from getting overdrawn. Customers want user-friendly, reliable and easy to use digital banking, hence making ‘Perceived Usability’, ‘Service Quality’ and other factors identified in the research important. Implementing some of these can be costly, but they add to customers’ value. Therefore, banks should always seek to create value for customers through innovation, to receive value in return. The research provides clear evidence of how to use digital banking to build customer relationship and enhance banks’ financial performance.

‘Customer Acceptance Trend’ of digital banking is on the increase due to changing customer behaviours, expectations and experience. Customers want better experience and to manage their finances conveniently from any location. The employee interviews in Chapter Seven, and customer open-ended questions in Chapter Six, show that customers are demanding more services than banks can provide, especially through mobile devices. This has implications for banks of the area to develop for customers to harness maximum benefits.

This research shows that ‘Employee-Customer Engagement’ through engagement, feedback and training are important in digital banking innovation and customer

experience improvement. Employees' knowledge about customer requirements is key to this achievement, therefore employees should engage more with customers to have appropriate information to build digital banking that is attuned to customers' needs. In the open-ended questions, some customers commented that banks should consult them before building applications that affect them. Through engagement, banks understand employees' feelings about the services they offer to customers, as was found in the interviews. The research implication is that customers and employees are engaged adequately to build digital banking knowledge and enable employees to innovate, as other research also suggests that employee engagement and satisfaction improve financial performance. It will help employees understand how they contribute to the banks' digital banking scorecard and strategic vision.

The open-ended questions in Chapter Six highlight the importance of keeping some bank branches open. Although digital banking is improving customer experience, there are still customers who want to bank through the branches. They see digital banking as an addition rather than a full branch alternative, as it cannot satisfy all their needs. Some of them are also conscious of security. The implication for banks is that until every banking function can be done through digital banking, some branches still need to remain open, otherwise they will lose business, and there should be security education for these customers.

The thesis provides detailed insight into UK banks, helping understand the efficiencies, capabilities and any weaknesses in their current digital strategy. New results are useful for formulating effective appraisal, benchmarking and improvement of the banks' digital banking position. It offers new insight into different factors affecting digital banking uptake, experience, financial performance and reasons for its uptake from different perspectives. The results have wider marketing, business and technical implications for similar e-commerce businesses and work in other industries. The research will create digital banking awareness and knowledge sharing.

Investors: The thesis builds a business case for digital banking implementation, investment and innovation within banks by highlighting its importance on customer experience and financial performance. This research is important in economic development and serving customers well, and improving profit for shareholders which is the main objective of banks. After the financial crisis of 2008, some customers felt

unhappy with mainstream banks, hence this thesis offers investors the comprehensive information required to fill the gaps in the financial market. It forms the basis for investment in the new challenger banks, by offering insight to would-be investors about the viability and potential economic value-adds from digital banking (e.g. efficiency savings, profitability and sales growth, ROE, Cost-to-Income ratio, NIM and profit though CLV).

Customers: The thesis illuminates new knowledge into current UK digital banking and how banks are delivering services to customers. It has highlighted information on how banks can work with customers to bring good experience, satisfaction and loyalty. It has provided an opportunity for customers to express their feelings, how banks can create value for them and recommendations on what they want implemented to improve their experience and satisfaction even further. For customers, security, service access and personalisation are important. The investment and work banks are doing around security can offer customers reassurance.

Policy and Practice: In addition to the information mentioned under ‘Bank’ above, the thesis will help create awareness and knowledge sharing within banks and government agencies about digital banking, and how it can be utilised more effectively. The new insight will help regulators implement policies to protect customers and banks, and create awareness of security issues. Policies in this area are still unclear. Security, data protection and privacy are still issues, and banks are vulnerable and at risk of attack. The research findings recognise the importance of employees’ views and knowledge, and customers’ feedback in innovation and implementation of digital banking, which banks should consider.

Academics: Part of the conceptual results is published in a banking conference in Nigeria (Mbama & Ezepue, 2015). Chapter Six results have been accepted for publication in the International Journal of Bank Marketing. Acceptance letters are included in Appendix H. Further research results will be presented in conferences and published in journals such as E-Commerce, Information Management, Marketing, Modelling in Management and Business, Organisational Performance and Service Improvement Research. Through presentation, awareness and knowledge sharing, the general public are informed, and publications help to disseminate new knowledge to academics and other researchers. The thesis forms the basis for future research.

9.6 Limitations of the Research

The research uses financial report, questionnaire and interview data. There are general issues with questionnaire research like a low response rate and lack of anonymity (Ritter & Sue, 2007). There is also the problem of receiving invalid data due to questionnaires not being filled in properly or some questions being left blank. The web-based questionnaire approach enabled anonymity and prevented respondents submitting incomplete questionnaires, which is an advantage. Even though respondents were reminded four times to return their questionnaires there was still only a 30.29% response rate, not unexpected for web-based questionnaires (Kwak & Radler, 2002). The research used closed and open-ended questions in the questionnaire. Closed questions can limit respondents from giving their own opinion, however open-ended questions related to the research topic were asked to enable respondents to do so. The use of open-ended questions enabled the research to uncover additional themes, which corroborate other results in Chapter Eight. This could not have been possible without mixed methods adoption.

Qualitative research (e.g. interviews) uses purposive sampling, generally used in phenomenological research and generalisability is one of its drawbacks (Yin, 2009). This was possible given research concerns, the type of information required and confidentiality involved in obtaining bank information. Therefore, the interview was deemed the most appropriate research method, to bring in-depth and contextual meaning to the research, as to what employees are thinking about digital banking. The researcher was aware of this limitation, and to mitigate it other UK banks were studied from their financial reports, and results from them corroborate the interview results, increasing the validity of findings and the research generalisability.

The research agrees with Hult et al.'s (2008) findings that there is limited research in financial performance using primary data, due to confidentiality. This research is among the few that utilises primary data. It investigated UK banks due to the researcher's location and interest. However, as digital banking is not limited by borders, the findings are useful and form the basis for further studies in other countries.

The research used systematic sampling method, which was a cost-efficient way of gathering data, nonetheless it could suffer from pattern risk and under-representation. A wider demographic spread or a larger sample size could have been used, however this

was limited due to resource. The research could be widened further using alternative methods, helping in its comparison. The sample and units investigated may have affected the findings. However, the triangulation method used made it possible to verify results and increase robustness.

Qualitative research is good in answering the question of ‘how’ and ‘why’, rather than ‘how many’ in quantitative research (Creswell, 2003; Saunders et al., 2003). The limitations of both were noted, therefore the research adopted mixed methods so that results could be corroborated. The research also adopted the content analysis method that enabled results to be correlated. By triangulating results in Chapter Eight, evidence shows the majority of results from quantitative research corroborates the qualitative research, which increases the robustness of the findings. This shows the benefit of using mixed methods, as discussed in Chapter Four, which increases validity and generalisability in research. The researcher anticipated some of these limitations and mitigated them through the methods and analysis techniques adopted. Finally, while the limitations of the research are acknowledged, they do not reduce the significance of the findings and benefits to all stakeholders.

9.7 Suggestions for Future Work

The research in this thesis has investigated digital banking in UK banks. Although conclusions have been drawn, there are things that need further investigation. The research needs to be extended to developing countries. Africa is an up-and-coming continent where mobile banking can be beneficial due to the large population living in remote areas. The research has studied digital banking’s effect on customer experience and banks’ financial performance, and has assembled an integrated framework that will help existing and new banks. Further research is needed to understand the applicability of this framework to other organisations like insurance firms, and whether there are other factors to be added.

The research used analysis results from questionnaire data collected from 206 UK bank customers. There is a possibility that the scope can be enlarged and tested further. The framework can be applied in banks using their customer database to build marketing insight and verify how their digital banking loyalty affects financial performance. This will have a predictive effect on banks’ future profitability, and require gaining their confidence. The research has collected data from well-established banks. The

framework and other research results can be tested in challenger banks and used to set up a new bank. This requires convincing investors that they stand to gain from the research information. The importance of digital banking in crowd finance and social banking are not widely covered. Social banking is conducted through social networking such as peer-to-peer lending. Digital banking's role in these areas can be interesting research.

9.8 Closing Remark

Banks and customers are recognising the benefits from digital banking. The proportion of bank customers accessing digital banking services has increased in recent years and the trend is expected to continue. This thesis has organised literature from service quality improvement, customer experience, organisational performance, e-commerce strategies, digital banking uptake and marketing to understand the current trend in research concepts. It has then used the viewpoints of UK banks, employees and customers to highlight, document and extend knowledge on the relevance of digital banking in improving customer experience and bank financial performance. This new insight sets a foundation for future study and a working framework for banks.

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Appendices

APPENDIX A – Research Hypotheses Development

Perceived Value: Perceived value is defined as the trade-off between costs and benefits of performing a behaviour (Dootson et al., 2016). It is an important determinant of behavioural intentions to use e-commerce (Piyathanasanan et al., 2015), and a key factor for banks (Keisidou et al., 2013; Liang et al., 2009; Garg et al., 2014; Fathollahzadeh et al., 2011), and the leisure industry (Chang & Lin, 2015). However, limited attention has been given to it in UK DB. We therefore frame an exploratory hypothesis linking perceived value and customer experience, namely:

H1. There is a positive relationship between Perceived Value and Customer Experience.

