

INDIVIDUAL USE OF ENTERPRISE MOBILITY APPLICATION SYSTEMS IN A BANKING ENVIRONMENT

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ABSTRACT

Advances in mobile technology, coupled with the explosive growth in the use of mobile devices, have seen the birth of a new organisational technology trend termed Enterprise Mobility. Enterprise mobility is where employees can work from any location other than their offices. Mobile technology use is potentially changing people's everyday tasks and freeing individuals from tethered systems such as desktop computers. Nevertheless, the Information System (IS) field has witnessed the use and non-use of organisational technologies which has led many researchers seeking to understand what influences employees to use or not use the innovated technologies.

Purpose: *The study sought to describe the use of enterprise mobility application systems by individual employees in a banking environment through the theoretical lens of Task-Technology Fit (TTF) model. The goal was to determine the appropriateness and fit of enterprise mobility technologies to employees' tasks, in the context of a South African banking environment.*

Design/Methodology/Approach: *This is a descriptive case study following an interpretive philosophy and using a qualitative research approach. Semi-structured one-on-one interviews were administered with study participants at their offices, in a South African bank.*

Originality/Value: *The study describes what influences the use of enterprise mobility. That is, the study extends enterprise mobility body of knowledge in the context of a banking environment. It informs practitioners with factors that may influence use and non-use of enterprise mobility application systems.*

Findings in Summary: *Through the lenses of TTF theoretical framework the study findings reveal that, to influence individual use of enterprise mobility applications systems there should be harmony between the tasks at hand and the technologies used. The study shows that for the enterprise mobility technologies to be used, banking organisations should look on improving the underlying technology capabilities so that they are scalable to accommodate the changing user tasks requirements. The study further shows that, organisations should strike a balance between enterprise mobility and working in the office so that the essence of human interaction is not completely lost.*

Key Terms: *Enterprise Mobility, Mobile ICT, Technology Use, Mobile Device, Banking, Task-Technology Fit.*

CHAPTER ONE (1)

INTRODUCTION AND BACKGROUND

1.1 Introduction

This research report is about what influences individuals to use or not use enterprise mobility application systems. The context of use is in a South African banking environment.

Mobility has changed the underlying Information and Communication Technology (ICT) where it provides convenience and flexibility in executing daily activities (Abrahao, Moriguchi & Andrade 2016). Increased mobile functionality has seen the rise in mobile usage with 86% of the world's population estimated to be mobile users (Alqahtani, Atkins & Stainer 2015). The rise of mobile devices and wireless networks has changed the underlying technology for creating a conducive environment that enables mobility (Basole 2007). Mobile technologies free people from tethered systems such as landline telephones and desktops by giving them ubiquitous access to information and people (Junglas, Abraham & Watson 2008; Ortbach, Brockmann & Stieglitz 2014).

Utilisation of mobile ICT

Worldwide utilisation of mobile ICT has been observed in the consumer world and for the past two decades, the mobile ICT utilisation trend has started filtering into the corporate world (Maree, Strydom & Matthee 2014). Mobile technology has the potential of significantly transforming businesses to greater opportunities by improving working practices and performance of individual employees (Alqahtani *et al.* 2015; Wang, Lin, Zhu & Chen 2015). The way people work, communicate and collaborate has been changed by the explosive growth and use of mobile devices (Basole 2007). This mobile ICT utilisation by employees in the corporate world has been termed Enterprise Mobility (Basole 2007). Enterprise mobility describes a technological trend where employees use mobile devices to do work tasks through network connections platforms and enterprise applications. This worldwide trend has brought about a paradigm shift in performing daily work tasks as it provides more flexibility and convenience in carrying work-related tasks from anywhere and at any time (Basole 2007).

The birth of enterprise mobility trend has witnessed notable discourses worldwide amongst practitioners advocating its adoption. Adopting enterprise mobility can improve organisational performance and profitability (Basole 2007). While the potential to increase efficiency and effectiveness is noted, however, if the developed technologies are not utilised organisational performance cannot be improved (Davis, Bagozzi & Warshaw 1989). With organisations investing in new technologies, such as enterprise mobility application systems, there is need to understand what influences people to use technology as lack of utilization can hinder the success of new technologies (Davis *et al.* 1989). Further, organisational productivity may be hindered when users reject and do not use technologies that are innovated by organisations (Venkatesh, Morris, Davis & Davis 2003).

Existing literature suggests that users would resist using the technology if the perception of the invested technology by the user is negative (Joshi 1991). It was, therefore, the intention of this study to seek an understanding of what influences use and non-use of enterprise mobility applications in a banking environment. Through the theoretical lens of Task-Technology Fit, this study sought to understand the appropriateness and fit of enterprise mobility technologies to employees' tasks in a banking environment.

Chapter Introduction

This chapter introduces the research and provides a background to the study and the purpose of the study. The chapter is outlined as follows; firstly, the chapter provides a background to the Enterprise Mobility phenomenon. This is followed by a background to the research problem. This background gives the study context and location, with a discussion of challenges observed at the study location. Thereafter, the identified knowledge gaps are articulated. The problem statement is then stated. Subsequently, the goal and purpose of the study is presented stating the central research question and the sub-questions. Then, the delimitations of the study are stipulated followed by the contributions of the study. The chapter closes with an outline of the rest of the research report.

1.2 Background to the Field of Study

This section introduces the field studied by defining the key terms which make up the research topic.

Enterprise Mobility: Within this study, enterprise mobility refers to an organization that provides employees access to enterprise application systems through use of mobile devices like tablets and laptops to perform work tasks from any location (Stieglitz & Brockmann 2012; Basole 2007). Employees can access and share all needed information with colleagues or customers using mobile devices, network connections and enterprise applications without the constraints of location and time.

Mobile ICT: refers to technologies that enable people access to information and communication without being constrained by the physical location, using mobile devices (Zuppo 2012). For the purposes of this study, mobile ICT is broader than just employee use of enterprise mobility technologies but encompasses all ICT mobility - be it at personal, social, customer-centric and employee-centric levels.

Technology Use: According to Cambridge English dictionary, use is defined as *“to put something such as a tool, skill or building to a particular purpose”*. Utilise is defined as *“to use something in an effective way”*. In this study, use refers to putting enterprise mobility technologies into use or effective use. The study focuses on technology use, and the term *use* and *utilisation* shall be used interchangeably.

Mobile Device: In today's life, mobile devices have become powerful aids offering solutions in our daily task demands be it personal or work-related (Botzenhardt, Li & Maedche 2016). Mobile devices have led to ubiquitous accessibility of information where employees are freed from fixed workstations and becoming mobile (Chung, Lee & Kim 2014). Market research predictions for 2016 estimated that 350 million people use mobile devices for business purposes, with suggestions of new business benefits (Stieglitz & Brockmann 2012; Chung *et al.* 2014).

Banking: is characterised as an information intensive sector, and the role of information technology is crucial (Al-Jabri & Sohail 2012). The banking industry has been revolutionized with technological advancements and is undergoing a radical transformation due to technology innovative business thinking (Dapp 2015). In South Africa, the banking industry is not spared to this worldwide strategic drive to transform all enterprise business divisions into 'going digital' as business processes are changing, partly due to the growth of mobile devices.

The sections below give context to Mobile ICT and Enterprise Mobility which are the back-bone terms for the field of study.

1.2.1 What is Mobile ICT?

In information systems (IS) literature, the concept of mobility is widely used and is described in different ways in association with information and communication technology (ICT). In the past, computer users travelled to computer physical sites to access and use computing services (Lyytinen & Yoo 2002). For example, people used and some currently still do go to Internet cafés to check emails and other services. However, all this is changing due to mobility of ICTs, where services are coming to the users through multiple devices and different sites whenever and wherever they are needed (Lyytinen & Yoo 2002).

In mobility stream, the phenomenon of ICT mobility in general, is more associated to its design, functionality and use (Basole 2005). ICT mobility pertains to access to information anytime and anyplace and draws its knowledge from the IS, computer science and human computer science streams (Perry 2001; Basole 2005). There is no consensus on the proper term for ICT mobility, with terms such as mobile ICT, mobile technology, mobile computing, and mobility being used interchangeably (Zhang & Yuan 2002; Basole 2007). For consistency, the term mobile ICT will be used in this study.

1.2.2 What is Enterprise Mobility?

Organisations are facing global competitive pressures to work around the clock. The work is often enabled by mobile ICT, which has become a regular phenomenon. Increased growth in consumerisation of mobile technology has brought an influence on strategic planning of many organisations (Stieglitz & Brockmann 2012; Rowsell-Jones & Gomolski 2011; Brand, Renen & Rudman 2015). Strategic planning associated with mobile ICT has been a significant discourse in the practitioner and academia fields (Basole 2007). The birth of mobile enterprise applications has seen many organisations extending their existing business applications to the mobile domain (Basole 2008). With the growth in ubiquitous access to data, organisations now require moving to mobile enterprises so that they can gain and sustain competitive advantages. Mobile enterprise has the potential to significantly transform enterprises by improving productivity, growth opportunities, and competitiveness (Alqahtani *et al.* 2015; Dapp 2015). Organisations are incorporating use of mobile ICT in their strategic planning to improve efficiency,

effectiveness, and convenience in their business operations (Basole 2004; Dapp 2015). The value propositions of mobile ICT are illustrated below:

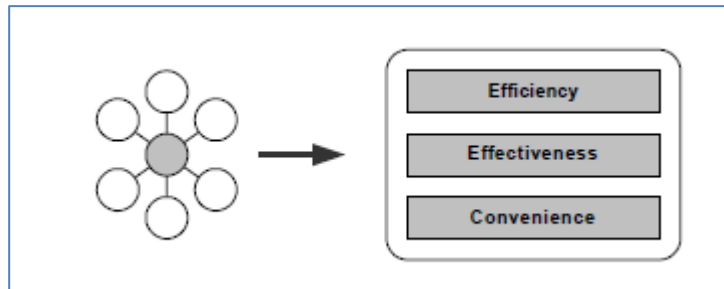


Figure 1: Value propositions of mobile ICT

Source: Basole (2004)

The adoption of mobile ICTs by enterprises to enable employees to perform work related tasks from anywhere anytime has been referenced with many terms such as enterprise mobility, mobile enterprise, mobile business, mobile ICT, and mobile enterprise systems (MES). In this study, the term 'enterprise mobility' will be adopted for consistency, to reference the utilisation of mobile ICTs by individuals to perform work related tasks without the constraints of location and time. As Basole (2007) reiterates, enterprise mobility cannot be perceived simply as a group of employees with various mobile devices and pagers – this does not constitute a mobile enterprise. For enterprise mobility, the emphasis incorporates mobile devices, network connections and enterprise applications.

Having introduced the field of study, the next section provides the background of the research problem.

1.3 Background to the Research Problem

This section provides a background to the research problem by detailing the study context and location, discussing the challenges observed at the location of study, and identifying knowledge gaps to be bridged by the study.

1.3.1 Study Context and Location (Banking Environment)

A bank is a financial institution authorised by government to provide services such as cash deposits and loans. The banking industry is a subcategory of the financial services sector. Financial banks comprise of investment, merchant and retail banking. In the Republic of South Africa (RSA), the banking sector is well developed and effectively regulated, and it comprises of the Central Reserve Bank and several financial banks. In the Global Competitiveness Survey of the World Economic Forum 2015/2016, the RSA banking sector ranked 8th out of 140 countries. As of 2014, the RSA banking industry had 17 registered banks. The statistical summary of the RSA banking sector is presented by Figure 2. below:

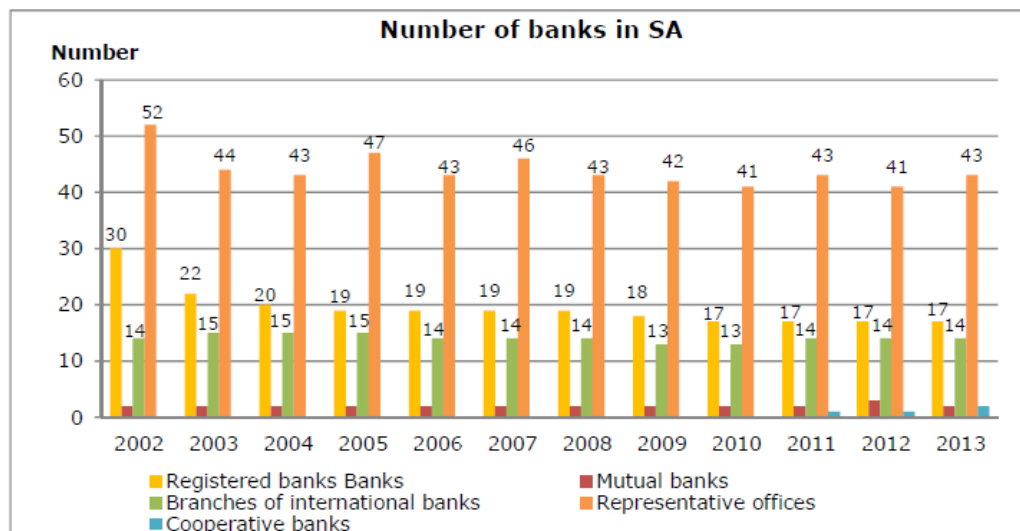


Figure 2: Banks in Republic of South Africa

Source: SA Reserve Bank: SOUTH AFRICAN BANKING SECTOR OVERVIEW 2014

In the study, a banking environment signifies any work, tasks and people engaged in doing their routine bank employment activities. The activities may happen while at the bank offices, branches or outside the office premises such as working at home or anywhere. Different roles and positions exist in the RSA bank environment to facilitate the process of providing banking services to customers. Of the estimated 160 000 bank employees in RSA, 61% are based in Gauteng province. Most of the roles and positions can be summarised in Figure 3. below;

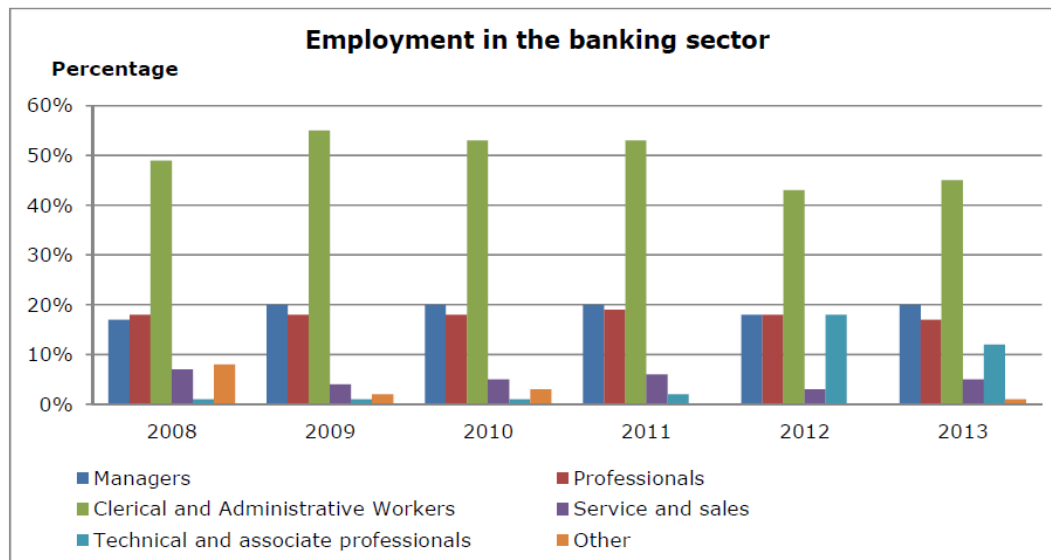


Figure 3: Employment in RSA banking sector

Source: BankSETA SSP 2013: SOUTH AFRICAN BANKING SECTOR OVERVIEW 2014

From the above, while some job roles such as technical professionals are not mostly constrained with location and time to conduct work, others such as service and sales are location and time constrained as there is a need to interact with customers face-to-face and the interaction happens within normal working hours.

Location of study (South Africa Bank)

This study was conducted in Johannesburg, South Africa, at the location of one of the four leading South African bank. The bank provides retail and corporate banking services to millions of customers in South Africa. For purposes of confidentiality, the bank has chosen to participate anonymously. The bank henceforth, is referenced to as *Data Bank* (pseudonym).

1.3.2 Challenges Observed at Study Location

Literature has suggested that organisations should consider enterprise mobility in their strategic planning (Basole 2008; Dapp 2015). In line with the bank's strategic drive, not to confine employees to office premises, *Data Bank* has started adopting enterprise mobility where employees can now carry work tasks from anywhere anytime. The use of enterprise mobility applications systems in the bank is still in its infancy and not fully utilised. It was observed, that use of enterprise mobility is currently

applied as an extension or back-up to the 'normal' working environment when the need to perform work-related task arises. Such needs include arrangement with line managers, being constrained to reach office premises, being on standby support duties, being off duty and there is work request, when business continuity planning (BCPs) is invoked for employees to work away from the business site, and when employees need to improve productivity and decides to work from home.

The observed partial implementation of enterprise mobility could give rise to demotivate employees to use the technologies as they are still expected to work normal working hours (8am-5pm jobs) but then use enterprise mobility technologies to support extended tasks. The extended working hours where employees are expected to stay connected has been identified as leading to work exhaustion as employees will not be able to separate work-life balance (Kim, Lee, Yun & Im 2015).

In the context of *Data Bank*, several users are observed to face challenges with the effort and process required to request access and setup the mobile devices for access rights to the virtual private network (VPN) that enable remote network connections. This cumbersome process inhibits most employees to have access rights to enterprise mobility, thereby inhibiting use of innovated enterprise mobility technologies (Gebauer 2010).

Having introduced challenges observed at the study location, the next section provides knowledge gaps identified with the existing literature relating to enterprise mobility phenomenon.

1.4 Knowledge Gaps

Sparse Literature on Enterprise mobility

Despite current practitioner discourses noting enterprise mobility as an important topic area, the academia literature remains relatively sparse (Basole 2007; Maree *et al.* 2014; Chung *et al.* 2014). Basole (2007) noted that most of the enterprise mobility published materials are practitioner-oriented. Furthermore, from the literature reviewed, studies addressing enterprise mobility in the banking sector are relatively scant. Hence, the need for researchers to fill this identified enterprise mobility body of knowledge gap in the IS literature stream. With the rate of adoption of enterprise mobility in developing

countries, the studies are very crucial as information and communication are both central for effective and efficient business operations (Tanburn & Singh 2001).