Convenience: Convenience is rarely researched alongside customer experience; however, it has a positive effect on customer satisfaction (Keisidou et al., 2013; Knutson et al., 2007; Kim et al., 2011; Karatepe et al., 2005) and customer experience (Garg et al., 2014; Klaus and Maklan, 2013) relating to offline and online activities. Jun and Palacios (2016) see convenience as one of the key service qualities of mobile banking in the USA. Wu (2011) investigates the location convenience effect on customer satisfaction, while Keisidou et al. (2013) tested the operational and locational characteristics of convenience. In this study, operational convenience of DB is tested:

H2. There is a positive relationship between Convenience and Customer Experience.

Functional Quality: This deals with the functionality aspect of online systems, its activities and interactivity components, which affects customer experience (Garg et al., 2014). Functional quality influences users' uptake of mobile banking (Lee & Chung, 2009) and customer satisfaction (Keisidou et al., 2013), and customer satisfaction and trust, and loyalty in Spanish banks (Monferrer-Tirado et al., 2016). These effects need to be tested in UK banks:

H3. There is a positive relationship between Functional Quality and Customer Experience.

Service Quality: Service quality is widely tested in banks, hotels and insurance companies employing SERVQUAL (Parasuraman et al., 1988), which differs slightly in DB. In banking, service quality is found to increase customer satisfaction (Keisidou et al., 2013) and profitability (Ladhari et al., 2011). It mediates overall satisfaction, which is an antecedent of loyalty (Levy & Hino, 2016). Jun and Palacios (2016) study mobile banking service quality in USA, while Amin (2016) and Raza et al. (2015) study internet banking service quality and its relationship to customer satisfaction and loyalty in Saudi Arabia and Pakistan, respectively. These researchers found that service quality significantly impacts on satisfaction and consequently leads to loyalty. However, there is limited research on service quality as a concept in DB services marketing in UK, hence the following hypothesis:

H4. There is a positive relationship between Digital Bank Service Quality and Customer Experience.

Brand Trust: Brand credibility is the level at which the service proposition information is considered to be believable (Keisidou et al., 2013). Brand, trustworthiness and image have been researched in studies and found to affect customers' bank choices (Liang et al., 2009; Fathollahzadeh et al., 2011; Knutson et al., 2007; Akhter et al., 2011). Levy and Hino's (2016) study found that attachment to brand positively affects bank loyalty. This study explores brand trust in UK banks via the hypothesis:

H5. There is a positive relationship between Brand Trust and Customer Experience.

Employee-Customer Engagement (ECE): Bank employees have interactions with customers and are the most important link in service delivery and complaint handling processes (Karatepe and Aga, 2016). They need to be friendly, competent, capable of sustaining interpersonal distance (Garg et al., 2014; Verhoef et al., 2009), and in building trust and influencing customer behaviour. Employees' attributes influence firms' business performance in non-DB environment (Grace & O'Cass, 2004; Karatepe et al., 2005), and customer satisfaction and profit (Yee et al., 2010). Customer satisfaction is largely influenced by service quality, which depends on employee job satisfaction in contact services (Chi & Gursoy, 2009; Kanyurhi and Akonkwa, 2016). However, the relevance of ECE in DB experience is tested:

H6. There is a positive relationship between ECE and Customer Experience.

Perceived Risk: Jun and Palacios (2016) found security as one of the key factors that affects service quality of mobile banking, while perceived risk is found to affect DB uptake in other countries (Martins et al., 2014; Akinci et al., 2003; Hanafizadeh et al., 2014). Banks are constantly investing in security to minimise risks; the following hypothesis is explored:

H7. There is a negative relationship between Perceived Risk and Customer Experience.

Perceived Usability: DB is about customers' electronic interface with a bank. Usability is one of the key elements that determines mobile banking uptake (Gu et al., 2009), and e-commerce business customer experience (Klaus, 2013). A study of Jordanian banks found that perceived usefulness, trust, and self-efficacy are predicting factors to use of telebanking (Alalwan et al., 2016). This is tested in the context of DB experience thus:

H8. There is a positive relationship between 'Perceived Usability' and Customer Experience.

Digital Banking Innovation: Banks benefit from interactive service innovations (Dootson et al., 2016; Berry et al., 2010), which offer better ways of doing things for customers and improve performance (Hult et al., 2004). Patsiotis et al. (2012) suggest that understanding the impact of innovation on different categories of adopters and non-adopters is of potential value to banks. Similarly, technology innovation focussed on customers is important for organisations, because customers need to use the innovation to make it valuable to both parties (Arts et al., 2011). However, there is limited study of customers' perceptions on innovation, and how it impacts DB experience. Baba (2012) notes that focusing on specific innovation contributes more to performance (growth in market share) than adopting different innovations at the same time. The relationship in innovation is tested thus:

H9. There is a positive relationship between DB Innovation and Customer Experience.

Customer Satisfaction, Loyalty and Experience: Different definitions of customer experience have been given by Klaus and Maklan (2013) and Verhoef et al. (2009), while Liang et al. (2009) suggest that customer satisfaction is overall customer experience. Studies in customer experience and loyalty are limited, but what leads to customer satisfaction has been tested in hospitality (Chi & Gursoy, 2009), internet banking (Amin, 2016; Raza et al., 2015), and mobile banking (Jun & Palacios, 2016) areas. Although these studies were conducted in different countries, the antecedent of customer loyalty has predominantly been tested using customer satisfaction, rather than customer experience. Klaus and Maklan's (2013) framework investigated customer experience, satisfaction and loyalty in high contact mortgage environment in the UK. This research tests the effect of DB experience, which is contactless, through the hypotheses:

H10. There is a positive relationship between Customer Experience and Satisfaction

H11. There is a positive relationship between Customer Experience and Loyalty.

Customer Experience, Satisfaction and Loyalty, and Financial Performance: Keisidou et al. (2013) investigate the relationship between customer satisfaction and loyalty, and financial performance using ROA or ROI; NPM and ROE, while Anderson et al. (1994) used ROI. Chi and Gursoy (2009) asked hotel managers to rate their financial performance in comparison to their competitors in terms of profitability, ROI and net profit. Undoubtedly, different research aims call for different measures; some researchers have approximated profitability through loyalty. Reichheld et al. (2000) claim that improving product quality enhances customer loyalty and profit through cross-buying, recommendations and low servicing cost, while Heskett et al. (2008) suggest that an increase in customer satisfaction and loyalty can boost profitability. This argument has linked customer loyalty to profit through Customer Lifetime Value (CLV) – profit attributable to a customer throughout their lifetime with a firm (Reichheld, 2003; Valenzuela et al., 2014). The links between satisfaction and loyalty, and financial performance have been studied, and need to be tested in DB experience, using financial ratios (ROE, Cost-to-Income ratio and NIM as FP1) and NPS value (the loyalty effect on profit through CLV as FP2). The underpinning hypotheses are:

H12. There is a positive relationship between Customer Experience and Financial Performance.

H13. There is a positive relationship between Customer Satisfaction and Financial Performance.

H14. There is a positive relationship between Customer Loyalty and Financial Performance.

Customer Satisfaction and Loyalty: Limited customer loyalty studies have been conducted in DB. Researchers who study satisfaction and loyalty do not always consider customer experience. For instance, the effect of service quality on customer satisfaction and loyalty have been investigated (Levy & Hino, 2016; Ladhari et al., 2011), while Saleem et al. (2016) study the effect of customer loyalty, with customer satisfaction as the moderator. There is a positive relationship between customer satisfaction and loyalty in Greek banks (Keisidou et al., 2013) and in other banking studies (Fathollahzadeh et al., 2011; Klaus & Maklan, 2013). These studies suggest that customer satisfaction can lead to customer loyalty, which needs testing in DB. Therefore, we propose the hypothesis:

H15. There is a positive relationship between Customer Satisfaction and Loyalty.

APPENDIX B – Dimensions, Attributes and Definitions of Factor Items

Dimension of Factors	Attributes, Definitions and Literature Evidence	No of Items
Perceived Value (PV)	Saves money, saves time, usefulness, enjoyment, better deal online (e.g. Keisidou et al. (2013); Liang et al. (2009); Garg et al. (2014); Fathollahzadeh et al. (2011); Chang & Lin (2015); Dootson et al. (2016))	4
Convenience (CONV)	Comfort, convenience, speed, hassle-free, (e.g. Keisidou et al. (2013); Knutson et al. (2007); Karatepe et al. (2005); Garg et al. (2014); Klaus & Maklan (2013); Jun & Palacios (2016))	3
Functional Quality (FQ)	Interactive, clear information, easy to navigate, easy to do business online, simple and intuitive interface (e.g. Keisidou et al. (2013); Garg et al. (2014); Monferrer-Tirado et al. (2016); Lee & Chung (2009))	3
Digital Banking Service Quality (DBSQ)	Meeting and exceeding expectation, reliability, accessibility, service excellence, (e.g. Keisidou et al. (2013); Levy & Hino (2016); Parasuraman et al. (1988); Ladhari et al. (2011); Amin (2016))	3
Brand Trust (BT)	Choosing, using and staying with bank due to brand and trustworthiness, (e.g. Keisidou et al. (2013); Liang et al. (2009); Fathollahzadeh et al. (2011); Knutson et al. (2007); Akhter et al. (2011); Levy & Hino (2016))	3
Employee-Customer Engagement (ECE)	Employee Engagement with customer, feedback, interactive online support, understanding requirement and designing better digital banking, (e.g. Karatepe & Aga (2016); Verhoef et al. (2009); Garg et al. (2014); Yee et al. (2010); Karatepe et al. (2005); Chi & Gursoy (2009); Kanyurhi and Akonkwa (2016))	3
Perceived Risk (PR)	Security, Cyber-attack, Fraud, (e.g. Martins et al. (2014); Akinci et al. (2003); Hanafizadeh et al. (2014); Jun & Palacios (2016))	3
Perceived Usability (PU)	Ease of use, user-friendly, flexibility, simple, easy to navigate, sufficient for my needs, (e.g. Alalwan et al. (2016); Gu et al. (2009); Klaus (2013))	3
Digital Banking Innovation (DBI)	Better services, investment in R&D, improving uptake and experience through innovation, (e.g. Hult et al. (2004); Patsiotis et al. (2012); Dootson et al. (2016); Baba (2012); Arts et al. (2011))	3
Customer Experience (CEQ)	Overall customer experience, meeting service journey, customer requirements, needs and expectations, (e.g. Klaus & Maklan (2013); Garg et	3

	al. (2014); Verhoef et al. (2009); Liang et al. (2009))	
Customer Satisfaction (CSAT)	Overall satisfaction with interface, products and services and navigation, making customers come back for more products, (e.g. Fathollahzadeh et al. (2011); Keisidou et al. (2013); Klaus & Maklan (2013); Amin (2016); Jun & Palacios (2016))	3
Customer Loyalty (CLY)	Staying longer long with bank, recommending friends and giving high NPS, (e.g. Keisidou et al. (2013); Liang et al. (2009); Klaus & Maklan (2013); Reichheld (2003); Levy & Hino (2016); Amin (2016))	3
Financial Performance (FP1)	Banks Financial Ratio effect (NIM, ROE, Cost-to-Income Ratio) (e.g. Keisidou et al.(2013); Chi & Gursoy (2009); Anderson et al. (1994))	3
Financial Performance (FP2)	NPS effect via loyalty and CLV, (e.g. Reichheld (2003); Valenzuela et al. (2014); Reichheld et al. (2000); Liang et al. (2009))	3

Table 1: Development of Items for Factor Analysis

APPENDIX C – Ideas Tournament

Attendee:

Supervisor (DOS)

PhD Researcher

An ideas tournament takes place to look at the research questions and items, instruments in the research questionnaire and interview to make sure they are adequate in addressing the research questions. The ideas tournament was digitally recorded and the following is the transcription of this ideas tournament. The headings have also been added by the author to guide the reader on the nature and dynamics of discussions that took place.

Definition of Terms: Digital Banking Services (DBS), Customer Experience (CE), Financial Performance (FP), Customer Lifetime Value (CLV), Net Promoter Score (NPS), Information and Communications Technology (ICT)

1. Overview

DOS: In this section we are looking at what we have discovered in this research process as an ideas tournament. The concept of an ideas tournament is to actually run ideas around various research questions in research work. At the moment there are four key research questions. Because these ideas are normal conversations we are going to have about what it takes to actually explore the research questions easily, you find out that sometimes I say something, sometimes you record it and we are actually looking at it together. It is that exchange of views that is captured by the word ‘tournament’.

2. Background

DOS: In fact, this process is similar to playing table tennis. It is, in a way, an intellectual ping pong. When I bounce an idea to you, you toss it back to me and it goes on like that until we are satisfied that we have covered the full remits of any particular research question. In that discussion we shall be suggesting the nature of questions that ought to be asked in the questionnaire relating to that particular question or an item in an interview schedule that may be used to survey respondents on that question. It is these things that give us hints about the possibility that any instruments we designed or that we have already drafted, which is what you have done at the moment, fit the bill, in terms of covering those questions. We will find out that once we transcribe this by playing back the tape of the idea tournament, it will enable us to go back to the questions and modify some of them or even eliminate some of them that are not necessary from the point of view of this tournament. We have to do that to make sure that the final set of questions that are fed in to respondents are valid for what they are supposed to measure, and therefore provide a sound basis for covering or exploring those questions. Are you ok with this process?

Researcher: Yes, I am ok with it.

DOS: What it also does, it guarantees quality in our work because at the end of the day, by the time data comes back and we process the data using the appropriate software, we are now sure that information coming out is actually adequate for handling those questions.

We have already covered research question 1 through the financial reports, so we do not need to look at it in the ideas tournament. This is because we know the information

coming out from them, so we need to concentrate on the other three research questions for the purpose of designing coherent interview and questionnaire instruments.

3. Discussion and Theme Identification in Research Question Two

DOS: So we begin by going in and looking at this question 2: The first question: it is something like *“What are the employees' perceptions of digital banking innovation in the studied bank, and how effective is the bank's digital banking in enhancing customer experiences and financial performance?”*

As part of this tournament, we are trying to confirm for ourselves, both of us now as the research team, that this question has the right intentions. How do we do it? We do it by looking at the themes the question covers and we ask whether those themes are relevant to what we want to study. If you look at this question, you discover that themes are *employee perceptions of digital banking*, but the purpose of knowing their perceptions or surveying is to have an idea from their point of view of how they think that digital banking is successful in delivering better customer experience, and therefore enabling banks to prosper. Are we happy that this is what it is about?

Researcher: I am happy, that is what it is.

DOS: It is a good because, if we look at it you will find out that it contains those intentions, it contains enhancing customer experience, so the three themes in that question are: (1) their perceptions; (2) to what extent do they feel that digital banking is actually enhancing customer experience and (3) how it impacts financial performance. So the debate we are going into now will be about these three themes. Once we have finished with question one in this way, we will go again in the same way, into the remaining two questions to discover the themes and then debate those themes again. Are you happy with that?

Researcher: I am happy with it.

DOS: So let me start it off by looking at the first theme on this question 1, Employee perceptions, how would you think for instance employee perception can be captured? What would be the most suitable or natural way to capture the perceptions of people at work, about what they are doing? What do you think is that most natural way of trying to obtain the evidence of perception of people at work? Even if they are not bankers, imagine trying to get the opinion of someone at work about how successful the organisation is and then use that idea to come back to the issue of capturing the perception of bankers regarding digital banking and its impact on financial performance.

Researcher: First of all, I will start by asking them the type of digital banking they have used and what is their impression of digital banking, in terms of how they use it to serve customers. I will ask them if they monitor their NPS with the customers to find out whether they are satisfied with their DBS and with the experience they have with digital banking offered by their banks.

DOS: That is a good one, that is a very good one. The essence of this type of tournament is that it brings us to ground zero where we as natural critical researchers, ask questions. Forgetting what we know and don't know, raising through a set of questions and reason out how we actually deliver the solutions. In short, this is a very practical way to do research and deliver good results. Do you agree with me? Do you think that somebody may not have an idea of the success of something like DBS – even if that person does not know a particular barometer like NPS, or does it not look natural that somebody who is in banking, especially somebody who is working in an environment of ICT within banking (the technology team in banking), who may be

people that are having to deploy some of these services or improve upon them. Does it not look natural that someone may have their own intuitive understanding of to what extent they think digital banking is actually succeeding, even before we check what NPS is talking about. Do you not feel that somebody may have a natural opinion about what he feels from his own experience or story about what he thinks is the success of digital banking? Do you not think so?

Researcher: From the practitioner point of view, I have always thought that sometimes if you design some of these digital services and you leave customers out of it for instance, if you have not sought their opinion to find out how it will improve their lives and in terms of what they want to achieve with these services - if you leave them outside it, it is difficult to design a system that will improve customer experience. Sometimes, it is better to engage the customer to really find out how to make them happy or satisfied during the course of digital service design. So it is sometimes difficult to know that without contacting the customers.

DOS: I am happy with your response and I think that you have given a good justification for why we should focus the research on how the banks actually monitor their scores and what the scores are saying. I am also thinking that being a conscious human being in that working environment, especially if they are the people that are in charge of that area of work, which I think is important, it is not every banker that will be able to tell you directly something meaningful about digital banking if they are not within the department that manages it. Because those people may have more insight and again we may check to what extent others know about DBS or can say something about that. So what that covers is that the nature of questions that have to come up. That is what the purpose of this tournament is all about. It means that we need to ask questions related to the monitoring of NPS. What they think from their experience, what NPS is saying about it, with regard to the success of digital banking in enhancing customer experience and possibly also on what they think they know which could be the likely implications in terms of the bank's performance

Researcher: I can add to that as well. For instance, when we ask the questions from the customer, we can ask what could be done to make them satisfied by employees.