Task-Technology Fit Constructs

One of the drivers of enterprise mobility application systems is for individuals to be performing work related tasks from anywhere and anytime. Hence, the need to understand use of enterprise mobility from the tasks and technology fit perception. The ability of a technology to support the task at hand is described better by the Task-Technology Fit theory, which suggests matching the technology's functionalities to the needs of the tasks it supports (Dishaw & Strong 1999; Zhou & Wang 2010). Information systems literature quest for determinants that may explain use and non-use of technologies remains a prominent endeavour with many contributions. However, Task-Technology Fit elements are missing or implicit in user acceptance and adoption models. Hence, there is need to fill this gap by understanding Task-Technology Fit in the context of enterprise mobility.

Technology use by individual employees

In the banking sector, research into technology use phenomenon (for example Boonsiritomachai & Pitchayadejanant 2017; Malaquias, Malaquias & Hwang 2018; Alalwan, Dwivedi & Rana 2017; Chan & Lu 2004; Luarn & Lin 2005; Lee 2009; Dasgupta, Paul & Fuloria 2011, Ghalandari 2012; Gu, Lee & Suh 2009; Laforet & Li 2005; Rotchanakitumnuai & Speece 2003; Shaikh & Karjaluo 2015; Zhou, Lu & Wang 2010) has been dominated by the studies of individual consumer utilisation and adoption of mobile banking technologies. Mobile banking technologies allows consumers to conduct banking transaction anywhere any time without the need to go to the physical bank (Boonsiritomachai & Pitchayadejanant 2017). The transformation of mobile ICTs bank technologies in traditional banks has been visible in the value creation of front-end consumer. However, there is much more to the process of “going digital” (Dapp 2015). It will not only suffice to innovate consumer centric banking technologies but to adopt comprehensive transformation process encompassing all enterprise business divisions. After all, in the banking sector, the mobile ICT is not only transforming mobile banking but also corporate communication, business processes and working norms (Basole 2007). Hence, the need to fill in the gap on technology use by individuals in the South Africa banking environment.

From these identified knowledge gaps, a problem statement for the study is articulated in the next section.

1.5 Problem Statement

From information systems literature, there is a notable observation of technology rejection where half of organisations' investments are technology related and of these technologies investments projects, some are rejected by the employees. The study is an investigation of the extent to which enterprise mobility application systems are used by individuals in a South African banking environment. In particular, the study focuses on the elements that influence use and non-use of enterprise mobility application systems.

Literature reviewed on enterprise mobility indicates that studies are relatively scant, which means that there is still lack of informed knowledge on what exactly influences the use and non-use, particularly in the context of individuals in the South Africa banking environment. Lack of literature informing organisations on the degree to which enterprise mobility technology functionalities supports individual tasks, gives a problem that impacts organisations to make informed decisions to invest in enterprise mobility application systems. To these points, this study sought to address this research problem by bridging the identified knowledge gaps and demonstrate the usefulness of enterprise mobility application systems.

1.5.1 Research argument

Mobile technologies can change the nature of employee every day's tasks such as accessing corporate data by freeing employees from tethered systems such as desktop computers (Jungals et al. 2008). Due to the explosive growth of mobile devices, current working ethics and norms are changing and this is bringing challenges to professionals on how the use of mobile devices can be incorporated into daily working norms. Hence, the study sought to address Enterprise Mobility challenges in practice. It is argued that the findings from this study will contribute to change the way people do their jobs in the banking sector. Thus, by understanding the degree to which enterprise mobility system functionalities supports user tasks, it will help organisations in making informed enterprise mobility strategic decisions. The key to understanding user decisions to use a technology lies in understanding how the available technology functions support the user's needs (Dishaw & Strong 1999). Hence, the need to understand use of enterprise mobility from the Tasks-Technology Fit perspective. TTF helps determine how enterprise mobility technologies may support the tasks at hand without leading to tensions such as

employee burnout that were identified in literature. Jungals *et al.* (2008) posit that successful technologies are those that are in harmony with user's needs. In this study, determining the appropriateness and fit of enterprise mobility technologies to the tasks of employees will help understand factors that may influence the use of the technologies. To sum up the research argument, the present study posits that lack of empirical evidence on factors which influence use and no-use of technologies in the context of enterprise mobility technologies creates a problem that impacts organisational decisions to invest in technologies such as enterprise mobility (Alqahtani *et al*, 2015).

From stating the problem statement and research argument the next section defines the goal and purpose of the study.

1.6 Goal and Purpose of the Study

1.6.1 Goal of the Study

The goal of the study is to determine the use of enterprise mobility application systems by individuals in a South African banking environment.

1.6.2 Purpose of the Study

The purpose of the study is to describe the use of enterprise mobility application systems by individuals in a banking environment.

1.6.3 Objectives of the Study

The objectives of the study are:

- To analyse the nature of individuals' tasks in a South African banking environment.
- To analyse the nature of use and non-use of enterprise mobility application systems by individuals in a South African banking environment.
- To analyse the nature of individual characteristics towards the use of Enterprise Mobility, in a South African banking environment.

- To analyse the appropriateness and fit of enterprise mobility applications systems to individuals' tasks, in a South African banking environment.

1.6.4 Research Question

To achieve the goal and the objectives, the research question and sub-questions that drove the study are:

Primary Research question (PRQ)

How can enterprise mobility applications systems be used in a South African banking environment?

Secondary Research Questions (SRQ)

1. How do *tasks characteristics* influence the use and non-use of enterprise mobility application systems by individuals in a South African bank?
2. What is the nature of use and non-use of enterprise mobility application systems in the South African banking environment?
3. How do *individuals' characteristics* influence the use and non-use of enterprise mobility application systems in a South African bank?
4. How do appropriateness of task-technology-fit influence the use of enterprise mobility application systems by individuals in a South African bank?

1.7 Delimitations of the study

The study was limited to the following;

- This study did not analyse the actual mobility systems and applications that are used by individuals. Rather it focused on the individuals' behaviour towards use of enterprise mobility technologies.

1.8 Research Contributions

This section briefly presents the study's contributions. The study contributes to the existing body of knowledge in the following ways:

- Extend the knowledge on enterprise mobility.
- Fill the knowledge gap on the phenomenon of enterprise mobility technology use in the context of South African banking sector.
- Extend the knowledge on employing a positivist model (TTF) as a theoretical lens in an interpretive study using qualitative data.
- The study contributes to practice in edifying how enterprise mobility applications systems can be used in a banking environment.
- It informs practitioners in understanding the underlying capabilities of their technologies and the changing task needs so that they can make informed decisions in investing in enterprise mobility technologies.
- It informs practitioners with elements that may influence use and non-use of enterprise mobility application systems.

1.9 Chapter Summary

In this first chapter, the introduction and background to the study was presented. The chapter started with an introduction to Enterprise Mobility phenomenon giving a background to the field of study. Then, the chapter provided a background to the research problem detailing the study context and location with a discussion of challenges observed at the study location. The identified knowledge gaps were then articulated. Thereafter, the chapter moved to stating the problem statement where the research argument was specified. The chapter then discussed the study goals, objectives and defines the research question driving the study. Thereafter, delimitations of the study were stated and intended research contributions were briefly discussed. The introductory chapter close by giving a summary of the chapter.

Before moving to the next chapter, the following section gives an outline of the entire research report.

1.10 Outline of the research report

The rest of the research report is structured as follows: Chapter two (2) gives a survey of scholarly literature and the theoretical underpinning the study. Chapter three (3) details the research methodology followed. Chapter four (4) presents the empirical data analysis and interpretation of the findings. Chapter five (5) evaluates, reflects and concludes the research study. Then the Appendices section includes: Appendix A) Ethical Clearance Certificate, Appendix B) Individual Participation Request Letter, Appendix C) Research instrument Guide.

Having introduced the research, the next chapter will present the survey of scholarly articles and the theoretical framework underpinning the study.

CHAPTER TWO (2)

SURVEY OF SCHOLARSHIP AND THEORETICAL FRAMEWORKS

2.1 Chapter Introduction

The previous chapter introduced the research by giving the background to the study and the research problem. This chapter surveys scholarly articles and the theoretical framing that informed the study. A review of scholarly articles in relation to the phenomenon of enterprise mobility and technology opens this chapter. From the review of scholarly articles, a discussion of technology use theories follows. Then, the popular theories of technology use are presented and their appropriateness for this study is discussed. Thereafter, the chapter then presents the theory that was adopted as a lens to understanding enterprise mobility. Lastly, the chapter gives a contextualisation of the conceptual research framework.

2.2 Related Research on Enterprise Mobility

The following sections provides existing works relating to enterprise mobility discourses.

Calls for Papers on Enterprise Mobility Impacts

Early research indicated there has been notable worldwide use of mobile ICT mostly at personal consumer level than at enterprise level (for example, Basole 2007; Sorensen & Al-Taitoon 2008). Few years later Sorensen (2011) indicated that IS discipline has not heeded the call by early researchers to study enterprise mobility. Three years later, Maree et al. (2014) indicated that there were signs of change as mobile ICTs have started spilling into the corporate world. In 2013, Fischer and Smolnik (2013) synthesised existing literature from 101 publications (from 2000-2012) on the impact of mobile ICT use on individual, organization and society. In their analysis, they found that current IS studies is still focussing on mobile computing technological aspects and not yet on the impact on individuals, organizations or society. The authors made a call for researchers to focus on areas of (1) enterprise value creation through mobile computing use, (2) individual behavioural changes, and (3) social and cultural issues related to mobile information systems. However, the present study does not focus on any of these suggested areas of research on impact as there is scant literature in the South African context

addressing adoption and use of enterprise mobility, which can then lead to a call for impact studies. Gebauer (2010), suggest that enterprise mobility substantially impact job performance and personal life. He further calls for researchers to carefully consider ease of use of the technology and effort required by users to set up and use systems as these determines utilisation and job performance.

Initial Researches on Enterprise Mobility

Basole (2005 -2008) has done several initial researches on enterprise mobility. In 2008 the author reviewed 13 articles from leading scholars and practitioners and categorised the findings into following sections: in the first section, evolution of enterprise mobility was discussed with findings suggesting it was inevitable for organisations to consider holistic adoption of enterprise mobility solutions as key strategic investments. This study edifies this finding by suggesting how enterprise mobility applications systems can be used in a banking environment. Secondly, the findings indicated enterprise mobility will impact work practices and work environment, hence, the need for organisations and researchers to look at implications of enterprise mobility. As per this finding, the present study looks at technology utilisation through the lens of TTF in a bid to understand how enterprise mobility technologies can best support employee tasks in these changing working practices and environment. Understanding the need for a fit between these tasks and enterprise mobility may help organisations in implementing enterprise technologies that best support the changing working environment. The findings also indicate that mobile applications and adequate security levels are critical enablers of enterprise mobility. Lastly, the review findings (Basole 2008) indicate that organisations should shift their strategic considerations by catering for mobile ICTs; hence, the need for the present study to focus on the appropriateness and fit of enterprise mobility technologies to individuals' tasks in a banking environment.

Literature on work exhaustion (work burnout)

Explosive growth in mobile ICT has seen the rise of individuals who stay connected to work without 'shutting off' at the end of working day (Kim *et al.* 2015). Mobile ICT have enabled individuals to always stay connected and make work increasingly independent of time and location (Moore 2000; Kim *et al.* 2015). However, this notion of always connected has been suggested as linked to work exhaustion (work burnout) by placing excessive productivity burden on individuals (Shih, Jiang, Klein & Wang 2013). The ability of individuals to work longer without constraints can lead to pressure and personal frustration on employees from not separating work and social life. The burnout may create a work-life imbalance that can lead to less job satisfaction and commitment (Kim *et al.* 2015). Enterprise mobility has been noted

as a rapidly growing trend, worldwide, in the corporate world (Brand *et al.* 2015); however, in developing countries the concept of enterprise mobility has been noted as relatively new (Blignaut & Thopil 2015).

2.3 Related Research on Technology Use

Having looked at enterprise mobility literature, the following sections reviews scholarly articles in relation to the phenomenon of technology use in general and to tasks-technology fit.

Literature on Technology Use

The information systems literature is filled with extensive studies seeking to understand factors influencing usage of technology (For example, Legris, Ingham & Colletette 2003; Kurfali, Arifoglu, Tokdemir & Pacin 2017; Madigan, Louw, Dziennus, Graindorge, Ortega, Graindorge & Merat 2016; Fleury, Tom, Jamet & Colas-Maheux 2017; Wills, El-Gayar & Bennett 2008). From the eighties, efforts in predicting technology utilisation have seen IS researchers develop and test different models (Wills *et al.* 2008; Legris *et al.* 2003; Kurfali *et al.* 2017). Owing to the complex interplay between individuals and technology, technology utilisation literature seeks to understand factors that influence individuals on use and non-use of technologies (Wills *et al.* 2008). User acceptance and utilisation literature has several models and theories that include: theory of planned behaviour (TPB), the theory of reasoned action (TRA), the technology acceptance model (TAM), Diffusion of Innovations (DOI) and Task- Technology Fit (TTF). These theories are discussed in detail under theoretical frameworks section 2.4.

Literature on Technology Use (Task-Technology Fit)

User acceptance and utilisation of technology literature (for example, Zhou & Wang 2010; Goodhue & Thompson 1995) indicate that user attitudes are a predictor of utilisation. A complementary stream of research on technology utilisation is the good fit of how the available technology supports the tasks at hand. This complimentary stream posits that focusing on user perceptions and attitudes is not enough as there is need to focus on a good task-technology fit factors (Zhou & Wang 2010). Technology utilisation is often addressed by the Task-Technology Fit (TTF) theory from a different but complimentary angle where it considers the effect of technology fitting the tasks (Jungals *et al.* 2008).

The need to understand the fitness of technology to task is built on the notion that task-technology fit aside from positively influencing utilisation also positively influences individual performance (Zhou & Wang 2010; Goodhue & Thompson 1995), which this study sees as one of the drivers for adopting enterprises mobility.

Having looked at the technology use literature, the following sections reviews existing technology use theoretical frameworks that were considered for the study.

2.4 Theoretical Frameworks

Information systems studies are underpinned by theories and models often borrowed from other disciplines such as psychology, sociology and so on. This section discusses theories which are often used in studying the use of technology.

2.4.1 Introduction into Technology Use Theories

The amount of research under the technology acceptance and adoption umbrella has been vigorous over the last decades, with models and theories seeking to describe how and why people use information technology (Venkatesh *et al.* 2003; Ajzen & Fishbein 1980; Ajzen 1985, 1987; Davis 1989; Davis *et al.* 1989; Rogers 1995; Goodhue & Thompson 1995). Amongst the technology acceptance theories, TAM and UTAUT has been suggested as the most widely used (van Raaij & Schepers 2008; Madigan *et al.* 2016).

Technology utilisation literature can be looked at from two different angles that complements each other, technology acceptance and task-technology fit perceptions. While technology acceptance focuses on attitudes that users develop perceptions of the usefulness and ease of use of the technology, task-technology fit focuses on the match between the technology's available capabilities and the tasks that users want to perform (Dishaw & Strong 1999; Mathieson & Keil 1998; Junglas *et al.* 2008). Task-technology fit posits that information technology is only used if the available functions provides support to the user's needs. The use of technology is explained primarily by the perceived ease of use (EOU) whether a person voluntarily uses a system. The perceived EOU can further extend beyond the interface and be a task-technology fit function (Mathieson & Keil 1998). When users report that the application

systems are difficult to use, the development team should not only look on the interface but further on the task-technology fit issues in understanding user's needs (Mathieson & Keil 1998). When there is a good task-technology fit, users are motivated to use the technology as they perceive it to be better and more efficient in fulfilling their tasks (Mathieson & Keil 1998; Junglas *et al.* 2008).

The following section reviews popular technology utilization models that were considered in answering the research problem.

2.4.2 Popular Technology Use Models and Theories

Theory of Reasoned Action (TRA) - by Ajzen and Fishbein (1980) inspired and influenced majority of technology acceptance and adoption theories (van Raaij & Schepers 2008). TRA originates from the social psychology literature and it explains the factors affecting a consciously intended human behaviour (Venkatesh *et al.* 2003). TRA asserts that actual behaviour is influenced by behavioural intention, which is impacted by both attitude and subjective norm. An attitude can be described as an individual evaluation (whether positive or negative) of performing the actual behaviour. Davis *et al.*, (1989) explain that TRA is a general model where a person's task performance is influenced by the person's behavioural intention (BI).

Theory of planned behaviour (TPB) - originates from the social psychology literature and extends TRA by introducing perceived control construct over performance of the behaviour to TRA (Ajzen 1991). The theory has been successfully implemented in diverse technologies (Godin & Kok 1996; Venkatesh *et al.* 2003). The concept of perceived behavioural control was added to account for factors that may affect intentions and behaviour and are outside of individual control. Perceived control in turn is determined by control beliefs (Ajzen 1991). TPB is suggested to predict a wide range of behaviour. It is also suggested as among the most prominent theories used in explaining and predicting behaviour (Pavlou & Fygenson 2006).

Technology Acceptance Model (TAM) - TAM evolved from TRA model and uses TRA as its theoretical basis, and it is tailored for Information Systems (IS) context to explain computer usage behaviour (Davis *et al.* 1989). Its goal is to provide general technology acceptance determinants that can explain end-user behaviour towards end user technologies (Davis *et al.* 1989). TAM has been applied in the IS field on diverse user technologies (Venkatesh *et al.* 2003). TAM deviated from TRA by excluding the model's

subjective norm. TAM suggests that the intention to behave determines the actual behaviour. TAM argues that computer acceptance behaviours are primarily based on two beliefs, which are perceived ease of use (EOU) and perceived usefulness (U). Perceived usefulness (U) is described as user's perceptions that using a particular application will improve job performance. Perceived ease of use is described as the user's expectation that the prospective system or technology will be free of effort.

Unified Theory of Acceptance and Use of Technology (UTAUT) builds on TAM and was formulated by incorporating eight competing behavioural technology acceptance models. The objective of this formulation effort was to enhance the predictive power of a user acceptance model or theory (Venkatesh *et al.* 2003). UTAUT integrated elements across the examined eight models. The models that were integrated are TPB, a model combining TAM and TPB, the motivational model, TAM, theory of reasoned action, model of PC utilization, innovation diffusion theory, and the social cognitive theory.

UTAUT explains user acceptance phenomena through factors that influence the intention to use technology and the subsequent usage behaviour with usage behaviour as the dependent variable (Venkatesh *et al.* 2003). UTAUT suggests four direct independent variables namely effort expectancy, performance expectancy, social influence and facilitating conditions influencing the intermediate variable, behavioural intention. Behavioural intention is the mediating variable or intermediate variable that explains the dependent variable namely the use behaviour. The theory seeks to suggest that these core determinants are moderated by factors like voluntariness, experience, age and gender.

Social cognitive theory (SCT) - previously known as Social Learning Theory (Bandura 1986) is derived from theories of human behaviour and it allows to be extended to technology acceptance in general (Venkatesh *et al.* 2003). SCT suggests that a person's behaviour is influenced by expectations and incentives (Rosenstock, Strecher & Becker 1988). It suggests that when individuals doubt their capability to successfully execute a task, the expectations of positive outcomes are meaningless (Huang, Lin & Wang 2008). SCT argues that social network and the person's cognition partially shapes the person's behaviour.

Diffusion of Innovations (DOI) - also termed as Innovation Diffusion Theory (IDT), is used to explain user adoption of technologies in IS stream. DOI suggest how, why, and at what rate does new technology innovation diffuse through the organisation (Rogers 1995). The how and why gives two streams of study, the *how* relates to the innovation infusion process and the *why* explains the underlying reasons behind

the adoption or rejecting the technology (Moore & Benbasat 1991). Initially, Rogers (1995) suggested five independent elements namely innovation's relative advantage, complexity, compatibility, trialability and observability as key factors of rate of diffusion. The theory was later expanded to include image, result demonstrability, visibility and voluntariness as additional factors (Moore & Benbasat 1991). However, empirical studies have constantly found that only three constructs technical complexity, technical compatibility and relative advantage are the most relevant elements of adoption of technological innovation in the IS stream (Bradford & Florin 2003; Tornatzky & Klein 1982; Wu & Wang 2005) leading to a generalized model of DOI. Individual's perception of the technology particularly its complexity, relative advantage and compatibility leads to use or non-use of the technology by the individual.

Technology-to-performance chain (TPC) / Task- Technology Fit (TTF) – was introduced by Goodhue and Thompson (1995) with part of the model known as Task- Technology Fit (TTF) being the commonly referred and used. The TPC model combines two research insights where 1) technology utilisation is predicted by user attitudes towards the technology, 2) user performance is predicted by the task-technology fit. Insights from research done with the TPC model suggests that the greater explanatory power comes from the task-technology fit elements than from the user attitudes. This insight resulted in a more narrowed and reduced model referred to as Task-Technology Fit (TTF). TTF has since been commonly tested and used instead of the larger TPC model.

TTF suggests that the successful utilisation of a system depends on matching the technology functionality with the tasks requirements at hand (Goodhue & Thompson 1995). TTF posits that the construct of task–technology fit implies matching technological capability with needs of the tasks at hand (Dishawa & Strong 1998) where task-technology fit is a predictor of utilisation and performance. TTF assumes that if the technology at hand makes the task at hand easier and efficient, users will adopt it (Goodhue & Thompson 1995). The primary elements of the model are technologies, tasks, individuals and task-technology fit. The tasks at hand is described as actions that must be carried out using the technology to transform some inputs into valuable outputs. Then technology is described as combination of technological support and user support services (Junglas *et al.* 2008). And individuals describe the person's abilities to use the technology. Goodhue and Thompson (1995) state task-technology-fit as “the degree to which a technology assists an individual in performing his or her portfolio of tasks. More specifically, TTF is the correspondence between task requirements, individual

abilities, and the functionality of the technology”. TTF does not merely predict current utilisation but also predict future utilisation (Aljukhadar, Senecal & Nantel 2014).

The Task-technology model is illustrated in the following Figure 4.

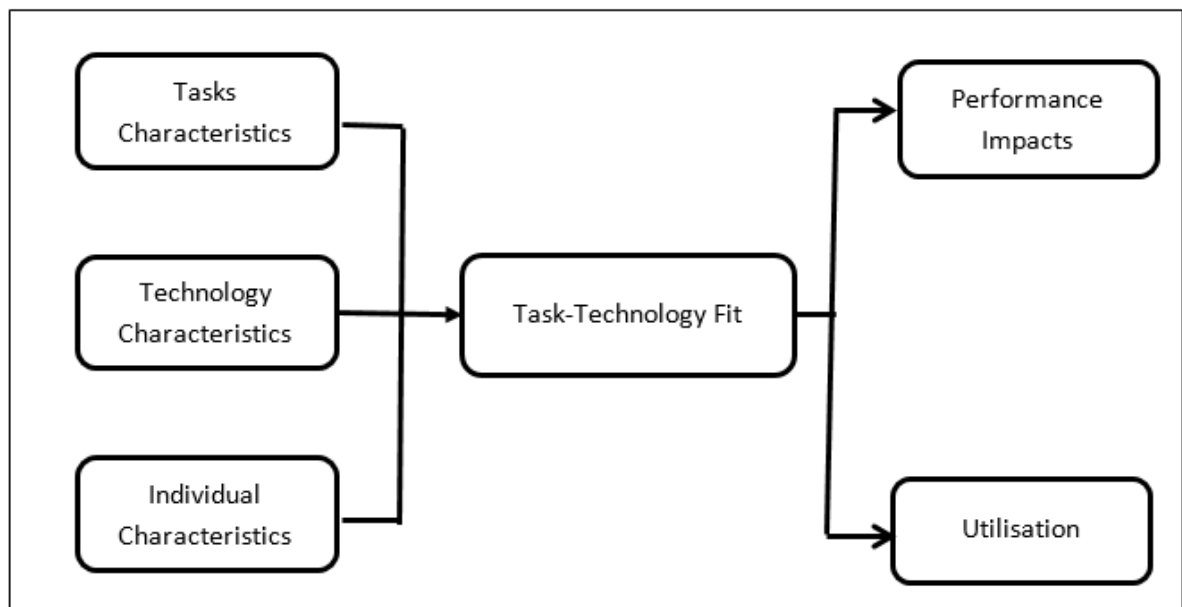


Figure 4: Task-technology fit (TTF) theory

(<https://aisnet.org/page/ISResearch>, accessed 31-May-2018]

2.4.3 Factors Considered on Reviewing the Theoretical Frameworks

Having discussed the popular technology use models, the following sections tables the factors considered on reviewing for a suitable model to use.

Table 1: Factors considered on reviewing the theoretical frameworks

| Theoretical framework | Description of the theoretical framework | Variables/Constructs in the theoretical framework | Why the theoretical framework was considered not suitable for this study | Why the theoretical framework was considered suitable for this study |
|-------------------------------------|---|---|---|--|
| TRA -Theory of Reasoned Action | TRA originates from the social psychology literature and it explains the factors of consciously intentional human behaviors | Dependent construct <ul style="list-style-type: none"> – Behavioral intention – Behavior Independent constructs <ul style="list-style-type: none"> – Attitude toward behavior – Subjective norm, | The model constructs do not fully represent drivers of use of enterprise mobility context | |
| TPB -Theory of planned behavior | TPB extends TRA by introducing perceived control construct over performance of the behavior to TRA. | Dependent construct <ul style="list-style-type: none"> – Behavioral intention – Behavior Independent constructs <ul style="list-style-type: none"> – Attitude toward behavior – Subjective norm – Perceived behavioral control | The model constructs do not fully represent drivers of use of enterprise mobility context | |
| TAM -Technology Acceptance Model | TAM evolved from TRA model and it is tailored for IS context. Its goal is to provide general technology acceptance determinates that can explain computer usage behavior. | Dependent construct <ul style="list-style-type: none"> – Behavioral intention to use – System usage Independent constructs <ul style="list-style-type: none"> – Perceived usefulness (PU) – Perceived ease-of-use (PEOU) | – the model was developed as quantitative user-centric model and might not have the ability to explain the phenomenon in question in a qualitative interpretive study | – The model is specific to computer usage which relates to enterprise mobility usage |

...Continued: *Table 1: Factors considered on reviewing the theoretical frameworks*

| Theoretical framework | Description of the theoretical framework | Variables/Constructs in the theoretical framework | Why the theoretical framework was considered not suitable for this study | Why the theoretical framework was considered suitable for this study |
|---|--|--|---|---|
| TTF -Task-Technology Fit | TTF suggest that the successful adoption of an information system depends on matching the functionality of the technology with the tasks requirements at hand | Dependent construct <ul style="list-style-type: none"> – Individual performance – System utilization Independent constructs <ul style="list-style-type: none"> – Task characteristics – Technology characteristics | | <ul style="list-style-type: none"> – The environment being studied relates to work related tasks to being performed from anywhere and anytime. – The independent variables of tasks-technology suggest having high explaining power in enterprise mobility application systems capabilities and the tasks at hand |
| DOI - Diffusion of Innovations/Innovation Diffusion Theory (IDT) | Posits to how, why, and at what rate does new technology innovation diffuse through the organization | Dependent construct <ul style="list-style-type: none"> – Implementation Success /Technology Adoption Independent constructs <ul style="list-style-type: none"> – Compatibility of Technology – Complexity of Technology – Relative Advantage (Perceived Need for Technology) | The theory focusses on adoption and diffusion of technologies which the study is not interested on. | |
| SCT -Social Cognitive Theory | Formerly known as Social Learning Theory (Bandura,1986) is derived from theories of human behavior. The theory posits the human behavior as a correlation of personal factors, behavior, and the environment | Dependent construct <ul style="list-style-type: none"> – Learning – Change in behavior Independent constructs <ul style="list-style-type: none"> – Personal factors – Behavior – Environment) | – The model constructs do not fully represent drivers of adoption of enterprise mobility context | |

2.4.4 Justification for not using the reviewed theoretical frameworks

In this section, a summary of why the rest of the theories were not used, and why TTF was used is discussed.

Literature is filled with many theories that explain utilisation of technologies, and those explaining why users may accept or reject technologies (Kurfali *et al.* 2016). Most of the theories (for example, TRA, TPB, UTAUT) were not considered as they focus more on behavioural intention as the dependent construct, which was not the aim of the present study. For this study, three acceptance theories (TAM, DOI and TTF) were closely considered and suggested to have more contextual practicalities to explain technology use of enterprise mobility application systems.

Firstly, TAM was considered as it is an attitude-based model based on strong behavioural elements, where it posits that behavioural intention determines the actual behaviour. It assumes that if someone decides to act on something, they act without restriction. Secondly, the DOI theory was considered due to its technology adoption determinants that suggest having more contextual practicalities to enterprise mobility applications systems. DOI theory has been used to examine technology innovation characteristics that can lead to adoption of the technologies (Rogers 1995). However, DOI theory was not considered as it focuses more on adoption of technologies and at what rate does new technology innovation diffuse across the organisation which the study is not interested.

While DOI and TAM focuses more on behavioural intention as dependent construct, TTF focuses more on system utilisation as a dependent construct. Therefore, consistent with the purpose of the study to understand what influences use and non-use of enterprise mobility application systems, TTF model was strongly considered due to its dependent construct of system utilisation. Further, TTF model ties with the aim of the research to understand task-technology fit, a stream of technology utilisation studies whose elements are missing or implicit in user acceptance and adoption models. Also, task-technology fit concept is suggested to improve performance which is one of the drivers of utilisation of enterprise mobility systems.

In addition to considering TTF, from the literature reviewed all popular technology use theories including TTF are from the positivist perspective, hence, the need to look at TTF from an interpretive perspective.

Thus, the study will edify existing knowledge with the aim to see if a positivist theory will yield similar or different results if applied in an interpretive study.

From these views, TTF was considered more relevant to this study as it was consistent with the purpose of the research.

2.4.5 Conceptual Research Framework

Having discussed why other theories were not chosen, the next section presents the conceptual research framework, informed by the chosen model of TTF.

The research sought to study the phenomenon of use of enterprise mobility application systems through the theoretical lens of TTF theory. In this study, it is argued that appropriateness of tasks-technology fit provides an explanation for use of enterprise mobility application systems by individuals in a banking environment. It is suggested that the fit between the technology characteristics of enterprise mobility applications systems and the individuals' tasks required may drive utilisation decisions. Thus, TTF was considered more appropriate in answering the research questions. TTF informs the conceptual research framework. TTF posits that if technology is well suited to the tasks it supports, people will use the system (Goodhue & Thompson 1995).

The conceptual research framework for the study is presented in following Figure 5.

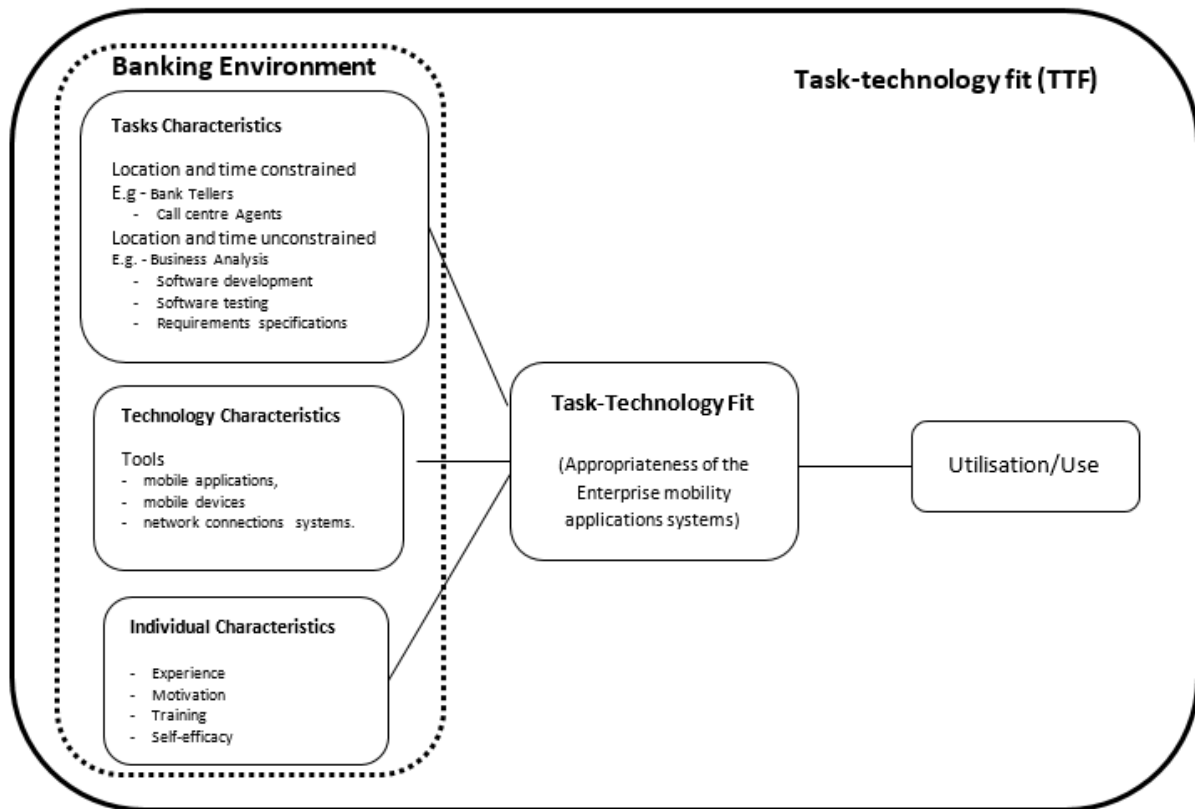


Figure 5: Conceptual Research Framework

2.4.6 Contextualisation of the conceptual research framework elements

This section gives a description of contextualisation of the core elements of the research framework used in this study. TTF theory has two dependent elements, individual performance and system utilization. Since the study is focusing on use of technology, system utilisation is the element most considered. In this study, technology use was defined as putting enterprise mobility technologies into use or effective use. The independent elements or constructs of the conceptual research framework namely task characterises, technology characteristics and individual characteristics are contextualised next.

Technology characteristics

Goodhue and Thompson (1995) define technologies as the hardware, data, software systems and user support services that are utilised by people to perform the tasks at hand. Technology characteristics from the conceptual research framework speak of the actual technologies and user support services that are used by individual users. This can be specific systems or a collection of systems. In the context

of this study, enterprise mobility application systems include a collection of applications and systems that can enable users to work from anywhere anytime. These systems include, organisational mobile applications, mobile devices (personal owned or company owned), network connections systems such as WIFI, and user support services. The availability and support of these technologies to the user's tasks at hand may drive usage. Basole (2007) suggest that organisations must measure their level of technology readiness before adopting enterprise mobility. Organisations must have the underlying network services, hardware, software and security technology infrastructure ready to support implementation of enterprise mobility; technology must be robust, flexible and scalable to accommodate the changing user tasks requirements (Basole 2007).

Task characterises

Tasks are the actions carried out by an individual using information systems technologies in transforming inputs into outputs (Goodhue & Thompson 1995). Task characteristics element speaks to the actual execution actions of the tasks (Goodhue & Thompson 1995). In the context of the present study, the task characteristics speak to the user's actual work tasks for example development of code, testing of developed systems or writing up requirements. Within IS, researchers view 'task as a behaviour requirement' that describes what response is expected from the subject and can be described independently of the task performers' characteristics (Junglas *et al.* 2008).

In the context of this study, there is need to distinguish banking environment tasks on spatial and temporal characteristics. The tasks can be differentiated between tasks that are constrained by office location and time, and those tasks that are not constrained by office location and time. Office location and time constraints entail tasks that are bound by the office premises or time component like a bank teller's tasks would be. Non-location constrained tasks are not bound by office premises or time, for example, software development tasks. This study's focus is on individuals in the banking environment whose job tasks can be carried out independent of location and time. Targeted common job roles are business analysts, developers and administrators. In the absence of enterprise mobility applications systems, the individuals will be bound to perform all these tasks while at the offices premises with dedicated workstations. With the utilisation of enterprise mobility applications systems individuals are able to perform these tasks from anywhere and anytime.

Individual characteristics

Individuals are the actual users of the technologies and may have different characteristics such as computer experience, values, and motivational needs to use the technologies. These characteristics may affect the user to use the systems (Goodhue & Thompson 1995). In the context of enterprise mobility applications these characteristics may include ability to use enterprise mobility technologies and values of using personal WI-FI connections for work purposes, and motivational needs to be productive anytime. Basole (2007), suggest the level of enterprise mobility adoption and use maybe improved if the individual's level of readiness is high. Individual readiness refers to the users' attitude, skill and perceived benefits of the technologies (Junglas *et al.* 2008).

Task-Technology Fit (TTF)

Task-technology fit refers to the degree in which available technology assist an individual in carrying out the required tasks (Goodhue & Thompson 1995). Task needs, individual skills and the capabilities of the technology should correspond with each other. Goodhue and Thompson (1995) points out that, "task-individual-technology fit" may be a possibly more appropriate label for the construct, but that the simpler "task-technology fit" term is less complex to use. In the context of adoption of enterprise mobility application systems, it is essential that there is harmony between task, individual and technology elements. Users are motivated to use technologies if there is perceived better fit than other alternative technologies (Junglas *et al.* 2008).