DOS: We are talking about employees, we are on question 1. Remember we do these things question by question. We talking about employees after exhausting everything about employees, what we think they are doing and how the employee comes into topic of research. After that we will go to the other one. I know what you are saying, you are just talking about something like, the fact that there are other things we should have asked. We need to capture their perceptions about what they think is going on. I think the first important question is also to ask them to what extent they are satisfied or not with certain aspects of digital banking. That question must be asked because it is a baseline question that gives us their own native and intuitive understanding of what is going on. That is very important. Those things you can now measure when you start getting customer perspectives, which is NPS scores or bank records about the success, which have already been covered in Chapter 5 which you have just drafted, so that we can triangulate this understanding of the extent of success so the basic question we must ask is something like, to what extent are you satisfied with the prospects of digital banking services that these banks are providing to the customers. Do you understand? From their own perspective as staff, who have been involved with the bank for the period, they may have been involved in the department, from their own normal view. So that particular question can be addressed in many ways. It could be that we give them a close ended structure question where they say things on a Likert scale, strongly disagree, disagree, neutral, agree or strongly agree. But if you ask them an open question it may

give us an opportunity to get some text, so we may leave that question as open ended. Because it is not good to be telling them to agree or disagree, because it does not have to have close ended options, they may have their view differently. We are not beginning to itemise to them on how they interpret the question, we want to leave it to them to be free to tell us their normal story of what they think is the success or failure of digital banking, so it has to be from the horses' mouth. It will be part of the qualitative aspect of the work. Because this work is not entirely quantitative. It is both qualitative and quantitative. So by doing that you give them open spaces, it is open ended question. Are you happy with that?

Researcher: Yes I am happy with that.

DOS: That is one question I think we need to cover. The next thing is to now to go on and talk about perception, because that is part of what they are giving you. But if there are things you want to ask of them that's where you can put other questions which can capture that. Of course, do not forget that they must have given us enough information about them. Not necessarily their names, but may want to capture their title, how long they have worked in the bank, i.e. their bio data that talks about their experience in the bank and which area of the banking services they are operating in. Because you cannot throw a question on the banker without knowing the role he is playing in the bank and how do you make a judgment about the extent of the veracity of what he is telling you. For instance, if someone just joined a bank one year ago his experience will be much more limited about digital banking compared to someone who has stayed there for 10 years or 15 years, a veteran. So the more we do the veterans who would know the story of digital banking from when they started newly and up to now they have caught up and more we also get the perspective of the ones who are actually dealing with digital banking and ICT as their roles, the better for us. But of course it makes it possible for many employees to answer, so that different perspectives can come in. We need to be able to classify their responses according to their characteristics. So at the beginning of that questionnaire you must have a section that captures their roles and those basic bio data. Are you happy with that?

Researcher: Yes I am happy with that.

DOS: I think we have got one interesting question now that has to come in.

Researcher: I think we have got the employee concisely covered.

DOS: Good! If you want to get the employee to also say a bit more, because, they are saying how they view it. This question we asked them was about what they feel, and what is it particularly they feel and they are writing something for us in their text for us to be able to interpret if they are very busy people, if it is not possible to interview them. If it is possible to gain access to them, fine. But the issue of how we get it and access can be looked at later. This is about a thorough brain-storming on what it takes to develop a research questionnaire. But again it is also possible to ask somebody, because some of them may have had comments from customers when they are talking to customers, customer must have been saying something to them. So we may be able to ask another question to them which is something like this "in your experience, in your contact and service experience with the customer whether directly in a client facing situation or through what you know about customer experience view point, how would you describe the customer's views about digital banking. For instance, on what customers may be thinking they are gaining from it, whether it is services they prefer, they like using, may be being compared to being served by somebody. What has been the testament from these customers that you are aware of, that they have been making about digital banking. Again, an open ended question, enabling them to say what they think the customers are saying.

The first question is about what they feel themselves. I think these two important questions are good enough as a kind of teaser and baseline eye-opening kind of thing to be able get their view, and that covers the evidence of customer experience together with the ones you mentioned before about NPS with their understanding of the scores that will then come after that. Some of them may say they are not aware of how NPS works, fair enough because a particular banker may not know. That is why it is important to ask some of those employees who are dealing with the ICT department, who are in charge of those scores or things like that or may have seen data from those scores and again that is very important. So a question that we may ask is are you involved in an IT role, especially those that are involved in customer experience surveys and things like that, an example could be NPS or satisfaction surveys. You may not be mentioning NPS to them, they may not know that acronym. Customer experience survey is what they know because they know customers are surveyed and they may also have systems that capture customer complaints and customer everything, so you may ask the question around for instance, what it is that they can tell us from the perspective of those surveys and we can ask a similar question as the second which they can now give us a narrative or we can even give them a closed ended question if we feel there are categories we would want all of them to respond to, we will make it something like “agree, disagree, etc. “ or that kind of stuff. Like when we are saying to what extent do you feel that digital banking has done so and so, so they can tick, strongly agree, agree and disagree, etc, on a five point Likert scale, something like that. But I think in that case again because we do not know what they know about their own survey we may not be able to determine those options. So we may again leave the question open for them so say something, so find out that naturally the majority of questions that will be coming from the opinion of the employees at the beginning will be qualitative type questions which will need qualitative type of analysis. But again some of the questions we ask customers or we did ask customers we find out that some of them can also be asked to the employees for triangulation. So we may leave these issues of the employee one at the moment. Let us deal with bank performance, because we have covered just enhancing customer experience, let talk about bank performance. We need to ask the question about what do they know about the impact (CE and DBS) on bank performance. The first question was on their opinion about the success. We may ask some specific question now about how do they think that it improves bank performance or what impact do they think it (digital banking) has on banks’ profitability. Again we may leave the question open for them, for instance, some of them may say that actually there is a high uptake of digital banking, customers are happy to use it and this is leading to a lot of ATMs being brought in to serve the customer who were initially being served by people. Over time customers now know how to use it, put their cards and banking services so that customers can do it themselves while they (bank staff) can concentrate on other more complicated bank work. They may be telling such stories, so it is better we leave them to tell us things, let them tell us other things so we can work it out thematically from NVivo analysis to fish out what they are telling us. Are you getting it?

Researcher: I think it is better they tell us because we wouldn’t know

DOS: It is better to leave it open to them to tell their story in their own words. Some of them that are more aware of digital banking, scores and evidence based quantitative metrics can be mentioning things like meeting bank financial ratio, ROI, ROE, ROA, efficiency, but not all of them will be that knowledgeable. But again make it wider, so we will be able to get enough evidence to be able to picture what is going on and then

we will compare it with the record you have already analysed in chapter 5, and this ties in nicely.

Researcher: It means looking at the research from three angles, interview, questionnaire and financial report and everything is triangulated from three corners.

DOS: So are we happy that we have been able to capture the nature of questions that is likely to happen within this first research question. We have captured their perception, and customer experience from their understanding of customer experience and contacts with them. Then we have captured what they think is the impact of digital banking on performance.

Researcher: we have captured the financial impact by asking them what they think about the financial impact of digital services.

DOS: So for me to summarise this intellectual ideas tournament on question one. We started by giving a kind of background to the work we are doing at the moment which is the ideas tournament we started with question 2, we looked at the three main themes in question 2 – perceptions of employees about digital banking services, its impact on enhancing customer experience as well as on financial performance of the bank. We have seen that this debate has enabled us to at least, more critically, look at how we should be able to approach these questions. We have also realised that we need to ask some baseline questions that will enable them to tell us their own stories, in what they know, which is what even the bank would not have asked them, and that is part of our contribution to knowledge, because banks may not have asked their staff on how they think this (digital banking) thing is working. The Bank just measures the metrics, which is ok, but sometimes you may also get other perspectives from the employees which may be useful. That is why it is research because we do not know what the result will be. Whatever it is we need to work into what we have and say what it implies for the research.

4. Discussion and Theme Identification in Research Question Three

DOS: Now we want to be able to go back to question 3 and deal with it the same way we have dealt with question 1.

Let us vocalise that question, and it is “*How do digital banking services generally affect customer experience and bank financial performance?*”

Now we need to understand who are actually supposed to be asked this question. This is customer experience now, so it is about customers, so we need to stress in the question that this is from the perspective of the customers. Just like we made it clear in the first question that it was from the perspective of the employees. Even this debate is showing us that we need to rework this question a little bit. It is not very clear of who is going to be the main focus of how digital banking generally affects financial performance. Anybody can answer that, employees can answer it, managers and customers can answer it, so we need to make it clear that it is about the customers now.

So let us put at the beginning, something like, “*from the perspective of the customers, how do digital banking services generally affect customer experience and bank financial performance? so that makes the question clearer. Are you happy with that?*”

Researcher: Yes, I am happy with that.