2.5 Chapter Summary

The chapter presented theoretical framework that grounded the study. The chapter started with a review of scholarly literature in relation to the phenomenon of enterprise mobility and technology use. From the review of scholarly literature, popular theories of technology use were presented and considerations of their appropriateness for this study was discussed. Thereafter, the theoretical framework section presented the theory underpinning the study. In closing the chapter, elements of the conceptual research framework were contextualised for studying enterprise mobility use. The next chapter discusses the research paradigm and methods used in the study.

CHAPTER THREE (3)

RESEARCH METHODOLOGY

3.1 Chapter Introduction

The previous chapter presented literature and the theoretical framework that grounded the study. This research methodology chapter presents the research methodology followed in conducting the study. It discusses the research philosophy, approach, strategy, design and data analysis of the study. The chapter starts with a discussion of different research paradigms, where the adopted interpretivism paradigm is presented. The chapter then discusses the qualitative inductive research approach undertaken giving justification of why the approach was found appropriate for this study. The case study research strategy is then discussed, and the case is described to give the reader an understanding of the case's social context. Afterwards, the chapter provides the research design and data analysis strategy that were employed for collecting empirical evidence for the study. Next, an evaluation of the adopted research methods is presented. Ethical considerations are then discussed last, with a chapter summary closing the chapter.

3.2 Research Philosophy

There are three main philosophical paradigms that underlie the design and conduct of Information Systems research; the positivism, the interpretivism and critical approach (Chua 1986; Myers 1999; Oates 2006). These philosophical paradigms relate to the underlying assumptions of epistemology, which refer to the nature of knowledge and its acquisition. These paradigms result in the academic community individuals having three main different shared way of thinking in asking and investigating the research questions as they have distinct views in the nature of the universe they live in (Oates 2006). However, philosophical paradigms are often implicit and assumed and hard to recognize as they are taken for granted (Bhattacharjee 2012). These three main philosophical paradigms are briefly discussed next.

Positivist Research Paradigm

Positivist research paradigm underlies 'the scientific method' approach which holds the assumption that the universe is ordered and can be investigated (Klein & Myers 1999; Bhattacharjee 2012; Oates 2006). The objective of the positivist research is to objectively know the world's patterns and laws in the natural science (Oates 2006). Positivists look for cause and effect evidence by confirming or refuting a defined hypothesis when they carry a research. Positivism relies on theories that can be tested and are interested into "falsifying" theories (Klein & Myers 1999; Oates 2006). Positivist research is characterised by hypothesis testing, variables that are quantifiable, and generalisation of phenomenon from population samples.

Critical Research Paradigm

Critical research aims at critiquing and resolving social inequality whereby the restrictive and dominating social and economic status quo is brought to light (Kline & Myers 1999; Bhattacharjee 2012). It posits that people should act consciously to change their social and economic circumstances to enhance the opportunities for realizing their human potential. It acknowledges that people's ability to change is limited by social, cultural and political factors (Kline & Myers 1999; Bhattacharjee 2012).

Interpretivism Paradigm

The interpretivism paradigm is concerned with understanding an information system's social context. It assumes that only through social constructions is our knowledge gained and attempts to understand a phenomenon through meaning that various individuals give to them (Myers 1999). It seeks to understand how the social setting influences the development and construction process of an information system (Oates 2006). Interpretivism does not seek to refute or confirm hypotheses (Klein & Myers 1999), but rather, it tries to explore and identify relations amongst all factors in a social setting and look at how individuals perceive the universe (Oates 2006). The assumption is that people perceive the world differently and there is no only one version of the truth and the truth is a construct of the people (Oates 2006).

Justification of the Chosen Paradigm

The study undertook the interpretivism paradigm in addressing the research question. This has been influenced by the nature of the research question and the phenomenon under investigation and the study context. The research question driving the study seeks to describe the use of enterprise mobility

application systems by understanding elements that may influence utilisation of enterprise mobility application systems. The research phenomenon and question under investigation may have multiple explanations which suggest positivist paradigm assumptions may not fully interpret and explain the context of the research. While interpretivism seeks to understand all factors in a social setting, positivist seeks for evidence to predict and generalise a phenomenon. Further, motivation to adopting interpretivism is that the study does not seek to falsify any theory but seeks to understand elements that influences use of enterprise mobility applications systems in a social reality setting context.

Interpretivism, argues that it is impossible to abstract social reality from the social settings, and this differs from positivism which accepts that reality can be obtained from their contexts and that it is relatively independent of the context. In this study, usage of enterprises mobility applications systems reality cannot be abstracted from the social settings.

Underlying Assumptions

All research, whether interpretivist or positivist research entails that the researcher's underlying assumptions should be clear about what makes "valid" research and what research approaches are suitable (Myers 1997; Ritchie & Lewis 2003). Thus, for this study the following assumptions are acknowledged:

Ontology - the "belief about the nature of the social world and what can be known about it" (Ritchie & Lewis 2003). The present study's standing is on idealism that asserts that the nature of the social world is only knowable through a person's mind and though socially created meaning (Ritchie & Lewis 2003).

Epistemology- the "nature of knowledge and how it can be acquired" (Ritchie & Lewis 2003). There are two ways that the nature of knowledge can be acquired, induction or deduction. Induction involves the search for themes and associations derived from observation of the world; whereas, deduction generates propositions theoretically through a logical process. That is, induction uses evidence as the beginning of a conclusion while deductive approaches use evidence to substantiate a conclusion (Ritchie & Lewis 2003). In this study, the epistemological assumption is of induction as a way of acquiring knowledge because evidence from the research was used to arrive at conclusions.

3.3 Research Approach

Having chosen interpretivism as the research paradigm followed, the next phase is to consider the research approach. Data collected can be either in the method of quantitative or qualitative (Bhattacharjee 2012; Myers 1997). Quantitative data is numeric and can be analysed quantitatively using statistical tools independent of the researcher. Qualitative data is not numeric but in the form of text and observation (Oates 2006). Analysing qualitative data is heavily dependent on the researcher as it requires understanding the phenomenon and making sense of the data collected (Oates 2006). For this study, qualitative data was collected, and this is discussed next.

Qualitative Research

Bhattacharjee (2012), states that qualitative research seeks to investigate complex social structures, interactions and processes in a systematic mode. Oates (2006) adds that data generated in interpretivism research is mostly qualitative. Bhattacharjee (2012) suggest that considerations of the type of data to be collected can guide researchers on which type of research, qualitative versus quantitative research. Thus, in present study, interviews were conducted as the purpose of the research was to understand and describe phenomenon in an organisational social setting, which is essentially subjective. In answering the research question, the idea is not in hypothesis testing but in seeking to understand elements that may influence utilisation of enterprise mobility application systems - in a social setting by engaging in “sense-making” process rather than in a hypothesis testing process (Myers 1997).

Further argument in choosing the qualitative research is, in general, technological utilization and use theories have been applied mostly with quantitative research, primarily surveys. Thus, there is also a need to understand the phenomenon in an interpretivist paradigm using qualitative approach. This is because the context of enterprise mobility applications systems use is complex and is being driven by social setting processes and beliefs, such as the need to work from anywhere anytime. This understanding of the phenomenon through participants’ point of views requires that data be collected in a qualitative nature and that it might be lost if the textual data is quantified (Myers 1997).

Inductive approach

All research can take two possible ways to inquire and develop knowledge: induction or deduction (Ritchie & Lewis 2003; Bhattacharjee 2012; Oates 2006). With deductive research approach, the researcher inquires for empirical data then evaluates it with the theories they have found in research. Here the goal is to test concepts and patterns from the theories they have, using the data obtained. Hence, deductive approach is also known as theory-testing research.

Then with inductive approach alias as theory-building, the researcher analyses the collected data and then infers theoretical concepts and patterns to see what theory emerges. Inductive approach allows a flexible study structure permitting changes of emphasis as the research progress. In this study, inductive approach was employed as the researcher was not theory-testing nor was aiming to explain causal relationships between variables. The researcher was trying to build an explanation based on different meanings and understandings attached by participants, as evidence. To get a close understanding of the research context, the researcher used the evidence collected to arrive at conclusions. It is important to emphasise that the use of a conceptual research framework in this study was purely for understanding how the study can be informed and to build on existing knowledge rather than building a theory from scratch. This understanding is expressed by Ritchie and Lewis (2003) who posits that interpretive researchers have open minds and not empty minds. Further emphasis is expressed on the difference between the underlying epistemology assumption of this chosen inductive research approach with the deductive (thematic) qualitative data analytic process that was adopted.

3.4 Research Strategy

In answering the research questions, the study could employ varied research strategies. The strategies include survey, experiment, case study, ethnography, action research and grounded theory. From these strategies a case study was chosen as the study sought an in-depth understanding of the study context rather than breadth (as in survey). Consistent with the study objectives seeking to understand the phenomenon within its real-life context, a case study strategy was chosen.

3.4.1 Case Study (Descriptive Case Study)

Studies in the banking sector has been mostly at organisational or customer centric level, with little studies at individual employee level (Dapp 2015). Hence, there is a need for banks to respond to the challenges of organisational digital innovation changes encompassing all business divisions. This holistic adoption of digital process can improve enterprise competitiveness and enterprise value (Basole 2004; Dapp 2015). From the literature reviewed, studies addressing use of enterprise mobility applications systems in the context of South African banking industry are relatively scant. Therefore, the present study will advance existing literature, contributing to technology use phenomenon at individual employee level.

Descriptive Case Study

A case study, also known as case research, is one of the several ways of doing a social science research. It is a method of studying one instance of a “thing” such as an organisation, a community or a department which will then be a case (Bhattacharjee 2012; Oates 2006). The case is studied intensively with the aim of obtaining rich detailed contextualized relationships into the ‘life’ of the case using data generation methods (Oates 2006). Yin (1993) posits that case studies are more ideal when the research focus is within some real-life context and seeks to understand the “how” or “why” of a phenomenon. Hence, a case study was employed as it was consistent with the study purpose that sought to obtain a close understanding in the use of enterprise mobility application systems by individual employees.

3.4.2 Description of the Case and Context

Literature suggests that within a case study the description and discussion of the social context is essential as it gives the reader a wider context of the empirical evidence presented. The descriptions can range from history of the case, background information on the overall structures, settings and frameworks of the participants (Popay, Rogers & Williams 1998). A detailed background of the study location and context was discussed in section 1.3.1 Study Context and Location, hence in this section only a brief of the social context is discussed.

This is a case study of how individuals in a banking environment use enterprise mobility within the context of South African banks. The case study was carried out in Johannesburg. Due to the request for anonymity, the bank is referred to as *Data Bank* (a pseudonym). The location of the study was at the

Data Bank main central offices. The bank provides retail and corporate banking services to millions of customers. The overall structure of the bank is driven by market share competitiveness and is similar with other banking structures in South Africa.

The social setting for data collection was a one-on-one, face-to-face semi-structured interviews. The interviews were conducted in various meeting rooms within the main central offices. During each interview, the researcher and the individual participant were the only people present. To assure anonymity, the researcher informed and assured participants that if the researcher needs to quote them in the study report pseudonyms will be used.

3.5 Research Design

The research design is the “blueprint” that gives the comprehensive process plan for collecting data to answer the research questions (Bhattacharjee 2012). In general, depending on the purpose of the study there are several research designs that can be followed namely; exploratory research, descriptive research, relational research, experimental research and explanatory research.

According to Yin (1993), case studies can be applied for various study purposes, leading to three different types of case studies: Exploratory case studies, causal case studies and descriptive case studies. For exploratory case study, the critical and first stage of the research is to underlie the issues to be researched where specific theories or research question are formulated after looking at the data. For causal case study, the theories of the phenomena are explained through cause and effects of the relationship of the data evidence presented. In a descriptive case study, the data collection and the analysis are guided by theoretical framework. With descriptive case study, a conceptual research framework is often informed by the underpinning theory. Consistent with the objectives of the study, a descriptive case study approach was followed during collection of data and analysis.

3.5.1 Unit of Analysis

Unit of analysis - refers to the target of the observation that the researcher is interested in studying, such as an individual, group or organization it is the what or who is being studied (Ritchie & Lewis 2003). In this study, the aim is in understanding use of enterprise mobility applications by individual employees, hence, the unit of analysis is the individual.

3.5.2 Population and Sampling

Target population - can be defined as persons or items with the characteristics that the researcher wishes to study such as an organisation, master's students or IT managers (Bhattacharjee 2012). The question here is who or what is to be sampled (Ritchie & Lewis 2003). In this study, the population comprised of employees of the bank.

A **sampling frame** is the accessible segment of the target population that the researcher will be able to draw a sample to do the research (Bhattacharjee 2012). It answers the question: what is the appropriate source of information (Ritchie & Lewis 2003). The researcher targeted individual employees at all levels whose employment tasks were not constrained by location and does not demand client facing.

Sample Selection, in the present study, the researcher deliberately chose the participants based on **purposive sampling strategy** where the participants possessed desired contextual characteristics and could provide useful information (Bhattacharjee 2012; Creswell & Clark 2006; Ritchie & Lewis 2003). The contextual characteristics included employees whose job roles were not constrained by location and do not demand client facing tasks. The selection of the individual employee was on the assumption that they would provide useful information pertaining to the use of enterprise mobility applications as suggested by purposive sampling (Ritchie & Lewis 2003). The sample selection catered for all levels of employees and common roles and positions that form the basis of *Data Bank* employee structure.

The following Table 2 presents a sample matrix that guided selection of the participants:

Table 2: Participant Sampling Matrix Guide

| Role | Desired contextual Characteristics for purposive sampling | | |
|--|---|------------------------------|----------------------------|
| | Can provide key information to enterprise mobility usage | Non-Customer Facing employee | Willingness to participate |
| Managers and Directors <ul style="list-style-type: none"> – Chief executive officers – Heads of business operations – Operations managers – HR Managers – Risk Managers – Project managers | √ | √ | √ |
| Technical professionals <ul style="list-style-type: none"> – Chief Information officers – Development managers – System analysts – Technical architects – Software developers – Software testers – Security & Fraud Specialists – Network specialists – Service desk specialists | √ | √ | √ |
| Professionals <ul style="list-style-type: none"> – Business analysts – Business Project managers – Strategic Analysts – Operation Analysts – Compliance Officers – HR Officers – Risk Officers | √ | √ | √ |
| Service and Sales (Customer Facing) <ul style="list-style-type: none"> – Bank Tellers – Branch managers – Sales Agents | x | x | √ |

The sample size consisted of 11 participants for semi-structured interviews. In qualitative purposive sampling study, the sample size is not defined, however, the collected data should be able to answer the research question. Bhattacharjee (2012), posits that with qualitative research small focused samples are generally used, this could be due to the required reading and re-reading of data during analysis phase which is time consuming (Braun & Clarke 2006). In this study, the sample size was determined when the researcher felt saturation point was reached such that the pattern of evidence that emerged was no longer able to provide new significant themes (Bhattacharjee 2012; Ritchie & Lewis 2003).

3.5.3 Participants Demographic

A total of 11 individuals participated in the study. These participants came from different departments: Information Technology, Human Resources, Business Support and Operations. To ensure anonymity, pseudonyms were used for both the bank and participant's names.

Table 3 below indicates the roles fulfilled by the study participants:

Table 3: Study Participants Roles

| Role | Department | Desired contextual Characteristics as per sample matrix | | | No of participants |
|-----------------------------------|------------------|--|------------------------------|----------------------------|--------------------|
| | | Can provide key information to enterprise mobility usage | Non-Customer Facing employee | Willingness to participate | |
| MIS Business Intelligence Analyst | Business | √ | √ | √ | 2 |
| Business Analyst | Business | √ | √ | √ | 1 |
| Head of Quality Assurance | IT Department | √ | √ | √ | 1 |
| HR Learning & Development Manager | HR | √ | √ | √ | 1 |
| Financial Operations Manager | Finance | √ | √ | √ | 1 |
| Sales Operations Manager | Sales Operations | √ | √ | √ | 1 |
| Test Analyst Manager | IT Department | √ | √ | √ | 1 |
| Sales Administrator | Sales Operations | √ | √ | √ | 2 |
| Legal Administrator | Legal | √ | √ | √ | 1 |

3.5.4 Data Collection Methods

Data generation methods are the mechanism of collecting empirical evidence and can be either qualitative or quantitative. These methods include interviews, questionnaires, observations and documents (Oates 2006).

Interviews

Interviews are meetings aimed at freely obtaining information through guided conversations (Oates 2006). Ritchie and Lewis (2003), suggest that in qualitative research individual interviews are probably the most widely used method of data collection. Interviews can be in three styles: **Structured interviews** – with these interviews predetermined, standardised, identical questions are used for every interview. **Semi structured interviews** – with these interviews the researcher uses a list of questions or themes to cover during the interviews, however, one can change the order of themes or questions during the interviews. The researcher can ask other questions in the event that the respondent brings other issues not planned, to cover more detail. **Unstructured interviews** – these are free flowing interviews where the researcher can start by introducing a topic and let the conversation free flow talking about events and behaviours.

Justification for Semi structured interviews

The researcher was motivated to use semi-structured interviews consistent with the purpose of the research, where the aim is to obtain comprehensive information about the phenomenon. Use of semi-structured interviews were considered appropriate as the study sought to extract data guided by the research objectives which formed the list of interview questions. Further, the researcher was seeking to gather information on feelings, experiences that cannot be easily obtained from the other methods. The key strength of semi-structured is the undiluted focus on the individual which provides a detailed subject coverage and understanding of the research context by offering opportunity for clarification on complex issues (Ritchie & Lewis 2003).

Data collection procedure followed

The researcher conducted one-on-one face-to-face semi-structured interviews, in English, through posing open ended questions. The researcher approached the participants in advance through email communication with an attached participation letter (see Appendix B) which explained the purpose of the study. Once the potential participants agreed to participate, the researcher scheduled interviews

meetings based on the availability of the individual participant. On the day of the interview before the interview started the researcher gave a recap of the purpose of the study, assurance of anonymity, voluntary of participation, and an explanation was given again of what is meant by enterprise mobility. Thereafter, the participants were requested to consent to digital recording and were assured that the purpose of the recording was for transcription purposes only. The interview recording commenced only after the potential participant had agreed to start. Once the recording started the researcher used an interview guide (see Appendix C) and digital recorder to assist with collection of the data. The interviews were all performed in meeting rooms at the bank's premises. Each interview lasted less than thirty minutes. All the interviews were done during working hours (7am - 4pm) as per participants' availability.

3.5.5 Interview Schedule

An interview schedule used as a research instrument guide (see Appendix C), was developed to assist in conducting the semi structured interviews. The aim of the study was to understand and determine how enterprise mobility applications systems may be used in a banking environment. Hence, the interviews sought to seek out what influences individual employees to use and not use Enterprise Mobility applications. The interviews focused on individual employee work tasks, current nature on use and non-use of enterprise mobility, individual attitude towards adopting Enterprise Mobility, and lastly employee perceptions on fit between their work tasks needs and the available technologies to utilise enterprise mobility. The themes of the interviews were informed by the research objectives.

3.6 Data Analysis Strategy

3.6.1 Qualitative Data Analysis

Qualitative researchers have been criticised of magically arriving to conclusions without providing clear information on how they worked through their data and arrived at conclusions (Oates 2006; Braun & Clarke 2006). Regrettably qualitative data analysis comes with inherent difficulties as words have different meanings and must be taken in context of other words that were said (Oates 2006). Qualitative data analysis approaches are noted to be incredibly complex, diverse and nuanced (Braun & Clarke

2006). For these reasons, it is important for researchers to clarify what assumptions informed their analysis and how they went about analysing the data (Braun & Clarke 2006).

Unlike quantitative data analysis, there is no single accepted methodology or procedure of analysing qualitative data (Ritchie & Lewis 2003). How researchers carry data analysis differs due to several factors such as: research purpose, the status of the data and primary focus of analytic process (Ritchie & Lewis 2003). Some common qualitative data analysis types in social science research are discussed in the next paragraphs:

Content analysis – involves logical analysis of the content of a text where both the content and context of documents are analysed.

Grounded theory - The goal of grounded theory is to articulate relationships between the themes or constructs identified with the aim to generate a plausible theory that is grounded in the data (Floersch, Longhofer, Kranke & Townsend 2010; Braun & Clarke 2006). It involves identification of relationships between analytical categories and their dimensions till the data is saturated and cannot form new themes (Ritchie & Lewis 2003; Braun & Clarke 2006). The understanding is that researchers must set aside preconceived theoretical ideas and let the data speak to the researcher about emerging theories (Bhatachejee 2001; Ritchie & Lewis 2003; Braun & Clarke 2006).

Thematic analysis – allows researchers to see patterns (themes) in the collected data and is commonly used in the qualitative method analyses (Ritchie & Lewis 2003; Braun & Clarke 2006). Due to pre-existing theoretical framework associated with this study, thematic analysis was adopted, and it is explained in detail in the next section.

3.6.2 Thematic Analysis Method

Thematic analysis offers a flexible and useful research tool for analysing qualitative data and it is argued that it minimally organises and offers a detailed account of the collected data (Braun & Clarke 2006; Floersch et al. 2010). It should be noted that, thematic analysis is only a method of analysing data and not an approach to conducting qualitative research (Braun & Clarke 2006). Thematic analysis can be used in many of theoretical frameworks and to different qualitative research approaches which makes it a

flexible method of analysing data. This gives it its strength of accessibility and flexibility as it is not attached to any pre-existing theoretical framework or research approaches (Braun & Clarke 2006). Thematic analysis involves systematically identifying and analysing data sets and offering insight into themes within the data collected. Thematic analysis allows the researcher to identify what is common and meaningful in relation to the research question and phenomenon being explored (Braun & Clarke 2006). In this study, the purpose of the analysis is to seek and identify patterns or themes that are relevant in answering the research question.

Identification of Patterns (Themes) in Thematic analysis

In thematic analysis, themes or patterns can be identified either inductively or deductively (Braun & Clarke 2006). In inductive or 'bottom up' way the identified themes are strongly related to the data (data-driven) and precludes the researcher's theoretical interest in the study similarly to the grounded theory. Then, in deductive or 'theoretical' thematic analysis, data coding and analysis is 'top-down' meaning the identified themes are guided by the theoretical or analytical interest of the researcher in the field (Braun & Clarke 2006). This study follows deductive or theoretical thematic analysis, as pre-existing theoretical framework informed identified themes. It is important to emphasise that deductive analysis also known as thematic analysis followed to do the data analysis is distinct from the deductive research approach underlying epistemology assumption of theory testing. Here deductive (thematic) analysis is used to reference how themes or patterns were identified in the data deductively (also known as 'theoretical' thematic analysis). In this study, the researcher's aim was to collect and analyse data guided by pre-existing theoretical framework to determine the use of enterprise mobility application systems. The research objectives formed the themes for the data analysis and were guided by the theoretical framework.

Thematic Analysis Process

While thematic analysis is broadly used, there is, however, no consensus regarding the process and procedures of carrying out the analysis (Braun & Clarke 2006; Aronson 1995). Since thematic analysis is a flexible method, researchers must be clear and explicit about what they do, and the analysis should match up with what they say are doing (Braun & Clarke 2006). In this research, the data analysis was guided by a step-by-step guide from Braun and Clarke 2006 which involved continual moving back and forward through the analysis process. The comprehensive nature of the process followed is explained in the following sections.

Step 1: Data familiarisation: In this step the researcher manually transcribed each interview after every recording before attempting to interview the next participant. Listening to the initial interview gave the researcher a chance to rearrange the sequence of questions to enable a logical flow of the interview. As the researcher listened to the data, patterns arising from the data were picked before coding process begun. After transcribing all the interviews, the researcher studied the transcripts of interviews by active reading and re-reading searching for meanings, patterns and noting down important issues arising from the data. Though the sample of 11 interviews was smaller, transcribing and re-reading of data was time consuming due to time limitations of the research.

Step 2: Generation of initial codes: After the data familiarisation the researcher produced initial codes from the collected data. Codes are the founding blocks of analysis and helps the researcher in identifying and providing labels for a data feature (semantic or latent content) that is potentially relevant to the study. Semantic or latent content gives the level of identification of themes. Semantic identifies the themes within the surface where the researcher does not look beyond what the participant said. In contrast, latent level goes beyond seeing underlying ideas or assumptions. In this study, codes were generated at semantic level due to the time limitations of the study.

Coding was done through ATLAS.ti a software used for qualitative data analysis. The initial codes were guided by themes obtained from the study objectives and research questions hence coding was 'theory-driven'. The researcher coded everything relevant to the research question and the data considered irrelevant was not coded; further some data extracts were coded more than once as they were relevant to different themes.

Step 3: Searching for themes: A theme is a patterned meaning in the data set that abstracts something important in the research question, "it represent some level of patterned response or meaning with the data set" (Braun & Clarke 2006). As the coding was theory driven, coding was guided by the research objectives where the codes were sorted and outlined into candidate themes based on the research objectives. The researcher's outcome of this stage was a collate of all the data extracts relevant to the four main themes as per research objectives.

Step 4: Reviewing themes: The process involved reviewing the themes in relation to collated abstracts of data checking if there is enough meaning in the data about the theme. The process involved reviewing all the extracts collated for each theme to check whether they form a coherent pattern. Data

extracts that were considered not to fit the theme were removed and additional data missed earlier were coded. The process also considered the validity of individual themes relative to the entire data set, checking if the theme "work" in relation to the data set. Hence, the researcher identified the themes across the content of what participants said and not via the questions they were asked. The aim was for the themes to capture the most relevant and important data extracts in relation to the research objectives.

Step 5: Defining and naming theme: The researcher defines and refines the themes and analyses the data within the themes at this stage. In this study, at this stage the researcher already had defined themes from the research objectives. The researcher looked at the "essence" of each theme and determined which aspect of the data set does each theme captures. Because the themes were from pre-existing tested theoretical framework no analysis was done to see if these themes overlap or have clear focus as these themes were analysed and tested by previous researchers. The analysis that was done, was to check that the themes offer a coherent story about the data. The data was analysed and related to the broader research objectives as discussed in the next chapter of data analysis.

The objectives of the study formed the themes of data analysis as they represent or addresses something relevant to the research question. Braun and Clarke (2006) suggest the use of an informative, concise and catchy name for a theme. In this study the identified themes were named as:

- Theme 1: Tasks Characteristics
- Theme 2: Technology Characteristics
- Theme 3: Individual Characteristics
- Theme 4 - Task-Technology Fit

Step 5: Producing the report: The final stage involves the write up of final analysis of data findings that relates to the research question. With qualitative research the researcher does not analyse the data and then write up a report, the process is interwoven (Braun & Clarke 2006). Hence, in this study the researcher simultaneously analysed and write up which is discussed in the following chapter. In the write up, the researcher put effort in presenting the themes, providing a compelling story about the data by going beyond data description making an argument about the collected data that addresses the research question.

The thematic analysis process followed is summarised in Table 4 below as per an extract from (Braun & Clarke 2006).

Table 4: Summary of step by step of thematic analysis – adapted from (Braun & Clarke 2006)

| Phase | Description of the process |
|---|--|
| 1. Familiarising yourself with your data: | Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas. |
| 2. Generating initial codes: | Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code. |
| 3. Searching for themes: | Collating codes into potential themes, gathering all data relevant to each potential theme. |
| 4. Reviewing themes: | Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis. |
| 5. Defining and naming themes: | Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme. |
| 6. Producing the report: | The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis. |

3.7 Evaluation of Methods Adopted

This section evaluates the methods adopted for the study to ensure rigor.

Reliability and validity play a great deal in all research methods, however, the rejection of reliability and validity in qualitative research has brought a crisis and a shift for “ensuring rigor” (Morse, Olson & Spiers 2002). Without rigour research is worthless. A set of criteria and standards alternative to reliability and validity has been established by Lincoln and Guba (1985) with concepts of trustworthiness, credibility, transferability, dependability and confirmability. However, other scholars have argued that the term ‘reliability and validity’ must be maintained whether quantitative or

qualitative approaches are used. Their argument is on the premise that to validate is “to investigate, to check, to question, and to theorize” which are all integral activities of qualitative inquiry that assures rigor. Further, work on concepts of trustworthiness by Lincoln and Guba (1985) received extensive criticism from researchers, even by the authors themselves (Morse *et al.* 2002; Oates 2006). The argument is that “While strategies of trustworthiness may be useful in attempting to *evaluate* rigor, they do not in themselves *ensure* rigor. While standards are useful for *evaluating* relevance and utility, they do not in themselves *ensure* that the research will be relevant and useful” (Morse *et al.* 2002).

In this study, to actively ensure rigor the researcher adopted use of verification strategies in the investigation process as described by Morse, Olson and Spiers (2002). Verification strategies help the researcher to determine when the research process should be continued, stopped or modified to attain reliability and validity and ensure rigor (Morse *et al.* 2002). It is suggested that, if the principles of qualitative investigation are followed, the analysis will be checked, ensured and confirmed by the verification process to ensure reliability and validity. The strategies followed were; investigator responsiveness, methodological coherence, theoretical sampling and sampling adequacy, active analytic stance and saturation. Each of these are discussed below:

Investigator Responsiveness

The researcher’s objective was to be responsive through the entire research stages such as listening to the data, using instructions to guide in decision making rather than simply following instructions. The researcher applied her capabilities to the best of her skill such as being creative, sensitive and flexible. Morse, Olson and Spiers (2002) posits that “Research is only as good as the investigator”, this speaks to summation of this study.

Methodological Coherence

The researcher methodically evaluated the harmony between the research question and the method which then compliment the data and the analytical procedure. As qualitative research is iterative and not linear, it entailed repeatedly refining the research question, objectives and themes as the research unfolded. Thus, aiming for a fit between the methods and analytical goals of the research question, with each component verifying the previous.

Appropriate Sample

A purposive sampling strategy was adopted, where participants who possessed the desired characteristics were selected. The main characteristics that was considered was based on: employee tasks characteristics that did not require customer facing, employees who could provide key information about use of enterprise mobility applications systems, and participants willingness to participate. The sampling strategy objective was to ensure that the collected data had enough data to answer the research question. Hence, the sample size was determined by the emerging patterns of evidence where the researcher stopped once saturation and replication of categories was reached. The sampling process was carried out in accordance with the sample matrix presented in section 3.5.2 Table 2.

Collecting and Analysing Data Concurrently

Here the researcher collected and analysed data concurrently thereby giving a chance to repeatedly review the interview questions and the objectives of the study.

Thinking Theoretically

The researcher was cognisant at applying the skill of thinking theoretically. Here the researcher was reconfirming and verifying ideas emerging from new data with ideas presented already from collected data. The idea was for the researcher to attain rigour by continuously checking and validating emerging ideas and building a solid research report.

Theory Development

The researcher aimed at inductively deliberating on the collected evidence to arrive at conclusions. The theoretical perspective of TTF guided on how the study can be informed. The objective was to contextualise TTF in context of enterprise mobility to gain a close understanding of the context of the research.

Having looked at the research methods and evaluation of the methods, the next sections details the ethical issues considered.

3.8 Ethical Issues Considerations

For research studies, it is imperative to consider ethical issues on how everyone involved, directly or indirectly should act or be treated during research (Oates 2006). The study involved the researcher, members of the university academic community, the organisation's representatives of the case study and its selected employees (few participants). To ascertain acceptable research ethical considerations, this study undertook strict observation of the university's code of ethics and conformed to the organisation's code of conduct. Ethical considerations undertaken for this study are briefly discussed below:

University's Code of Ethics

The study conformed to the ethical standards enforced by the University's Human Research Ethics Committee. For all researches, where participants are human subjects the university requires that an ethics clearance letter be issued before data collection can start. The process entailed submitting the research instrument, details of how participant's rights will be protected, consent letter from the organisation and other documentation to meet the university ethical requirements. The research was approved (protocol number: CINFO/1196) and an ethics clearance certificate was provided (see Appendix A).

Organisation's Code of Conduct

To ascertain conformity with the organisation's code of conduct regulations, the researcher obtained consent letter from the organisation's representatives. This process entailed, informing the organisation of the line and purpose of the research, the details of the research, the objective and requirement for employees' participation. A consent letter from the organization was presented to the university ethics committee.

Right to Privacy

In this study, participants were informed in advance through written and verbal communication before conducting the interviews. Anonymity and confidentiality were guaranteed by informing participants and the organisation that a pseudonym (false name) will be used if there is need to quote the participants or the organisation in the study.

Informed Consent

In this research, participants had the right not to participate whether as an individual or as an organisation. Participants were informed that they voluntarily participate and have the right to withdraw even if they were halfway through the process of participating in a research. In this study, the participants were verbally informed of their right not to participate and to withdraw. Participants and the organization were informed about the purpose of the research, the research details, the interviews and the use of their data.

Protection from Harm (emotional and physical)

In this study, everyone involved; the organisation, participants and academic community was informed that no-foreseen harm was anticipated since the study did not solicit or invoke any personal emotions. The interviews objectives were to seek work tasks, experience and attitude towards Enterprise Mobility application systems and nothing personal was asked during the interviews.

3.9 Chapter Summary

This methodology chapter discussed assumptions and justification underlying the research approaches chosen. The chapter opened with a discussion of different research approaches. The study was based on the interpretive paradigm employing qualitative inductive research approach. The research strategy of descriptive case study was then discussed giving detail of the social context of the case. The chapter then provided the research design detailing employed data collection method of interviews. Thereafter, the data analysis strategy was discussed. Next, a discussion of evaluation of methods employed to ensure rigour of the research was discussed. Lastly, the observed ethical procedures were presented followed with this summary section ending the chapter. The next chapter, through conforming to the discussed research methodology, presents and narrates evidence collected.

CHAPTER FOUR (4)

DATA ANALYSIS, DISCUSSION AND INTERPRETATION OF FINDINGS

4.1 Chapter Introduction

In the preceding chapter the research methodology was discussed explaining how the research was conducted. In this chapter, the collected data is analysed, discussed and interpreted. The chapter starts with an overview presenting how the findings were discussed. Then, a discussion of the collected data will be narrated grouped into patterns of quotations extracted from the interview transcripts. Thereafter, an interpretation of the findings through the lens of TTF theoretical framework and research questions is explained citing elements that were found to be relevant in influencing enterprise mobility. Lastly, a revised conceptual framework in the context of enterprise mobility is presented.

4.2 Data Analysis and Discussion of Findings

4.2.1 Overview of the Discussion of Findings

The data collected through semi-structured interviews from the 11 participants within the organisation is analysed and discussed in the following sections. The discussion of different themes followed the process of first stating the objective and related research question, then presenting data extracts (responses) from participants that captures something essential in relation to the theme. The responses from participants are discussed in narrative form in relation to the theme. These response extracts are captured in “Times New Roman” font. The researcher analysed data extracts across the content of what participants said and not purely via the questions they were asked as the themes were presented not solely from the questions asked. The aim was to consider the different themes in relation to the entire data set and not solely in direct questions asked. Data that emerged for each theme is narrated in below sections.

4.2.2 Theme 1- Tasks Characteristics

Research objective: To analyse the nature of individuals' tasks in a South African banking environment.

The theme sought to extract the nature of individual tasks within the organisation. It aims to answer the secondary research question: "How do *tasks characteristics* influence the use and non-use of enterprise mobility application systems by individuals in a South African bank?" As per purposive sampling strategy employed, the participants were selected based on the characteristics that they are not customer facing when performing their tasks. The nature of tasks that emerged is presented in below section.

Nature of tasks

In discussing the nature of work tasks, the participants presented the role positions and tasks they do. The discussions of employee tasks in essence were the ice breaker of the interviews. Several participants from different roles summed up their tasks and explained:

Nicky: "so, I do MIS right, so basically its business intelligence so what I deal with a lot is data management and analytics. So, I focus mainly on data analytics reporting, dashboard designs for decisions makers to make better decisions. So, yah that's what I do".

Nicky indicated that his role involves Management Information Systems (MIS) business intelligence, where his duties are to do with data analytics.

Tonie: "so, my title is head of quality assurance ummm (pause)... so, I look after the testing teams and systems analyst teams. So ummm (pause)... my day to day task involves attending meetings with stakeholders for projects, interviews for new resources, meeting with vendors to discuss possible solutions on projects, ummm (pause)... analysing documents, analysing test cases and there is meeting such as Stercos, Mancos, Excoco along those kinds of lines".

Tonie indicated he heads the quality assurance department and mostly his job tasks involve attending meetings mostly.

Miss Phee: "Okay, I am an administrator for law..., so what I basically do my daily task is to prep the legal documents that attorneys use. So, I would basically prep them and have them scanned and

check if everything that is scanned is what's on the document or the file. So, we basically index, we transforming paper format to electrical format. So, that's what I basically do".

Dhee: "my position is uhmm... obviously, a broker of all functions for commercials or companies. So, what we do is ...uhmm... I am not part of sales I am part of the administration, so we like do your endorsements to quotes, to new business all paperwork I can say like that but obviously electronically, I do that. So, you can say administration broker of all supporting functions".

Miss Phee and Dhee have indicated they are both administrators but from different departments.

Keith: "our daily tasks, basically we capture income that comes into our bank account. We capture commissions, we do client refunds for insurance purposes".