DOS: Are you beginning to see that without even going to ask questions, that this tournament is enabling us to refine some aspects of the framing of the research questions. That is power of this approach to research. It enables us to look at everything

again, which is very important. This is the final assessment of the validity of not only our questions on the way they are framed but also the relevance and validity of the items we are covering in the question or the interview guide, however we want use it. So let us look at the themes that come up for this question. The most important themes are the customer perspectives, so we are going to be asking this question of customers, their experience of digital banking services and financial performance. In other words, we will be asking the question of their experience, which is the key operational one. Their perspective is also their experience, but their experience is the key one. So as we are asking them a question about their experience, we are limiting it to their experience of digital banking because they have different experience within the bank and financial performance. Customers themselves may not know much about bank financial performance. It is not their business to know about that, so the main focus about the their question is how are they enjoying the service, to what extent they are taking it up, is it something they like, what amount of comfort does it give them for instance to be able to do stuff from their houses without getting about, spending their money to go to city centres. There are a lot of things we need to capture from there. And so this shows us that within financial performance here it is not for customers to answer but it is for us to gather the information on customer views and tie it in to the bank financial performance. It is important to do this type of thinking. So that the question is on their experience but it is us doing the back office work of linking that to bank financial performance, so nobody will make the mistake of asking them, what do you about bank performance and how do you think digital uptake or not is affecting financial performance, they cannot give you that information. They are not in the position to answer that. Does it make sense?

Researcher: Yes, it does.

DOS: It is very important that when you are dealing with an ideas tournament like this to be very open to changing things and understanding what you mean actually and what you are writing down. So we now know clearly that even if we brought bank financial performance into this question it is not about customers telling us that, but it is about us knowing that we are going to tie it back to our responses and results. Are we happy with that?

Researcher: Yes, I am happy with that.

DOS: Is there any comment you think you can make so far before we go on?

Researcher: I am happy with the whole thing. In the sense that, previously, I was thinking of how to measure financial performance from the customers' perspective, but now I have realised that I don't have do that. But we can tie in information from the customer, e.g. using information like CLV, NPS scores and what the literature tells us about customer loyalty and the result we have got already in chapter 5 about what the banks are telling us on the general level about percentages of uptake of online services generally, etc, at least you now have a big evidence base. So we can use it to build our model.

DOS: Exactly. Are you happy now?

Researcher: Yes, I think I am happy with it.

DOS: Are you happy that the process is helping filter out what we are going to do? So for this question, therefore the two main things we are interested in are digital banking services customers receive and the impact on their lives, so the key thing is their experience. Are they happy with it, how is it changing their lives, how is it making life easier for them or not, are they taking it up well, do they find it convenient. These are the things. That is now where we now go into the literature and use the standard measures. These things have been done before so we are not going to reinvent the wheel.

We go to Reichheld, we go to all the surveys about NPS, etc. I think you have done some of these things in the draft you provided but we intentionally kept the draft away so we do not bias this rational process. But I am sure most of things we need from the customers are mostly some of the questions you have been asking anyway in your draft or are similar.

Researcher: Yes, they are similar. I think after the tournament we shall know which ones are relevant and which ones are not. The ones that are not relevant we now remove them or add one if necessary.

DOS: Good, so that makes sense. So let me begin again to open up discussion on this. We talk about DBS, if you get a typical customer and you want to ask them something about DBS in a questionnaire for instance or in an interview supposing you are lucky to meet him face-to-face, would you think that every single customer you know or you meet will understand what DBS is?

Researcher: No, you have to give an example of DBS to tell them what it means.

DOS: So what does it mean in our instrument?

Researcher: It means we have to explain that.

DOS: We must explain what DBS are, to make sure it is clear to a customer what DBS are, because with customers sometimes there are different levels of knowledge or awareness. Their interest is just to come to be served. So we must explain, a very short explanation of what DBS means, either at the beginning of the questionnaire or somewhere at their own section where they are answering it. So that they are aware that digital banking is their ability to use ATM machine, online banking, etc, ability to digitally transfer money from their mobile, so we must give them that basic background knowledge of DBS. Are you happy with that? That is not necessarily your question but something that clarifies for them what DBS is

Researcher: An overview of DBS.

DOS: Of what is it they are being asked about. Are we happy about that?

Researcher: Yes I am.

DOS: If it is not done in your instrument at the moment, it has to be added in. Let us now say that we have done this, so that the customer now knows what DBS is. What are typical things you may want to ask a typical customer about their experience of DBS. How DBS affect their banking experience.

Researcher: I can ask a question like, how convenient is DBS to a customer or does he think DBS is convenient? Is he likely to recommend his DBS to his colleagues, friend and family. That is one of the questions to test their loyalty with DBS, banks and their satisfaction with DBS. I can also ask how useful it is for them. The ones they are using I can ask them, how user-friendly they are to them. That will test how satisfied they are with DBS.

DOS: Also how frequently do they use it compared to going straight into the bank. Because, we may want a rough measure of how frequent or relative use of DBS compared to going into a bank to be served, because that gives a better measure of their real behaviour. They may be telling you things like, we are satisfied but they may not be doing it. They may be doing it but still prefer going to their bank to be served by somebody, but they may feel that you want to measure whether they are comfortable with the technology and give you answers that suggest they are good using it and it is not bad. But the real measure is the frequency at which they access those services over time compared to walking into the bank to get served. Such a question is important. So while you still ask them those things they can tick for us according to standard questions in the customer survey, the new simplified survey based on NPS score which I think also the banks are doing, we need to capture from them the live data that measures the extent of use.

Researcher: I think I have asked that kind of question.

DOS: But we are just debating that this is the kind of question that needs to be asked. You think it is there. If it is there we can restructure. This is about knowing what needs to be there first and then framing can be looked at again. It is important that it is there. But this is the benefit of this. To have a way of measuring what is likely to be there and what is supposed to be there. The biggest error is something that ought to be there not being there. It is not necessarily being there, but also not properly worded. Being there is something but it is lesser error that it is properly framed, because even if it not properly framed, they can still give you some reasonable answers. So the biggest error is omitting something that ought to be there in the first place and that is why we are trying to do this. So I think we have got the general view on the issues about experience, comfort, convenience, frequency of use, interactive-ness. The amount of that comfort is that it saves a lot of cost to them, instead of having to travel. We can even give them the opportunity to give us narrative because sometimes narrative is even better, something or a question that compares DBS to traditional banking. This question may be at the end of the questionnaire. In fact, the same questions we asked the employees at the beginning, we can reframe it and ask similar questions to the customers, so we can compare and triangulate those. What employees think the customers told them against what the customers are now telling us about DBS compared to traditional banking so we can get a clear picture. We can ask a question like “please tell us or can you summarise for us your perceptions of your bank DBS to you or how do you enjoy your bank’s DBS? Or things like how you enjoy it, how useful is it for you, things like that, in their own words? So they can give us again another set of text that we analyse qualitatively to fish out the main themes, so we can corroborate it with the themes that are coming out from that of the employees’ perceptions. Are you happy with that?

Researcher: Yes, I am

DOS: And in terms of banks’ financial performance, we have said they cannot know much about it. This is our work to do. We can capture FP (financial performance) using the information from the customers. We have captured a lot of questions about that and I know from the kind of question we normally ask in the standard customer survey, these standard questions are already there in your draft questionnaire. But we have added a bit more questions by asking them a bit of these open questions to get the narratives of their own feelings which we must analyse qualitatively to strengthen the evidence base because most of the NPS will give us simple rough scores. We need to ask something that gives the real feeling or in-depth or richer feeling and picture from the perspective of a customer about what is going on. That can only be an advantage because it is building on what the other scores will tell us. Are you happy with that?

Researcher: Yes, I am happy with it.

5. Discussion and Theme Identification in Research Question Four

DOS: *So the next thing is to go to look at Question 3.* If we look at the themes in these questions. Do you want to vocalise it yourself, to show that you are part of this. Read out the question first.

Researcher: *How can the research results be integrated into a framework for enhancing digital banking, related customer experiences and bank financial performance, in light of such metrics as profitable growth and economic value-adds?*

DOS: So what do you think are the themes?

Researcher: Looking at that I think the themes are “framework for enhancing digital banking, customer experience and FP”

DOS: You are also trying to help yourself by trying to connect these three things, in trying to find out the nature of link on things like profitable growth or economic values, in other words these are possible ways of measuring FP. So let us put them as the fourth theme. The main things in FP are the possible metrics. We can now debate in what we think can now be better metrics. Are you happy with that?

Researcher: Yes

DOS: First of all I want to thank you for understanding this process. By being active, and after vocalising the question and easily determining with myself, what the themes are. That means you have mastered the process and I hope that in future when you supervise PhD students like I am doing now, you can adopt this process efficiently. That is the purpose of the training beyond just delivering the doctorate degree.

Researcher: I think it is a very good experience. Without this tournament I would not have looked at these questions from this perspective. It appears to be opening up our understanding of these questions.

DOS: It even shows that even when we are scholars and we are writing things, there are times the meaning of what we are writing is clearer, when we do this kind of thing. We may think that we have known all that we need to know but when we subject ourselves to this type of clinical assessment we find out the entailment of the research questions themselves, we begin to understand more of what the research is all about. I think this is the sense of what is coming out from your conclusion now.