Keith referenced his tasks speaking on behalf of his team, who are in operations department.

Sello: "so, the main tasks are basically analytics, continuously analysing data with obviously routing of leads, checking the volumes, and managing the relationship with digital as a whole for the channel".

Sello was from the sales team and is involved in analytics of sales leads received and routes the leads to the appropriate teams.

Mimie: "oh okay, so within the project management office as Business analyst my core tasks essentially is to understand a requirement in terms of what the business objective is. And after understanding that requirement I design or build a solution that either proposes a process that allows business to mitigate or fulfil that requirement. So in essence a lot of my work is a lot of material reading a lot of engagement with different stakeholders in terms of either one who is giving me the requirement and secondly the one who is going to perform action thereto."

Mimie was BA from the business project management department and she enthusiastically detailed her daily tasks as a BA, and continues by saying;

"So, in my day-to-day my day is starting at looking at requirements of specific projects understanding who are my stakeholders are and then kicking off specific engagements in terms of either solution design, requirement analysis and putting that together into a business requirement. So essentially daily what I am doing is trying to source analysis and data for me to give a best

possible solution in terms of what it is of the business need I am trying to either fulfil or mitigate by prescribing processes within operational areas”.

Sheila: “okay, here in our department, we open up credit cards from start to end. We have our indexing team where the documents come in from different channel, we classify the documents and we tell the system what we actually have and the system has like a document matrix in the background and the system will actually decide where the application needs to go to..”

Sheila gave different job tasks performed by sales administrators or agents for the teams that she works with.

Theme 1 Findings Summary

The findings indicated that the nature of tasks in a banking environment is very diverse. The data presented, indicates that some employees can work from anywhere. No detailed discussion of the collected data is presented under tasks characteristics theme as the data simply indicated in general on what the employees do in a banking environment.

4.2.3 Theme 2- Technology Characteristics

Research objective: To analyse the nature of use and non-use of enterprise mobility applications systems by individual employees in a South African banking environment.

The theme sought to present current nature on use and non-use of enterprise mobility in the organisation. The aim of the theme was to answer the secondary research question: “What is the nature of use and non-use of enterprise mobility application systems in the South African banking environment?”. The sub question was to gather the current status quo within the bank to understand how the technology influence use or non-use of enterprise mobility applications systems. The evidence presented by technology use characteristics theme is interpreted below.

Evidence of non-use of enterprise mobility application systems

In discussing technology characteristics to understand current status quo of enterprise mobility some participants indicated non-use. For example, Sheila (Sales administrator) commented:

Sheila: “No, currently there is no one who is working from home, all of us we work from here in the office”.

When Sheila was asked why they are not able to work from home or anywhere she responded:

Sheila: “uhmm... it was never implemented on our side or it was never brought up ... uhmm ... to ask people as to whether they can work from home or do they like to work from home from our department. But apparently, there are other departments that has already started and they are busy rolling it out, but they haven’t gotten to us. But I think for our (names a team) ...and (names another team) teams it is possible that we can work from home because we only work with documents on our application systems”.

The indication of non-use of enterprise mobility was also emphasised by Dhee (another sales administrator from different division with Sheila) who stated:

Dhee: “Ok, with working from anywhere uhmm at the moment I wouldn’t be able to because we haven’t been given the necessary tools to work from home”.

Non-use was further indicated by Miss Phee (Legal administrator) who commented:

Miss Phee: “Yes, we don’t use laptops, and yah its basically like that we can’t work from anywhere other than the office”.

These remarks were also supported by Keith who stated:

Keith: “no, all of us work from the office, because most of my staff still use desktops, but we going to change that come new year, so all of them will have laptops.”

Evidence of use of enterprise mobility application systems

Discussions with other employees who are in other support roles such as IT and HR on the same matter of current status quo of enterprise mobility, revealed that some employees are utilising enterprise mobility. For example, Tonie (Head of Quality Assurance) stated:

Tonie: “Yah yes, so I think my area is very flexible and the nature of my job allows me to work remotely. So, I do work from home quite often ummmm... also, when I have meeting with vendors I can work off-site at their offices which is being quite handy. Yah in terms of interviews and meetings we have Skype for business video conferencing... I can just dial into a meeting so it does

not really impact me from that perspective. Or even if I am presenting I can still hook up my presentation into the board room where everyone is and I can still chair the meeting or present”.

Tonie’s comments suggested that he is fully utilising enterprise mobility and his sentiments are supported by Sello (from Sales department) who succinctly said:

Sello: “I have already adopted and adapted”

Mimie (from business operations) also indicated she is utilising enterprise mobility and commented:

Mimie: “so I will start with the first one, currently we do use enterprise mobility we can work from home. But the basis is of where it’s on a day I have actually done all my requirements gathering and analysis which means I have met all my stakeholders and now I am putting it into a document. So, those are the only instances where I can work from home”.

Mimie’s comments above presents evidence that suggest that though she can work from home, its only for certain instances. Another participant also indicated her department can work from home on certain instances and explained:

Kathy: “so ummm right now(pause)... there is that option to work from home if you have got challenges, but it’s not something that we driving. Because it’s not like a bank wide thing, or maybe to say from a (names department) perspective, to say open up that window to say work from home. But with the tools that we got and as part of governance we have access to VPN and the VPN allows us to access all banking systems”.

When Kathy was probed to clarify if they can access all banking applications including *Mainframe System** she responded:

Kathy: “Yes, correct we can access them from home”.

Characteristics of technology used

In discussing technology used, the study was seeking to understand the nature of technologies used in the banking environment. This can be specific systems or a collection of systems to understand what can enable users to work from anywhere anytime. As per contextualised elements, the systems include,

organisational mobile applications, mobile devices, network connections systems such as WIFI, and user support services. When asked about the devices they use, Dhee (sales administrator) responded:

Dhee: “At the moment, we have desktops most of the people on the floor has desktops only, purely managers have laptops at the moment uhmm (pausing to think) ... there are few employees that do have laptops I would not say what positions they are in because I wouldn’t not know, but most of the people on the floor they only use desktops”.

He further clarified that they use soft phones connected to their desktops:

Dhee: “No, we not allowed to use our cell phones for work related purposes.....we use something called soft phone that one that connects to your computer”.

The other administrators supported the evidence that they do not use laptops and only use desktops as well;

Sheila: *“and on our side to classify and index documents we use our PCs”*

Miss Phee: *“Yah, we only use the desktop computer only ... uhmm yes and the scanner”.*

When Miss Phee was asked, what devices they use to communicate with colleagues she explained:

Miss Phee: “We communicate by email to let our manager know which documents we have allocated to the shared drive if they need to view them that’s where they can find them”.

The evidence reveals that those that indicated utilisation of enterprise mobility are using mobile device. For example:

Tonie: Yah, so the devices that I use is my laptop, phone and IPad and it’s the same devices that I use when I work remotely.

Kathy: “yah, alright, ummm.... mainly I just need my laptop and yah that’s about it”

Tina: “so, I use more of my laptop yah and, also I have a team in (names the office).. and a team in (names another place).... and most of the time when I cannot make it to meet the team I use my Skype Business, and we share documents”.

Tee: “So, mainly I will be using my laptop ... umm but then you do get to talk to your colleagues via what’s up so I then get to use my phone”

Mimie: “as business analyst we definitely have to be on laptops because we move between the different offices so if your stakeholders are sitting in Sandton you might have to go there”.

Theme 2 Findings Summary

The evidence presented indicated use and non-use of enterprise mobility technologies within the bank. In answering the secondary research question, the evidence presented no-use, use and the technology used within the organisation. The technology used indicated a mixed bag of technologies that support enterprise mobility and those that do not support enterprise mobility. It was found that non-use was dominated by administrative personnel, and use was found from IT, Business Operations and HR departments. For example, all administrator personnel indicated that they use only desktops and no personal cell phones are allowed for work purposes. The non-use suggested it was more related to the constraint of technology used such as desktops, even though the participants indicated willingness to be utilising enterprise mobility the technologies are limiting. Some indicated they are fully utilising the enterprise mobility and it has been noted to suggest that the technologies in use such as use of laptops support their jobs tasks to work from anywhere.

4.2.4 Theme 3- Individual Characteristics

Research objective 3 - To analyse the nature of individual characteristics towards the use of Enterprise Mobility, in a South African banking environment.

The theme sought to present individual attitude towards adopting Enterprise Mobility. The aim of the theme was to answer the secondary research question: “How do *individuals’ characteristics* influence the use and non-use of enterprise mobility application systems in a South African bank?”. In answering the research question, the evidence presented reflects different individual perceptions on convenience, productivity, travelling costs and personal data usage. The perceptions that emerged for the individual characteristics theme are presented in below sections.

Productivity Perceptions

Participants extracts from below sought to understand individual perceptions on productivity. The data suggested that, when employees are working off premises, they are more productivity and it suggests that the motivation to be productivity influences people to utilise enterprise mobility. For example, a few have explained:

Tonie: “so, I think there is lots of value in working remotely away from office premises especially for my team as well. And, umm ...I have personally seen a lot of productivity with the option of allowing the team and myself working from home”.

Sello: “so basically in my view I did work from home for couple of days and actually you more productive from home” he also commented “how do I put it, I am trying to find the right words... umm it’s just more productive being at home”.

Nicky: “in my case I come very early to work so that I can have that quiet time. I am more efficient during quiet time in the first hour that I am here before people come in I do more than the rest of the day. Because during the day there are lots of interferences, so if you at home in your own office space you will be more effective that way because you will be quiet and more comfortable”

Dhee: “I think enterprise mobility is the best step forward to minimise on costs and to have effective work performance”.

Tee: “I find that when you work in the office there is always lot of disturbances so you can’t really have a schedule that today I am going to do A, B and C. You may start with A and while in the middle of A someone might come and disturb you and ask for something else and then you have to drop that task and help the client (stakeholder) urgently. Whereas if you work from home you can work according to your own pace and do the tasks that you need to do immediately”.

The data extracts presented above, suggests that individual employee’s perceptions are that when employees utilise enterprise mobility, they will be more productivity as there are less disturbances as in working in the office.

Convenience Perceptions

The data suggested that, besides being productive the convenience that comes with working from home can influence employees to utilise enterprise mobility. This argument was presented by participants who responded:

Tee: “yes, another advantage that I like about working mobile is you can work at any time of the day that you like umm you can in the morning could go do your shopping, you can go to the gym umm... do whatever it is that you want to do as long there is nothing urgent and then at night you can cover the work that you have for the day which I enjoy”.

Sello: “... because you able to schedule yourself in the day, so if you know 7 to half past 7 it’s the kids you have that peace of mind to go and drop the kids and come back and you are actually productive”.

Sheila: “But now if you at home you always have that time, for instances there are some guys that start at 7 and sometimes they don’t rock up here at 7 and they will rock up a bit later. But now if you were at home you will be able to start whichever time that you can as long as you notice that you have specific target and this is what you need to do for the day. And even with regard with sick leave and annual you will always have time to go and do your stuff that you need to do because you are at home and you working from home and knowing very well there is things you need to do. Even if you finish your target in the morning and you know during the day in the afternoon or at night you still have time, or you can do your stuff in the morning and in the afternoon or at night you do your daily target and do the hours that you are required to do”.

Mimie: “Because it allows flexibility in terms of when the staff cannot get to work they can still say I am going to work at home. Cause currently what happens is, I then say I am taking family responsibility leave, hence what happens is the organisation will have lost a day and I will have lost a day”.

Tina: “like I mentioned around the high volumes of traffic. So why would you let a person who can code at home or anywhere else to come to the office in town instead of that person waking up in the morning get a shower have breakfast sit at the comfort of his home or in the branch that is nearer to his home and do the work”.

Another angle of convenient that was presented by the responses is of employee safety where there was indication that its safer to work from home as people will avoid civil unrest issues such as strikes and hectic travelling efforts. For example, in saying

Tee: “and for instances when the BCP (Business Continuity Procedure) is invoked working mobile is beneficiary because we can work on areas that are safer. Cause where I work it’s in central business district where there is always civil unrest or strikes and everything leading to traffic and what note. So, then during those instances we are encouraged to work from home therefore guarantying our safety”.

Mmie: “I think security is a big thing, the comfort of working from home and not having to catch a taxi when there are strikes and not having to be locked in the office building when there is strike to protect staff”.

Tina: “ and, also to be risking my life because there are accidents in the roads every day and, just the effect that it does to me, to my heath to be travelling every day”.

The above participants are emphasising the benefit of working from home where employee safety is guaranteed away from public strikes and unrest.

Travelling time and costs Perceptions

The evidence suggests that cutting transport costs might influence employees in utilising enterprise mobility. Several participants commented:

Tonie: “Yah, definitely because we work in the CBD there is lots of traffic, so working from home saves me at least 2 hours travelling time, which then I can use to be productive by working from home. And, also a huge costs savings in terms of fuel, wear and tear on my vehicle yah umm yah”.

Mimie: “ I think there is value for me in terms of if I look at the time it takes for me to commute from home to work and vice-versa, it’s about an hour and over an hour on average for a lot of people in the office. So, if I wake up and my day starts at 7 it starts at 7, I think there is a lot of time spent commuting: 1 between offices and 2 just to get to work. If I don’t have to be sitting at an office desk physically to do what I need to do I think there is a lot of value in me doing it from home”.

Dhee: “they must also think of the cost involved coming to work, and traveling costs. If I am on holiday and I am still able to access my work, for example there is a problem at work there is something that people at work can’t find and I only have. Will they wait for two weeks until I arrive cause that means they will lose a client? So, what’s best is I have a laptop and they can give me a call and I can log to assist with and what they looking for is dealt with, as simple as that”.

Tee. “and, then another benefit for being able to work mobile (is that the word?), umm if you have clients (stakeholders) that are not based at Data Bank* main head offices you might need to travel to meet them offsite. And then umm ...with traffic and the rising cost of fuel and staff we can save time and money if we were to work at any location that suits us”.

Tina: “so, I can trade being home for the data which is just the fraction of the costs for me compared being on the road for two hours a day in the morning and in the evening”.

Sheila: “Okay, for me I think working from home will actually be a great idea uhmm... because you know sometimes uhmm like financial wise it will also be great cause sometimes when getting to work sometimes you late every morning because of traffic. And sometimes they are times when you travel maybe from far to get to the office. Or sometimes things happen on the road or like for instances when you working from home you in your comfort, you sign on, you can do the job. You have that free time as well and I think you will be able to do more than in the office”.

Another angle of travelling frustrations was detailed by Kathy (Sales manager) who emphasised that the CBD is always congested and exhausting leading to high stress levels. She elaborated that travel times eats into family and work time thereby leading to no work-life balance. She thoughtfully commented:

Kathy: “For me the way I see it working from home then talks to the softer issues and not costs in terms of personal issues, maybe to say stress levels are reduced and things like that to say people are getting more sleep and are relaxing in whatever areas. Because there are certain individuals, like for me for example, by half past 4 in the morning I need to be up and preparing for the day preparing for the kids, the kids needs to be up by half past 5 and you normally find the kids are too grumpy because its way to early especially in winter. So, it’s a very stressful situation just preparing to get to work”

Kathy, further expressed her frustrations on balancing daily work and family demands. She further narrated her challenges:

“and then ... (pause) ideally I should be leaving the house by 6 in order to drop the kids at school by at least quarter to 7 in order for me to get to work latest by half past 7. If I miss the 6 o'clock slot to leave the house and something goes wrong in the process. Then it means I am getting stuck in traffic ... everything ... like that whole process is late and by the time you hit the office you already frustrated from how your morning started. And then as you get to the office then you have got meetings and all those things like that to a point that sometimes you don't even get to have breakfast meetings run the entire day you don't get to have lunch and already that's something bad for your health. But if you had an opportunity to work from home those things are managed, you will probably get to have a much more healthier life meaning that in terms of work you delivering quality at all times. Half the time you can't even ... (pause) ... if I am late because I am late doesn't necessarily mean that I need to leave late, because home responsibilities are still there, I still need fetch the kids at certain time. Meaning then from my hour's perspective I haven't given all my hours to the organisation. And then if you continue working from home, that means you eating into family time. So, it becomes this never-ending cycle where there is no work-life balance it does not exist.”

Company Costs Perceptions

Besides the view of employee's savings on transport costs there are perceptions that the organisations will also save operational costs such as electricity and water. The evidence presents suggests that cutting organisation operational costs it might influence organisations to drive enterprise mobility initiatives. In support of this argument some participants stated:

Dhee: “it will be much better because its cost effective, the bank will save more money, you know, they don't have to waste money like electricity, people using like rest rooms”.

Mimie: “For me the biggest one thinking broadly, is the office space is expensive just to have that singular desk that I sit on, the upkeep and maintenance of that is very expensive and its counted per head and if a table has ten chairs whether there is two people who sit there they maintain ten chairs. So, I think the move to enterprise mobility the organisation can down scale and have 'hot desk' versus a physical desk where someone sits I would only need to come in if I need to do a specific

thing that I can't do at home, which for the greater part the organisation is saving on costs there as well".

Sheila: "Okay, uhmm enterprise mobility will be really something great and I think if they do consolidate and everything else it will also save the company a lot of money. Because like for instances when we come in there is a lot of bills that's need to be paid for you as an individual that you are sitting here getting the job done".

Tee. "and, also we have had sessions and maybe it will be mentioned at the upcoming road shows that the bank is always trying to cut costs and if more staff work from home we can cut on train costs and rental fees of desks space, telephones, water, electricity and so forth. And the bank is working towards that that's why they have trend for hot desking purpose"

Need for Human Interaction

Individual perceptions suggested that, there is need to strike a balance between working in the office and enterprise mobility. The data presented suggests that, employees are not ready to completely change from working in the office to move solely to enterprise mobility as they indicated that the human office interaction is also required. In saying:

Nicky: "I would say for me it will have to be mixed then, in a week they will say maybe 2 days' work from home and three days' work from the office. Because there is an issue of knowledge sharing if you work in the office as teams you able to share knowledge and ask each other questions and interact. But if you are far away at home then you are stuck alone if you run into challenges. So, I would prefer it to be mixed not purely enterprise mobility or purely in the office".

Nicky suggest the human interaction is still necessary to facilitate knowledge sharing. This perception was supported by Tina (from HR) who commented:

Tina: "for me that could be the best thing that could happen. If I can be able to work from home at least 3 days, because I still have to come to have that interaction with my colleagues from time to time".

Keith (not yet using enterprise mobility) who manages an operational department indicates that though he is open for the team to work from home he would prefer that the team works some days from home and some days at the office for interaction purposes. He commented:

Keith: “from my side, it will all be dependent on the individuals, then it will be responsible enough, but with the trust factor yes I will trust them to work from home. But not every day, maybe once a week and maybe maximum 2 times a week”.

He added later:

Keith: “ but as I have said not every day I would say 2 times a week. Because you would need to be in the office for meetings and to check up basically on what’s being done”.

Maturity Perceptions

In discussing user’s individual perceptions on enterprise mobility several participants indicated working from home needs individual maturity on whether people will be working or not. The data suggested that individual maturity and monitoring will be required. Sello (from sales department) emphasised that before embarking on enterprise mobility the organisation or departments should do self-retrospectives to assess if they are mature enough. He commented:

Sello: “So, look, I know Thabo*(the CEO) mentioned about working from anywhere hot desking and so-forth, but I think as business we need to ask: are we ready for that change? Is my channel ready for that change? Because I think we need to have courageous conversation. If one is working from home you got have some sort of maturity, right? You are accountable for your work, and you have to deliver and I think it all speaks about maturity are we mature enough now to allow that?

The argument is further supported by Kathy (Test manager) who suggested:

Kathy: “But then it goes again with ... I think times has changed the work ethics is not the same anymore. So, there is people you know if you say work from home.... we not saying be on your laptop from 9 to 3 or whatever, but whatever deliverables you said you will deliver they should be delivered. And there are individuals you can rely on and you know they would come back and their work is done, and there are individuals where you know it won’t be done. And I think it goes back again to the behaviour in the office that determines that work ethics and that builds the trust in

actually saying can I as manager let someone work from home and it's based on the behaviour around the office".

In saying the above Kathy is suggesting that individual maturity differs and management should understand and manage the dynamics that might come with allowing people to work from home. In support with this argument Dhee (sales administrator) weighed in by saying;

Dhee: "working from home it's a bit more convenient, you know, but obviously it also goes according with the type of person, because you also have to be uhmm how do I say it uhmm (pausing to think) ... when you are strict, you know, when you have guidelines like I have to dedicate most of my time to working. You can't just say I am gonna work from home and then you only work for 2 hours and then you doing something else you understand? If you have deadlines, you know, and there are guidelines to the rules of working at home, it will be much better because its cost effective.

In further discussing managing employee maturity in relation to enterprise mobility KPI monitors was suggested to assist managers in motoring employee deliverables. Sello, (from sales department) recommended:

Sello: "so, the key drivers once again, you do have a KPI in place, our Key Performance Indicator where we measure your performance. If your performance is not up to scratch if your performance does not show above a 3 technically you not performing and you should be at work because there is some form of indication that you are not fulfilling your job. Whatever you not fulfilling in the job, your line manager needs to be able to drill down to that one aspect that impacting you to not performing. Then ascertain is it working from home impacting that or it's just another source that's impacting you from not performing".

In support of his assertion, Sello further emphasised that enterprise mobility is working well for other sales teams from other organisation and suggests *Data bank* should also be able to utilise enterprise mobility. He stated:

Sello: "Look so in a nutshell, it depends on the role that you are in that determines if you can work from home. If you look at the sales agent, right, if you look at the sales agent in our environment we require them to be at work, but, if you look at One Life Direct, Auto and General, my sister works for Auto and General she is a sales agent and she is working from home right now. So, she

works from home she does not go to work, she only goes to work I think once or 2 weeks to go for a meeting and she goes back at home after the meeting and she is an agent dial in”.

Theme 3 Findings Summary

The data presented indicated several perceptions that may influence use of enterprise mobility technologies. The elements that were picked include, productivity perceptions, convenience perceptions and reduced traveling costs and time, reduced company cost perceptions, which all indicated influencing use of enterprise mobility. The data extracts presented above, suggests that individual employee's perceptions are that when employees utilise enterprise mobility, they will be more productivity as there are less disturbances as in working in the office. Then the need for human interaction was raised which indicates the participants' preferences of balancing enterprise mobility and working from the office premises. Maturity perceptions were also noted suggesting employees should indicate and exercise maturity so that enterprise mobility can be fully utilised.

4.2.5 Theme 4- Task-Technology Fit

Research objective 4 - To determine the appropriateness and fit of enterprise mobility applications systems to individuals' tasks, in a South African banking environment.

The theme sought to extract and present employee perceptions on fit between their work tasks needs and the available technologies to support enterprise mobility. The aim of the theme was to answer the research sub question: “How do appropriateness of task-technology-fit influence the use of enterprise mobility application systems by individuals in a South African bank?”. Discussing holistically the data that emerged within tasks, individual and technology characteristics (task-technology fit) is presented in below sections.

Data Costs Constraints

The evidence presented suggest, that though employees might have the appropriate devices for enterprise mobility such as laptops, however, data costs is one of the hindrances to utilise enterprise mobility. Enterprise mobility technologies include mobile devices, applications and network connections capabilities, thus, with the constraint of data it limits the available technologies to support enterprise mobility. Employees will not consider utilisation of enterprise mobility if the available

technologies do not fully support the tasks at hand. One of the participants indicated that though bank provides their department employees with data it is still not enough. She commented:

Tee: “so at work in order to connect to the internet they have provided us 3Gs for a month I think we get 500MB which is not enough to survive you the entire month. So, I would say there isn’t a fit between the amount of data that they give us and the tasks that we have to accomplish if we to work from home permanently. So, we do find ourselves having to go to the office if did not have enough data. But fortunately, most people in the office have WIFI at home and that’s how they are able to work from home”.

She further added that sometimes in addition to the data provided and using personal data still it’s not enough to support working from home or anywhere:

Tee: “...so, some people they do use so much data that they use all the allocated data and they use home data but then it’s still not enough”.

Other participants raised the same concern and further commented;

Tonie: “and I think that might be a stumbling block for me if they ask me to work for a week from home, umm you know it’s gonna use a lot of my data and you know in South Africa data is very expensive. So, in terms of adoption I think data issues ummm ... personally that’s something that could block working from home”.

Tonie, indicated that in his department the tasks are data intensive. He further elaborated;

Tonie: “these applications like the HP tools are quite data intensive and it needs a lot of bandwidth and very quick internet access but as well it eats a lot of data. So, spending 3hrs on for example on ...ummm Selenium or one of the automation testing tools can eat as much as 10GB of data. And the difference there, is the bank only allows us 2GB on our modem, so it means me using my personnel data for that task”.

Mimie, a business analyst also expressed her concern about non-compensation of data and said:

Mimie: “the one concern that I have is currently even if I say I am working from home there is no compensation thereto from the bank for instances it is my data that I will have to use”.

The evidence suggested that, employees will not be motivated to adopt enterprise mobility if it entails paying for the data themselves. Dhee, a sales administrator who is currently a non-user of enterprise mobility technologies, when asked about his opinion on working away from office premises with the possibility of using own data he had this to say:

Dhee: “uhmm I think using personal data it wouldn’t be good, because employees wouldn’t want to work for long time in an effort to save data, they will try say if I am using my personal data I need to cut back because now I am paying for it and this is for the company. You understand? If it was vice-versa where the companies dedicate data or let’s say for example they give employees a modem. And that modem is purely used for work purposes and they can actually track if an employee is not using it for work, then that’s a different story. Then if I am given a modem as an employee I won’t have an excuse of for being deterred to work because I have all the necessary tools that will enable me to work yah and let me get my work done”.

Some participants indicated use of personal data is not a constraint to them as they have unlimited fibre connections at home. For example, Sello commented:

Sello: “I don’t find it being an issue because I have unlimited Telkom in terms of unlimited Fibre, so for me it’s not really an issue”.

Mobile Devices Constraints

Further evidence presented with the task-technology fit theme, is that in some departments the devices used do not support enterprise mobility. Some employees use desktops computers even though their tasks don’t require them to be bound to the office premises. Non-utilisation of enterprise mobility was presented as more to do with non-availability of enterprise mobility technologies than to do with individual user perceptions or tasks. This was evident from data extracts from support roles such as administrators where a few commented;

Dhee: “ok, with working from anywhere uhmm at the moment I wouldn’t be able to because we haven’t been given the necessary tools to work from home. If we had laptops of course, people could work from home because some people are doing it, like if my manager is sick I can still get through to him cause with his laptop he can assist me whenever I need help. So, we can work from

home but we just are unable to because we haven't been provided with the necessary uhmm yah equipment".

Keith: "Yes, if everything is available working from home will never be an issue".

Miss Phee: "Yes, we don't use laptops, and yah its basically like that we can't work from anywhere other than the office. But I believe if we were given laptops then we can access the shared drive from the laptops, that's still doable either way".

Sheila: Yes, when we are provided with the laptops and all the applications are installed and you have the data as well, you will be able to work from home.

Some of the equipment that was mentioned as constraints in enabling enterprise mobility include printers and scanners, as mentioned below:

Mimie: "so, it depends on the role within the bank that you fulfil I don't think operational areas will be easy to work from home I will give you a point in case. The people who do the account fulfilment and the quality assurance thereto, even if you gave them a laptop and they were mobile they are certain systems that they use and certain machines for example they scan and print and so forth. It becomes difficult to say they can work from home cause that means they will need to have a scanner and a printer and certain other things".

Mimie (Business Analyst) commented that some of the applications are not accessible from untrusted networks hence defeats the purpose of the technology supporting enterprise mobility. She irritably commended

Mimie: "the only thing I cannot do which is where I stress that enterprise mobility needs to look at my functions and understands what it is that the bank needs to provide me with. For instance, if I want to test at home there are applications that don't allow me access to tests even if I am on VPN, I don't have access to because of certain firewall rules that do not allow certain banking applications through these called untrusted networks. So, this defeats the purpose of me saying testing at home I am faster because I am not getting distracted, but now there is a blocker I can't use my normal WIFI because you can't access certain applications. So, the bank needs to look at some of their applications because they do not support what I would like to do when I am at home".

Tasks Constraints

In discussing tasks-technology fit, besides devices and data constraints noted above some participants indicated their tasks alone might limit them in adopting enterprise mobility. For example, Miss Tee (administrator) stated:

Miss Phee: “But, now the challenge it’s gonna be the documents themselves, because they are in paper format, so if we are to work from home we need to uhmm and its confidential documents that I don’t think they can leave the building or something. So, yah”. She added “yes, I think that’s the only challenge, unless we are allowed to take the confidential documents (laughing) out of the building then it’s doable.

Mimie (Business Analyst) added to the constraint of tasks indicating that though she can work from home other tasks requires her to be in the office:

Mimie: “the problem with us, is our stakeholders are keen to have us physically there with them. So, when you are actually doing the requirement and analysis you cannot work from home you have to be with the stakeholders wherever they are. We have tried doing Skype calling but we find that it’s not conducive in terms of making sure that everybody around the room feels that there is a connection or for instances where there is need to draw on a board all in the meeting cannot see the board drawing. So, the stakeholders are always on caution to do Skype calling, so they prefer the first few meetings to be physical face to face and then thereafter like if you going through a document or document review. But we only use working from home where we have gathered the necessary information and you now starting to do the actual documentation on your BRS and your process flows and so forth, that’s the only time in my current position where I can actually work from home”.

In support of tasks determining if one can utilise enterprise mobility technologies, Sello further emphasised that enterprise mobility is working well for other sales teams from other organisation and suggests *Data bank* should also be able to utilise enterprise mobility. He stated:

Sello: “Look so in a nutshell, it depends on the role that you are in that determines if you can work from home. If you look at the sales agent, right, if you look at the sales agent in our environment we require them to be at work, but, if you look at One Life Direct, Auto and General, my sister works for Auto and General she is a sales agent and she is working from home right now. So, she

works from home she does not go to work, she only goes to work I think once or 2 weeks to go for a meeting and she goes back at home after the meeting and she is an agent dial in”.

Appropriateness ‘Fit’

In discussing employee perceptions on task-technology fit, besides the constraints presented in previous section several respondents indicated that the available technologies support their current tasks even though there is room for improvement on tasks-technology fit. Several participants commented:

Sello: “yes because I am not yeah... how do I put it? Because I am not bound to a desk and, also I am not customer facing and talking to bank customers. The nature of my work I can work umm...I can pretty work from anywhere in South Africa”.

Mimie: “yes, there is a fit between my tasks and technology to support my working away from work office. So, currently because I do not need despairing third party technologies to fulfil my functions especially in terms of the core functions of being a BA which is documenting the requirements. I see a total fit there because I don’t need any specialised tools because it is standard tools that I get on my laptop that are there to do my work”.

Tonie: “Yes, I think most of my work can be done on a laptop, which is also available on my iPad and on my phone. I have been working from home over the last year and I haven’t had any issues accessing a particular application. As long as the VPN was working I have been able to access all my applications that I can access here at office. So, in terms of the tasks-technology fit it works quite well for me”.

Sello: ”so, we using laptops at the moment and Skype for business so that keeps you in contact with the stakeholders. So even if you working from home you still have the Skype functionality if you wanna chat. But the main device and tool is the laptop and the VPN access if you working from home to log on to the bank applications”.

In addition, the data suggests that the bank support enterprise mobility and has turned the office premises to ‘hot desks’ where employees do not own dedicated desks. Further, employees can work from any branch as presented by some of the participants: For example, when asked whether the tools that they have limit them to work from anywhere and anytime, Kathy responded:

Kathy: “No, they don’t ... they don’t ... actually people can actually ... (pause).. if you can’t connect from home you can still go to any Data Bank branch and connect from there and you should be able to log-in from there”.

Another participant agreed to the notion of being able to work from any branch and stated:

Tee: *“other people for example, you know, that they do work in branches instead of travelling to main head offices”.*

Tee further clarified that no one has a dedicated desk by commenting:

Tee: “umm for now where I work they have recently trend or done a trend so that most of our desk are ‘hot desks’, so no one has a desk that is dedicated to them and anyone can sit anywhere that they like. So umm, since there isn’t a dedicated desk for everyone it means that the desks are not enough for everyone. So, the only reason that you should come to work is if you have meetings or if you just want to work in an office space otherwise if you come to work every day there will not be enough space to accommodate every one”.

When asked about the strategic position of the bank on enterprise mobility Tina from HR indicated the bank is still in a process of unrolling enterprise mobility and communication has not yet filtered completely to all employees. She stated:

Tina: Yah ummm (pause).... for me I think it’s still developing in the sense that it is only now that the Exco members at BU level and I stand to be corrected. My feeling when I speak to managers some are still not really clear about how and what it this Exx is all about. But if you look at our HR newsletter it actually describes well this Exx that it is just around changing the way and mindset of employees, of dealing with our customers, just the way of dealing with our people, the way of managing our people as well. So, it really integrates everything else that we do as a bank. So, they will be more communication to actually make it clearer to everyone as to what it is all about and how do we get involved to make sure that it really works”.

Technology Improvement

It emerged from the data that though the bank support enterprise mobility initiatives there is room for improvement. For example, some recommended:

Mimie: “So, the bank needs to look at some of their applications because they do not support what I would like to do when I am at home”.

Tina: “...eeh of course for me the only thing that I am still trying to get a balance is around our method of working, this Agile method of working. Which wants people to be there at the board and have daily stand-ups. So how do we get the balance, can we then look at having electric boards where we are all skypeing at the same time and put those stickers on boards, but should be electronic boards. So, those are the things that I am still being battling with, but I do not see a reason why people cannot work anywhere”.

In her concluding remarks Tina re-iterated her recommendations:

Tina: “I think I have covered everything, the only concern as risk for me is around Agile, and the boards. I think somewhere we have to think differently about these boards that we do not necessarily have to be there and put a sticker. If there is technology that can move these stickers and as an employee I can write and share with the team that this is what I am doing, why don’t we do that on VC”.

Another participant suggested for organisations to put security measures in place with regards to employee personal data. He recommends:

Tonie: “umm I think the only other sort of umm (sighing) item that I can think about is the whole of the security factor in terms of the organisation especially when you are using your personal devices. I think it’s important for the organisation to make sure they can control that part of it. For example, if you are accessing your emails then the organisation must ensure that they have options in place where an employee makes sure the password is strong and one changes password every month. And what types of information you use via that email, because you know you are also using personal information”.

Further, another participant suggested improvement on technologies so that the underlying technology can scale to support tasks such as printing and scanning. She suggested:

Miss Phee: “uhmm...its actually related to the work I do, maybe a suggestion, remember on the documents I said.... you asked me how do we receive them. So, they are emails mainly being printed out, so in terms of advancing technology. If we can have a system. Instead of having the emails printed out to whatever that has been sent into paper format cause now we want to transform it into electronic. Instead of having it printed out maybe have it scanned out or something like a scanning system directly from the email into a PDF formats. Thereby saving paper saving time and then put it into the shared drive that we need to keep it into. You understand what I am saying..... yes, maybe that’s a suggestion as solution to minimize paperwork so that we can work from anywhere and all that.

Another recommendation presented was to improve on monitoring matrices so that employee’s tasks can be monitored while working away from office premises. For example, one suggested:

Kathy: “Yes, so I think then it would mean on our side we have proper matrices in place and tools to actually monitor, you understand? But then again even the tools you know does it mean with the tool take for example with VPN you can actually see how long a person was logged on for”.

The emerged data, suggests there are areas for the bank to improve on technologies so that employees who are keen to utilise enterprise mobility technologies are holistically supported by the technologies.

Theme 4 Findings Summary

The data presented indicated several elements that may impacts task-technology fit. To answer the secondary research question, the evidence presented suggested that negative issues such as data costs, mobile devices constraints and certain tasks constraints inhibits employees to fully use enterprise mobility technologies. Also, emerged data suggested that in certain areas there is harmony between the tasks and technologies to support utilisation of enterprise mobility. Data costs constraints, mobile devices constraints and tasks constraints all indicated these constraints influences non-use of enterprise mobility. The evidence also presents that in some areas or job roles the users are finding a fit between tasks and technologies and the participants are utilising enterprise mobility. The data suggested areas of improvements on the underlying technologies capabilities that may influence use of enterprise mobility technologies.

4.3 Interpretation of Findings and the Conceptual Framework

The previous sections discussed the findings, in the following sections the findings will be interpreted in relation to literature through the lenses of TTF conceptual framework.

4.3.1 Findings Summary

The findings narrated in previous sections offered some patterns (themes) within the data and the substantive significance of these patterns were analysed relative to the conceptual framework and the research question. Floersch, Longhofer, Kranke and Townsend (2010), suggest that ‘substantive significance’ of a theme refers to its consistency across and within participants and not to its frequency. Thus, in this study, the significance (importance) of a theme was determined by its consistency and strength across participant’s emphasises on the importance of the elements in relation to enterprise mobility. The next Table 5 summaries the interpretation and the significance or strength of elements in relation to the use of enterprise mobility applications.