Let us move on then, let us talk about the integrated Framework, because we are looking at an integrated framework that does something, that enhances DBS. So my view about it is that this is no longer about questioning anybody. It is about pulling out the insights from the data analysis that can lead us to building out a nice framework that can help to enhance DBS. So this is about understanding what the information means. For instance, we measured the NPS scores that are coming out from the customer responses, scoring, against the literature, e.g. Reichheld, etc. For instance, what does it mean for a score of 7, averaging 6, averaging 9 or 10. On a ten point scale, even to get an outstanding customer experience we need up to 9, between 8 and 10 for instance. It is not even wonderful for an NPS score to be coming in between 6 and 7, as that does not deliver a lot of gain. So our interest on this is to be able to filter out from our analysis, for instance, what it is that those figures mean, which we can develop in a kind of model that can enhance DBS experience and FP, even if we find out that scores are low compared with what literature is saying that is good enough to deliver a high customer experience. Then how do we get the framework to help the banks to improve on those scores, so the framework ought to be doing something to get us from A to B in infatuating superior customer service. That is what it is supposed to do, because we know that once the customer services are sound enough and NPS score is high enough. But because of correlation we have had in the past between high NPS scores and profitability, we are almost certain that that will lead to high profitability of the banks, so we need to understand what the instrument should be doing. An instrument is a tool, framework or guideline that can enable banks to improve on their customer experience and FP, be it through the so called NPS scores or through their metric of CLV, if we found out that that is good measure. We have to be open that when we are doing the real work or analysis that some metric may not be good for us. We have to change our minds and use the metrics that are meaningful for that particular moment. Because in some situations, CLV may be good in some other studies but it may not be wonderful in our own studies but we do not know at the moment. But we think it could be useful, that is why we put it in our immediate working approach. When we begin to deal with the numbers later on, if we feel sincerely that CLV may be difficult to calculate and link to

DBS we may not necessarily have to carry on with it. We have the capacity as researchers to choose to do what is right and what is practicable for us. But let us leave it there for now.

The purpose of the instrument is to be able to look at what the analysis results are telling us about those scores, about the various metrics that are linked to DBS, customer experience and profitability growth, and see how we can tweak existing practices on customer services models to actually improve the NPS scores. I think that should be the focus. If you ask me what should be the theoretical guide point or theoretical framework for dealing with this question Four. I would say we need to understand customer experience model in the literature. Because if we can get a thorough understanding of a customer experience model as a primary theoretical conceptual framework, which we agreed should be the primary one against those various models, we now see those other models. We will see how to combine those models with the new insight that comes from the data into a new model. That model cannot be completely new because it is resting on those other models but improving them. So the truth is to wrap the existing model that appears to do the work at the moment, within financial services generally, specifically with banking and use the new insight we got from our data analysis to improve those models. Whatever shape the final model that does the work comes in is now our new model and that becomes our enhanced model. That becomes our model for enhancing customer experience, so it must rest on some other models that already exist in the literature. And this is why we make customer experience the underpinning model and framework a strong primary theoretical framework to become the main agenda of this research. Are you happy with that?

Researcher: I think that is the main focus of the research. I think I am happy with that. I think we have the same understanding of what it should be.

DOS: So the truth now is that the model is now sitting as a mediator on all the results we have on customer experience analysis, the opinion of the employees, the opinions of customers and all the literature that comes from the theoretical literature review itself – the critical literature reviews. All of them are contributing evidence to the model. It is not just data analysis, the critical literature review itself is throwing light on the models. Data from customer experience that we have analysed is also throwing light on the model. The experience of the employees and what they tell us is also coming into the model and also closing out all the important avenues or pathways in understanding what is going on in customer services and also on the impact from the analysis on the profitability of the banks is also coming into it. So the model we should be building will be coming from a multi-focal perspectives, covering 1) customer experience, detailed insight from our analysis, 2) the critical literature and what it contributes. Of course, the literature will contribute mainly on theoretical or conceptual modelling. So we need to go into the literature in-depth and fish out every ‘manner of animal’ literature in the zoo of customer experience model, and look at them thoroughly and choose the best ones that have been recommended by the experts in customer experience for studying or doing customer experience modelling. Some of them may be linked to Customer Relationship Modelling, some of them may be linked to customer retention, CLV, some of them may be qualitative models of just diagrams that describe how things are communicated. The important thing is that we do a thorough critical literature review of those models themselves. Because it is one or two of them that will stand out as the best one to be combined with this evidence that is coming from the customer experience, from Bank FP analysis, literature on banks’ financial performance, on their activity

online as well as the approaches the banks use for modelling economic value adds, in order to build the model.

That reminds us that in the research, banks' financial management will be one focus of the study. We need to look at the banks financial management itself as related to profitable growth, economic value-adds and various metrics that banks normally use to measure performance that come from financial accounting and all the literature on financial management. If it is not reflected that way in the work, we are going to put it there. It is very important. Because we are not doing for every aspect of banking operations, it is for the online or DBS aspects. That's the point we are making. Because if we go to the literature of bank FP and FM you will find out that there is a lot of work already done on this but it will be about other banking, investment, wealth management, etc. There may not have been specific or in-depth research on banks' FM linked to DBS and that is the main work we are doing. So the two main things we are doing are to bring out the critical thinking on banks' financial performance linked to DBS and customer services and building out a final model for enhancing banks FP. Are we happy with that?

Researcher: Yes, I am

6. Summary

Researcher: I think we have actually covered every aspect of this work.

DOS: This ideas tournament is now coming to an end because we have fairly nailed it. However, we find out that it still has to be distilled for value. Because all it is that our views are now taped or recorded, but we need to transcribe it into a document. That document will then be the basis for checking on whether the questions we have already asked are relevant to the research. That document when it is properly transcribed goes into the thesis as a methodological knowledge – a contribution to knowledge and one of the key contributions to knowledge of the research but from the methodological point of view for designing questions or questionnaire. That is your own contribution to knowledge now. Even before you start analysis, this approach is already novel. Therefore, it goes in as a way of checking the results. So the full transcript is now put in the Appendix, just as you put the data from text from the banks. It will show how the transcript has helped us to correct or redraft or modify the questions in this drafted questionnaire. We are going to put the draft questionnaire in the Appendix. We are going to redraft the questionnaire in the normal way a questionnaire should be drafted with all the preambles – beginning and ending, etc. Then put the questionnaire that is the corrected version that comes after the experience of this ideas tournament so that one sees the dynamics of how your instrument building was carefully handled. For instance, first the draft which came out after your literature work, and then the ideas tournament that debated thoroughly what needs to come in, then the modification of that draft that the tournament led to. It has to now show itself in the thesis.

That is how the thesis is going to be done. I think we are happy with that.

Researcher: Yes, I am happy.

DOS: The next thing for us now is to go quickly on some of these questions and compare with new information that comes from ideas tournament. That comes to end of ideas tournament.

APPENDIX D – Template for Bank Employees’ Interview

Thank you for participating in the interview. This is much appreciated. The interview includes questions about your perceptions about digital banking services, e.g. Telephone banking, Mobile banking and Internet banking. This is the ability to carry out banking transactions online without going to a bank branch. It is part of a PhD research at Sheffield Hallam University, UK on the relationship between digital banking, customer experience and bank financial performance. There are no right or wrong answers to the questions, just answer them as honestly as possible. Your name and financial details are NOT required. You are not obliged to answer any question you are not comfortable with, and you can draw from the interview at anytime. The interview is expected to last for approximately an hour. Below is an outline of the proposed interview questions

Themes covered in the interview: Employees’ Perceptions of digital banking, and Digital banking impact on Customer Experience and Financial performance, e.g. Profitability

	Bio Data
1	What is your Job Title?
2	What is your Department?
3	What is your Length of Service with the organisation?
	Digital banking services in the banks
4	What type of digital banking services channels do you provide to your customers?
	Type of Financial services
5	What type of financial services do you think digital banking can be used for? And why?
	Customer Experience / Satisfaction
6	How do you think digital banking is enhancing your bank’s overall customer experience? Follow on and probing questions, e.g. explain more on point. How interactive, convenient, useful is your digital banking for customers? And why? What needs to be done as the case may be.
7	How do you think your bank is meeting customer requirements through digital banking? Follow on and probing questions, e.g. explain more on point. Why? Can you give an example? What needs to be done if necessary?
8	In your experience, how would you describe the customer’s views about digital banking services, for example through service contact with customers whether directly or indirectly or through what you know about customer experience? Follow on and probing questions, e.g., what customer may be thinking they are gaining from it, whether it is services they prefer or like using, compared to being served by staff? What has been the testament from the customers that you are aware of, that they have been making about digital banking?
	Loyalty / Performance
9	How do you think that digital banking can improve bank performance or what impact do you think digital banking has on the banks profitability? Follow on and probing questions, e.g., in what way, can you give an example and explain more as the case may be.
10	How do you think digital banking can help your bank capture and retain customers? Follow on and probing questions, e.g. in what way, can you give an example? Explain more on point, as the case may be.

11	Based on your perceptions of your bank's digital banking, how likely is it that you would recommend your bank's digital banking services to a friend or colleague, on a scale of 0 to 10? And why?
12	If you were to recommend improvements to your bank's digital banking experience what would it be to make you give the highest rating? And Why?
	Employee Perceptions
13	What are your perceptions about the digital banking services this bank offers to your customers? Follow on and probing questions, e.g., how fit for purpose are they for customers compared to traditional banking? Can you give an example, or explain on point?
14	What type of experience do your customers have with your digital banking? Follow on and probing questions, e.g. why? Do customers enjoy using them? Can you give an example?
15	To what extent are you satisfied with the prospects of digital banking services that this bank is providing to customers?
16	How would you rate your bank's digital banking in terms of offering good experience and satisfaction to customers? And why?
17	How does your digital banking service compare with your competitors? Follow on and probing questions, e.g. why? Where do you rate your digital services compared to others? Do you think you are doing what others are not doing or vice versa? Can you give an example?
18	How satisfied are your customers with your digital banking? Follow on and probing questions, e.g. Do you conduct customer satisfaction survey, like NPS? If so, what are the scores?
y	Trend on Digital Banking within the Bank
19	What is your general view about the development of digital banking within the bank in the last few years? Follow on and probing questions, e.g., do you think your customers enjoy them? What is the trend on the acceptance of digital banking among your customers?
20	What do you think about your digital banking strategies? Follow on and probing questions, e.g. do you think it offer customer the right digital banking services? what is the nature of the bank's investment and R&D in digital innovation? Can you give an example?
	Customer Experience / Operational Risks
21	How safe do you think digital banking services are? Follow on and probing questions, e.g. what do you think fraud, security, reliability, cyber-attack, etc.? Can you give an example?
	Employee-Customer Engagement
22	How do you engage customers in the impact of digital banking on customer experience, when implementing digital banking services? Follow on and probing questions, e.g. is it necessary and why? How do you ensure staff have the relevant knowledge about digital banking?

APPENDIX E – Sample E-Mail Containing link to the Questionnaire

From: Mbama, Cajetan

Sent: 10 November 2015 15:55

Subject: Research Survey

Dear all,

A BOS survey has been created for you to complete.

The survey is from Cajetan Mbama. This is part of a PhD research at Sheffield Hallam University, UK on digital banking, customer experience and bank financial performance.

Please click on the following link and complete the questionnaire for me, which will take about 10 minutes.

https://shu.onlinesurveys.ac.uk/digital_banking_survey

Thank you for participating in the survey.

This is much appreciated.

Please remember to do this in your private time.

Many thanks

Cajetan

APPENDIX F - Questionnaire distributed to Bank Customers

Thank you for participating in the survey. This is much appreciated. The survey includes questions about your experience with digital banking services, e.g. Telephone banking, Internet banking and Mobile banking. This is the ability to carry out banking transactions online without going to a bank branch. It is part of a PhD research at Sheffield Hallam University, UK on the relationship between digital banking, customer experience and bank financial performance. There are no right or wrong answers to the questions, just answer them as honestly as possible, by ticking the box. The answers are completely anonymous and cannot be linked to you or your bank. Your name and financial details are NOT required. Where the questions have a scale, they are ranked on a 5-point Likert scale, with the exception of one question which uses an 11 point scale.

If you would like to know about the findings please contact me at: C.Mbama@ntlworld.com

Themes covered in the interview: Customer Perceptions of digital banking services and impact of Digital banking on Customer Experience and Financial Performance, e.g. profitability

	Digital services in the Banks					
1	What type of digital banking do you use? Please tick as many as applicable. If you selected other please specify:	t-banking	e-banking	m-banking	other	
	Type of financial services	Please tick as many services as applicable				
2	What services do you use digital banking for? If you selected other please specify:	Savings	Check Balance	Pay Bills	Print Statement	
		Transfer Funds	Standing Order	Current Account	Buy Insurance	
		Stock/Shares	Direct Debit	Mortgages	Other:	
	To what extent do you agree with the following statements?	Rated on a five-point Likert scale, where 5 = 'strongly agree', 4 = 'agree', 3 = 'neutral', 2 = 'disagree' and 1 = 'strongly disagree', % Response				
	Questions	5	4	3	2	1
	Customer Perceptions on Digital banking					
3	With Digital banking, access to banking services is quicker.	75.20	22.80	1.50	0.00	0.50
4	Digital banking saves me time from banking in branches.	76.70	20.90	1.50	0.00	1.00
5	Digital banking services are convenient to me.	73.30	25.20	0.50	0.00	1.00
6	I enjoy using digital banking services.	51.50	34.00	12.60	1.50	0.50

7	I am able to bank from the comfort of my home, with digital banking.	74.30	22.30	2.90	0.50	0.00
8	Digital banking saves me money as I don't have to travel to the branch.	40.80	31.10	20.90	5.80	1.50
9	My bank's current digital banking is easy to use.	34.70	47.10	5.30	2.90	1.00
10	My bank creates innovative digital banking services that make life easy for me.	28.60	48.10	18.00	3.90	1.50
11	My bank makes it easy for me to do business with it online.	31.60	52.40	13.10	1.50	1.50
12	My bank makes it easy me to search for and buy products using their digital banking.	19.40	33.50	38.30	7.80	1.00
13	High quality online interactive support is important in digital banking.	41.30	39.80	17.00	1.50	0.50
	Customer Experience / Satisfaction					
14	I am happy with the overall customer experience received through my bank's digital banking services.	34.00	54.90	6.80	2.90	1.50
15	I am likely to continue to purchase products through my bank's digital banking services	24.30	44.70	23.30	5.80	1.90
16	My bank understands my requirements through digital banking.	13.60	43.20	33.00	8.30	1.90
17	My bank's digital banking services are user-friendly.	29.60	58.30	9.20	2.40	0.50
18	My bank's digital banking services are easy to navigate.	28.20	57.80	12.10	1.00	1.00
19	The online information provided by my bank is clear.	24.30	57.80	14.10	2.90	1.00
20	I am satisfied with the overall quality of digital banking services from my bank.	26.20	60.20	9.70	2.40	1.50
21	My bank meets my digital banking service expectations.	28.60	56.80	10.70	2.40	1.50
22	The digital banking services are sufficient for my requirements.	33.50	51.00	8.70	5.80	1.00
	Loyalty / Financial Performance tie in					
23	I am likely to recommend my bank's digital banking services to a friend or colleague.	30.60	47.60	17.50	3.40	1.00
24	My bank deserves my loyalty via digital banking.	18.00	35.90	31.60	10.20	4.40

25	My bank provides excellence financial services through digital banking.	17.00	44.70	32.00	4.90	1.50
26	I will use my bank's digital banking again because the interface is simple.	33.50	52.90	9.70	2.40	1.50
	Customer experience / Operational Risks					
27	My bank's digital banking services are completely reliable.	20.40	46.60	22.80	8.30	1.90
28	My bank's digital banking services are cyber risk free.	8.70	20.40	44.70	18.90	7.30
29	My bank's digital banking services are secure.	14.10	42.70	33.50	8.70	1.00
30	My bank protects me from digital banking fraud.	15.00	52.40	26.70	5.30	0.50
	Staff					
31	Bank staff should engage with customers during the implementation of digital banking applications to know their requirements.	30.10	57.80	9.70	1.90	0.50
	Customer Experience / Trust in Brand / Differentiation					
32	Brand is important to me when it comes to digital banking	15.50	36.90	28.60	13.60	5.30
33	If I am selecting digital banking for the first time, I would still choose my bank's digital banking.	17.00	43.70	31.60	6.80	1.00
34	My bank's digital banking services are trustworthy.	14.10	61.70	21.80	1.90	0.50
35	I would rate my bank's digital banking services very highly.	21.40	58.70	15.00	4.40	0.50
36	My bank's digital banking services are useful to me.	44.20	52.90	1.00	0.50	1.50
	Customer Experience / Trend on digital banking					
37	Digital banking services have grown within my bank in the last few years.	34.50	46.50	16.50	1.90	0.5
38	My confidence towards digital banking has improved in the last few years.	22.30	50.00	21.80	4.90	1.00
39	I am using more digital banking than bank branches these days	65.50	25.20	3.90	3.40	1.90
Bio Data						
40	How long have been using digital services	Less than 1 year	1 to 5 years	6 to 10 years	11 + years	
41	How often do you use digital	Daily	Weekly	Fortnightl	Mon	

	banking?				y	-thly						
42	Which financial organisation do you do most of your digital banking services with? If you selected other please specify:	Lloyds / Halifax	Nat West/ RBS	HSBC	Barclays	Santander	Virgin Money	Other				
43	How long have you been with your bank?	Less than 1 year	1 to 5 years	6 to 10 years			11 + years					
Use the scales to rank the question that follows (NPS) Question												
	0	1	2	3	4	5	6	7	8	9	10	
	0 to 6				7 to 8			9 to 10				
	20.87				41.26			37.86				
	The NPS ranges ((Detractors (15.29 to 17.49); Passives (34.63 to 38.73) and Promoters (32.68 to 36.93) for the 6 banks.											
	The financial ratio ranges (ROE (22.86 to 26.96); NIM (6.04 to 6.84) and Cost-to-Income ratio (152.58 to 170.65)) for 3 years.											
44	Based on your experience with digital banking, how likely is it that you would recommend your bank's digital banking services to a friend or colleague? Mark on a scale of 0 to 10.											
45	What is your gender?	Male		Female								
46	What is your age?	15 - 24		25 - 34		35 - 45		46 - 55		56 - 65		66 +
47	What is your level of education?	O Level / GCSE				College level			University level			
48	If you were to recommend improvements to your bank's digital banking experience what would it be?	(please specify in a short sentence)										
Customer perceptions												
49	Please can you summarise your perceptions of your bank's digital banking services, for instance, how do you enjoy them compared to going to the branches?	(please specify in a short sentence)										

APPENDIX G - Distribution of Respondents Answers to Questionnaire

	t-value	p-value	Mean	Median	Mode	SD
With digital banking, access to banking services is quicker.	126.12	0.000	4.72	5.00	5	0.54
Digital banking saves me time from banking in branches.	115.01	0.000	4.72	5.00	5	0.59
Digital banking services are convenient to me.	115.97	0.000	4.70	5.00	5	0.58
I enjoy using digital banking services.	78.75	0.000	4.34	5.00	5	0.79
I am able to bank from the comfort of my home, with digital banking.	117.68	0.000	4.70	5.00	5	0.57
Digital banking saves me money as I don't have to travel to the branch.	58.44	0.000	4.04	4.00	5	0.99
My bank's current digital banking is easy to use.	78.98	0.000	4.30	4.00	4	0.78
My bank creates innovative digital banking services that make life easy for me.	65.79	0.000	3.99	4.00	4	0.87
My bank makes it easy for me to do business with it online.	74.56	0.000	4.11	4.00	4	0.79
My bank makes it easy for me to search for and buy products using their digital banking.	56.78	0.000	3.63	4.00	3	0.92
High quality online interactive support is important in digital banking.	74.87	0.000	4.20	4.00	5	0.81
I am happy with the overall customer experience received through my bank's digital banking services.	75.43	0.000	4.17	4.00	4	0.79
I am likely to continue to purchase products through my bank's digital banking services.	59.34	0.000	3.83	4.00	4	0.93
My bank understands my requirements through digital banking.	57.47	0.000	3.58	4.00	4	0.90
My bank's digital banking services are user-friendly.	83.08	0.000	4.14	4.00	4	0.72
My bank's digital banking services are easy to navigate.	81.90	0.000	4.11	4.00	4	0.72
The online information provided by my bank is clear.	75.01	0.000	4.01	4.00	4	0.77
I am satisfied with the overall quality of digital banking services from my bank.	76.43	0.000	4.07	4.00	4	0.77
My bank meets my digital banking service expectations.	74.70	0.000	4.09	4.00	4	0.79

My bank's digital banking services are sufficient for my requirements.	68.63	0.000	4.10	4.00	4	0.86
I am likely to recommend my bank's digital banking services to a friend or colleague.	68.90	0.000	4.03	4.00	4	0.84
My bank deserves my loyalty via digital banking.	48.75	0.000	3.53	4.00	4	1.04
My bank provides excellent financial services through digital banking.	62.12	0.000	3.71	4.00	4	0.86
I will use my bank's digital banking again because the interface is simple.	74.25	0.000	4.15	4.00	4	0.80
My bank's digital banking services are completely reliable.	57.42	0.000	3.75	4.00	4	0.94
My bank's digital banking services are cyber risk free.	42.90	0.000	3.04	3.00	3	1.02
My bank's digital banking services are secure.	59.39	0.000	3.60	4.00	4	0.87
My bank protects me from digital banking fraud.	68.51	0.000	3.76	4.00	4	0.79
Bank employees should engage with customers about digital banking services to understand their requirements.	84.31	0.000	4.15	4.00	4	0.71
Brand is important to me when it comes to digital banking.	45.91	0.000	3.44	4.00	4	1.07
If I were selecting digital banking for the first time, I would still choose my bank's digital banking.	61.07	0.000	3.69	4.00	4	0.87
My bank's digital banking services are trustworthy.	81.37	0.000	3.87	4.00	4	0.68
I would rate my bank's digital banking services very highly.	74.41	0.000	3.96	4.00	4	0.76
My bank's digital banking services are useful to me.	92.58	0.000	4.38	4.00	4	0.68
Digital banking services have grown within my bank in the last few years.	75.33	0.000	4.13	4.00	4	0.79
My confidence towards digital banking has improved in the last few years.	65.97	0.000	3.88	4.00	4	0.84
I am using more digital banking than going to bank branches these days.	73.53	0.000	4.49	5.00	5	0.88
Based on your experience with digital banking, how likely is it that you would recommend your bank's digital banking services to a friend or colleague? Mark on a scale of 0 to 10.	52.91	0.000	7.79	8.00	8	2.11
Note: n=206, df = 205	Minimum 1 and Maximum 5, Range 4					
*p<0.05, **p<0.01						

Table 1: Distribution of Respondents Answers to Questions.

APPENDIX H – Published Work and Articles

1) Email Confirming Acceptance of Paper for Publication at the International Journal of Bank Marketing

On 28 March 2017 at 20:30 International Journal of Bank Marketingn<onbehalfof+estelami+fordham.edu@manuscriptcentral.com> wrote:

28-Mar-2017

Dear Mr. Mbama:

It is a pleasure to accept your manuscript entitled "Digital Banking, Customer Experience and Bank Financial Performance: UK Customers' Perceptions" in its current form for publication in International Journal of Bank Marketing. The comments of the reviewer(s) who reviewed your manuscript are included at the foot of this letter.

By publishing in this journal, your work will benefit from Emerald EarlyCite. This is a pre-publication service which allows your paper to be published online earlier, and so read by users and, potentially, cited earlier.

Please go to your Author Centre at <https://mc.manuscriptcentral.com/ijbm> (Manuscripts with Decisions for the submitting author or Manuscripts I have co-authored for all listed co-authors) to complete the copyright assignment form. We cannot publish your paper without this. All authors are requested to complete the form and to input their full contact details. If any of the contact information is incorrect you can update it by clicking on your name at the top right of the screen. Please note that this must be done prior to you submitting your copyright form. If you would like more information about Emerald's copyright policy, please visit the Information & Forms section in your Author Centre.

If you have an ORCID please check your account details to ensure that your ORCID is validated.

FOR OPEN ACCESS AUTHORS: Please note if you have indicated that you would like to publish your article as Open Access via Emerald's Gold Open Access route, you are required to complete a Creative Commons Attribution Licence - CCBY 4.0 (in place of the standard copyright assignment form referenced above). You will receive a follow up email within the next 30 days with a link to the CCBY licence and information regarding payment of the Article Processing Charge. If you have indicated that you might be eligible for a prepaid APC voucher, you will also be informed at this point if a voucher is available to you (for more information on APC vouchers please see <http://www.emeraldpublishing.com/oapartnerships>

Thank you for your contribution. On behalf of the Editors of International Journal of Bank Marketing, we look forward to your continued contributions to the Journal.

Sincerely,
Prof. Hooman Estelami
Editor, International Journal of Bank Marketing

2) Email Confirming submission of Paper to the Journal of Research in Interactive Marketing

On 31 January 2018 at 21:41, Journal of Research in Interactive Marketing <onbehalf@manuscriptcentral.com> wrote:

31-Jan-2018

Dear Mr. Mbama:

Your manuscript entitled "Digital Banking, Customer Experience and Financial Performance: UK Bank Managers' Perceptions" has been successfully submitted online and is presently being given full consideration for publication in Journal of Research in Interactive Marketing.

Your manuscript ID is JRIM-01-2018-0026.

Please mention the above manuscript ID in all future correspondence or when calling the office for questions. If there are any changes in your street address or e-mail address, please log in to ScholarOne Manuscripts at <https://mc.manuscriptcentral.com/jrim> and edit your user information as appropriate.

You can also view the status of your manuscript at any time by checking your Author Centre after logging in to <https://mc.manuscriptcentral.com/jrim>.

Thank you for submitting your manuscript to Journal of Research in Interactive Marketing.

Yours Sincerely,

Prof. John Schibrowsky

Journal of Research in Interactive Marketing Editorial Office

3) Title: Modelling the Effect of Digital Banking Services on Customer Experience and Financial Performance in UK banks, Accepted for Presentation at the MERI Research Symposium Proceedings, UK

4) Title: Digital Services Innovation, Customer Experience and Financial Performance

Acceptance Letter:

UNIVERSITY OF IBADAN, IBADAN, NIGERIA
DEPARTMENT OF MATHEMATICS

G.O.S. EKHAGUERE, PhD, DIC (London) , FAAS
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C.MBAMA AND P. O. EZEPUE,
Sheffield Hallam University,
Sheffield, UK

August 3, 2015

Dear C. Mbama and P. O. Ezepe,

ACCEPTANCE OF PAPER FOR PRESENTATION

I am pleased to inform you that your paper entitled: *Digital Services Innovation, Customer Experience and Bank Financial Performance* has been accepted for presentation at the *International Symposium on Mathematical and Statistical Finance*, which will take place from September 1-3, 2015, at the Conference Centre, University of Ibadan, Ibadan, Oyo State, Nigeria.

I look forward to meeting you at the Symposium.

Yours sincerely,
Professor G O S EKHAGUERE, *FAAS*