Table 5: Summary of findings and their significance in influencing the use of enterprise mobility

| Element | Extent and influence |
|--|--|
| Tasks Characteristics | |
| Location constrained | |
| - Branch Operations Tasks (e.g bank tellers) | Substantial and influential to non-use |
| Time constrained | |
| - Sales Tasks | Substantial and influential to non-use |
| Location and time unconstrained | |
| - Business Operations Tasks | Substantial – with some task’s constraints influencing non-use |
| - IT Tasks | Substantial and influential |
| - HR Tasks | Substantial and influential |
| Technology Characteristics | |
| - Mobile applications | Substantial and influential |
| - Mobile devices | Substantial and influential |
| - Network connections systems | Substantial and influential, with data constraints influencing non-use |

...Continued: *Table 5: Summary of findings and their significance in influencing the use of enterprise mobility*

| Element | Extent and influence |
|---|-----------------------------|
| Individual Characteristics | |
| - Convenience Perceptions | Substantial and influential |
| - Productivity Perceptions | Substantial and influential |
| - Travelling Costs Perceptions | Substantial and influential |
| - Data Costs Perceptions | Substantial and influential |
| - Safety Perceptions | Moderately influence |
| - Human Interaction | Moderate influence |
| - Maturity Perceptions | Moderately influence |
| - Company Costs perceptions | Moderately influences |
| - Experience | No influence |
| Task-Technology Fit Characteristics | |
| - Appropriateness of Tasks Characteristics | Substantial and influential |
| - Appropriateness of Technology Characteristics | Substantial and influential |

Table 5 showed the importance or strength of elements in relation to the use of enterprise mobility applications in a banking environment and will be discussed in the next section of interpretation of findings.

4.3.2 Interpretation of Findings Relative to the Conceptual Framework

The purpose of the study was to describe technology use phenomenon, therefore, this study focused on system utilization which is one of the dependent constructs of TTF model. In the next sections, the findings of the research are interpreted in relation to the independent constructs of the model namely: task characterises, technology characteristics, individual characteristics, and task-technology fit.

Task characteristics

Task characteristics elements speaks to the actual execution of actions to perform a task in turning inputs into outputs (Goodhue & Thompson 1995). In this study's context, tasks characteristics refers to the employee's actual work tasks such as requirements elicitation, writing reports, phoning customers, scanning & saving documents, and testing of developed systems. The study focused on individuals whose tasks are not constrained by location for example employees who perform customer facing tasks in a banking hall are constrained by location. The aim was to understand if these non-constrained tasks can influence use or non-use of enterprise mobility. The findings revealed that the nature of tasks influences the use of enterprise mobility. The data suggests that, non-location-based tasks such as IT tasks, HR Tasks and Sales tasks can significantly influence enterprise mobility utilisation. However, some business operations tasks were deemed as constrained-tasks for enterprise mobility such as tasks that require drawing on board, human interaction, printing and scanning documents. These tasks-limitations influenced non-utilisation of enterprise mobility application systems. For example, one of the business operations participants expressed this limitation and stated:

Mimie: “so, it depends on the role within the bank that you fulfil I don’t think operational areas will be easy to work from home I will give you a point in case. The people who do the account fulfilment and the quality assurance thereto, even if you gave them a laptop and they were mobile they are certain systems that they use and certain machines for example they scan and print and so forth. It becomes difficult to say they can work from home cause that means they will need to have a scanner and a printer and certain other things.

Another extract of her comments expressed that other tasks are constrained by the need for a conducive human interaction environment that cannot be achieved by available technology. She concisely expressed:

Mimie: “the problem with us, is our stakeholders are keen to have us physically there with them. So, when you are actually doing the requirement and analysis you cannot work from home you have to be with the stakeholders wherever they are. We have tried doing Skype calling but we find that it’s not conducive in terms of making sure that everybody around the room feels that there is a connection or for instances where there is need to draw on a board all in the meeting cannot see the board drawing.

Technology characteristics

Technology refers to information, hardware and software systems that are used in performing tasks at hand (Goodhue & Thompson 1995). In this study, technology refers to both user support services and computer systems that enables employees to work from anywhere anytime. Basole (2007) suggest that organisations should be technology ready to support implementation of enterprise mobility. Technology readiness refers to the underlying technology that is robust, flexible and scalable to accommodate the changing user tasks requirements.

The findings revealed that technologies such as mobile applications, mobile devices and network connections systems significantly influences the adoption of enterprise mobility. The participants indicated limitations of these technologies hinders adoption of enterprise mobility. Use of desktops and printers was indicated as technology limitation and hinders the use of enterprise mobility. For example, use of desktops was indicated as a hindrance:

Keith: *“no, all of us work from the office, because most of my staff still use desktops, but, we going to change that come new year, so all of them will have laptops.*

Individual Characteristics

Individuals are the actual user of the technologies and may have different characteristics which may influence the user to use or not use the systems (Goodhue & Thompson (1995). In this study, the findings indicate various individual sentiments on the positive effects and challenges of enterprise mobility that may influence use and non-use. The level of adoption of enterprise mobility is depended on the level of employee's readiness (Basole 2007), where readiness refers to employee's attitude and perceived benefits (Junglas *et al.* 2008).

The evidence suggests that, productivity perceptions, convenience perceptions, reduced travelling cost and time perceptions, significantly influence employees to utilise enterprise mobility. Further, the data suggested that individual safety due to being in the comfort of your home, individual maturity and reducing company costs though these elements influences adoption of enterprise mobility, the participants' explanations did not strongly express the elements as more significant.

The findings also suggest that, data costs where individuals are expected to use personal data for work-related tasks strongly influence non-use of enterprise mobility. For example;

Tonie: “and I think that might be a stumbling block for me if they ask me to work for a week from home, umm you know it’s gonna use a lot of my data and you know in South Africa data is very expensive. So, in terms of adoption I think data issues ummm ... personally that’s something that could block working from home”.

Further findings from the data, on individual characteristics suggested that human interaction tasks are still considered important and recommendations for organisations to have a mix bag where employees would be working from home a few days in week and in the office for the other days. The suggestion of enabling working from both the office and home was a consistency comment across participants as in interpreted in previous section.

Lastly, individual experience, training and self-efficacy elements from the TTF model did not suggest any influence as they were not mentioned at all during the interviews. In my opinion, these elements may be irrelevant as neither experience, training and self-efficacy is required in the context of enterprise mobility. Thus, the employees will be doing the same tasks and using the same technologies tools whether they are working from office or home. For example, one of the participants indicated:

Tonie: “Yah, so the devices that I use is my laptop, phone and iPad and it’s the same devices that I use when I work remotely”.

Task-Technology Fit (TTF)

Goodhue and Thompson 1995, posits that Task-technology fit refers to the degree in which available technology supports an individual in carrying out the required tasks. With the Task-Technology Fit construct the researcher was analysing if the emerged data presents harmony between the individual work tasks and the available enterprise mobility technologies. Literature suggests that users are motivated to use technologies if there is perceived fit or harmony across task, individual abilities and technology (Junglas *et al.* 2008).

From this study, the data suggests that technology constraints such as use of personal data and use of desktops significantly influences non-utilisation of enterprise mobility. Use of these technologies (desktops and personal data) in the context of enterprise mobility application systems indicates they do not support individual tasks to enable utilisation of enterprise mobility. The findings further suggest that tasks constraints such as printing, and scanning are not supported by enterprise mobility technologies to enable users to work from anywhere.

The findings agree and validate current literature that posits that users are motivated to use technologies if there is perceived fit between tasks and technology. For example:

Sello: “because I am not bound to a desk and, also I am not customer facing and talking to bank customers. The nature of my work I can work umm...I can pretty work from anywhere in South Africa”.

Nicky: “in my role, I can work from anywhere I don’t need to be fixed at any particular place ... yes, my tasks are supported with the technology that I use”.

4.3.3 Conceptual Framework for the use of Enterprise Mobility

In this section, the conceptual research framework presented in Chapter 2 is reviewed based on the interpretation of findings where elements were found to have relevance and significance or otherwise. From the discussion of TTF elements presented on previous sections the revised conceptual framework in the context of enterprise mobility use is presented in Figure 6. as follows;

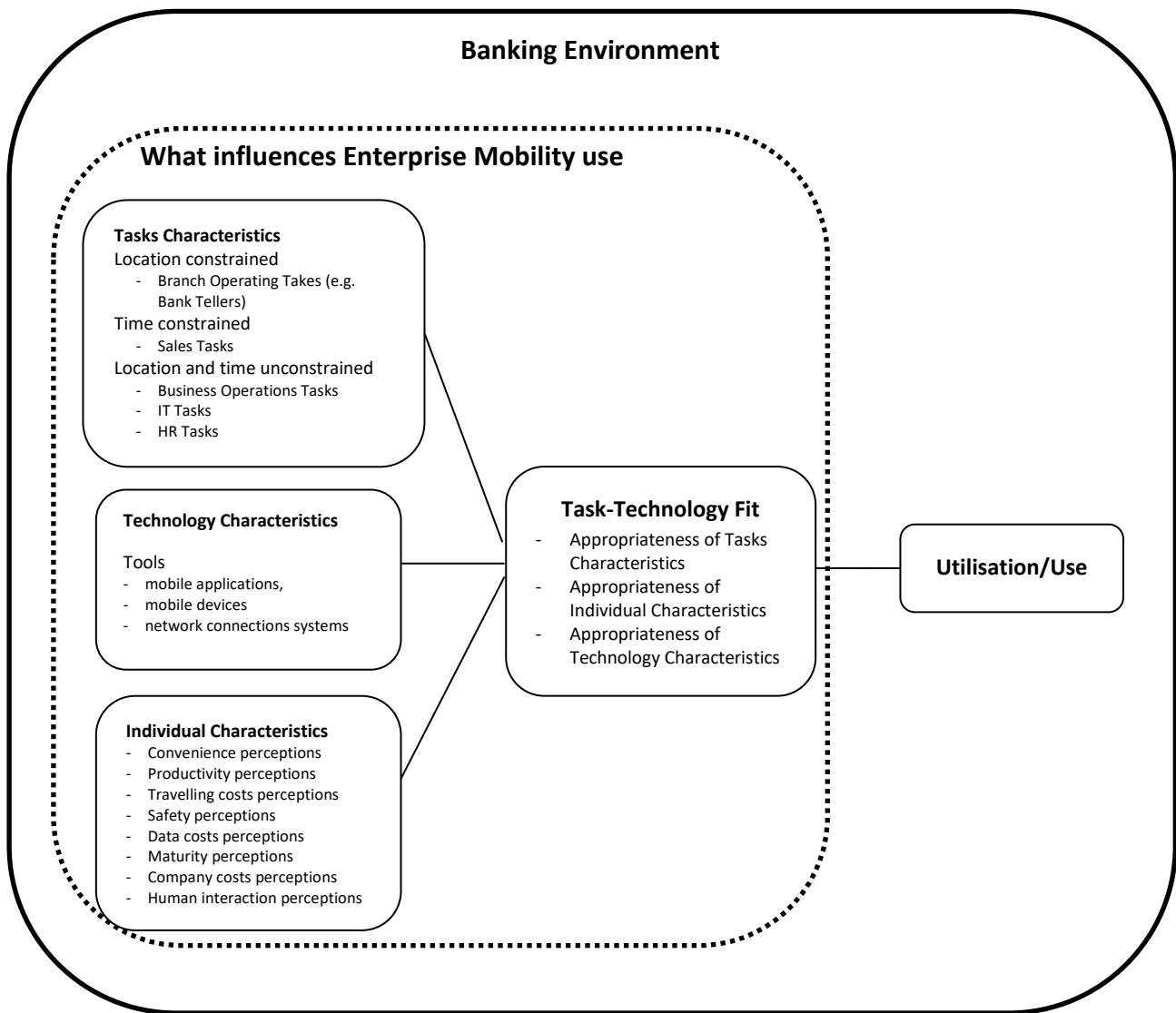


Figure 6: Conceptual Framework for Enterprise Mobility use in a banking environment

The conceptual framework in figure 6 for enterprise mobility indicates that fit between tasks characteristics, technology characteristics and individual characteristics influences utilisation of enterprise mobility application systems. The findings agree and validates TTF model and conceptual model presented in this section the context of enterprise mobility individual. Elements of experience, training and self-efficacy elements from the TTF model did not suggest any influence in the context of enterprise mobility and were excluded from the conceptual model presented here.

4.4 Recommendations from the Conceptual Framework

From the case study and the interpretation of findings, several recommendations regarding the use of enterprise mobility application systems were presented. These recommendations suggested mostly improvements on the underlying technologies to fully support enterprise mobility. The recommendations that emanate directly from the case study were discussed during interpretation of findings and are summed up below:

- Since one of the bank strategic direction is to use Agile principles in executing tasks. The findings recommended improving underlying technologies to support Agile way of working especially the use of white boards: writing and moving stickers on the board so that employees will be able to move stickers while they connected remotely. This speaks to improving underlying technology so that it supports current way of working without losing the essence when people are connected remotely. This was eloquently expressed by one participant:

Tina: "I think I have covered everything, the only concern as risk for me is around Agile, and the boards. I think somewhere we have to think differently about these boards that we do not necessarily have to be there and put a sticker. If there is technology that can move these stickers and as an employee I can write and share with the team that this is what I am doing, why don't we do that on VC".

- A recommendation to improve on the security of personal data since employees use the devices for personal use and company use. It was recommended that organisations put equal effort in securing personal data as it puts on securing company data.
- The case study recommended for management to put proper monitoring matrices in place to monitor employee work tasks and performance for organisation that would want to adopt enterprise mobility. This is to help to avoid employees who will claim that they are working from home and yet they not working at all.
- To improve data technology so that employees do not have to use personal data when connecting to work applications

- To improve network technology so that access to all organisations applications is available as some findings indicated certain applications are not accessible which could be due to security reasons such as opening confidential applications to untrusted networks.
- To improve hardware technology to support tasks such as printing and scanning from anywhere and anytime.
- For organisations to strike a balance between working from the office and enterprise mobility so that the human interaction is not lost with transition to enterprise mobility. The respondents suggested striking a balance such as 2 days working from home and 3 days working in the office per week.
- For organisations to improve communication for mobility strategic roll outs so that information filters clearly to all employees.

4.5 Chapter Summary

This chapter provided a detailed data analysis procedure, data discussion and interpretation of findings. The analysis chapter had three main area of focus, firstly, the data findings were interpreted in relation to the objective of the research question. Secondly, a revised TTF conceptual framework was presented in the context of enterprise mobility. Thirdly, recommendations from the conceptual framework were highlighted. Lastly, the chapter summary closed the chapter. In the next chapter, the entire research study is evaluated and concluded.

CHAPTER FIVE (5)

EVALUATION OF THE RESEARCH AND CONCLUSION

5.1 Chapter Introduction

In the previous chapter, the collected data was analysed, discussed and the findings interpreted. This chapter evaluates and reflects on the entire research journey. It firstly, reflects on the answers to the research question to evaluate if the research objectives have been met. Then it discusses contributions of the research to both research and practice. Thereafter, relevance of the research to practice and theory is stipulated. Then, limitations of the research are acknowledged, followed by suggestions for future research. The researcher also gave a brief personal reflection on the research process. To close the study conclusion remarks are stated. The report ends with Reference List and Appendices which are presented in the last sections of the report.

5.2 Answers to the Research Question

The explosive growth in use of mobile devices has changed the working norms where discourses have witnessed practitioners advocating for enterprise mobility adoption. With organisations investing in enterprise mobility technologies there is need to understand what influences employees to use or not use technologies as non-use can negatively impact these technology investments. The banking industry is not spared to the worldwide changing working ethics where organisations are investing in enterprise mobility to enable employees to work from anywhere and anytime.

It is essentially important that researcher's studies what may influence employees to use or not use enterprise mobility application systems. Hence, this study, set out to understand individual use of enterprise mobility applications systems in a banking environment. This aim, in turn translated into the primary research question of *"How can enterprise mobility applications systems be used in a banking environment?"*. To answer the research question, the study undertook understanding technology use

phenomenon through the lenses of Task-technology Fit (TTF) theoretical framework of Goodhue and Thompson (1995) and conducting a case study with *Data Bank* one of the leading banks in South Africa. The case study involved conducting semi-structured interviews and analysis of the findings in relation to the study objectives and research questions. The following sections gives an outline on how all the secondary questions for the research were answered. The answers were then synthesised to answer the primary research question.

5.2.1 Answers to Secondary Question 1

Research secondary question - “How do tasks characteristics influence the use and non-use of enterprise mobility application systems by individuals in a South African bank?”

The evidence presented indicates that employee’s tasks influences use and non-use of enterprise mobility. In terms of tasks characteristics, tasks that influences enterprise mobility use are those tasks that can be done from anywhere and it included and not limited to HR tasks, IT tasks, Operations tasks and Sales tasks, that is, tasks that do not require customer-facing interaction such as writing requirements documents and data analysis. In instances where the tasks do not influence use of enterprise mobility technologies it was found that the tasks require to be performed in the office. These tasks included tasks such as brainstorming meetings where employees would require writing on boards with back and forth sharing of ideas. Other tasks that were limited in the office included printing and scanning documents and could not be performed from anywhere as they need support of immovable equipment.

5.2.2 Answers to Secondary Question 2

Research secondary question – “What is the nature of use and non-use of enterprise mobility application systems in the South African banking environment?”

The findings highlighted that *Data Bank* is in a process of strategically driving use of enterprise mobility application systems. The CEO has been quoted initiating different drives such as ‘hot desks’ where employees do not own dedicated desks and any employee can use any desk that is available. Further, the employees can work from any branch that is convenient to them in cases of any constraints to reach the employee allocated office premises. The current status quo of use and non-use was found to be a mixed bag where some employees work from anywhere any time and some do not.

In instances where people are utilising enterprise mobility, the findings indicated technology characteristics influences use of enterprise mobility. In terms of use, it was found that employees who were working from anywhere were using enterprise mobility technologies such as laptops to perform their work. In terms of non-use, it was found that this was mainly related to the constraint of technology used such as desktops and printers, even though the participants indicated willingness to be utilising enterprise mobility the technologies were limiting the employees. The findings revealed that technologies such as mobile applications, mobile devices and network connections systems significantly influences the adoption of enterprise mobility.

5.2.3 Answers to Secondary Question 3

Research secondary question – “How do individuals’ characteristics influence the use and non-use of enterprise mobility application systems in a South African bank?”

The findings indicated that individual characteristics influences use and non-use of enterprise mobility. In terms of use it was found that individual perceptions and motivation such as perceived productivity, perceived convenience, and perceived reduced transport costs and time significantly influences employees to use enterprise mobility. In instances of non-use, employee’s perceptions of using personal data indicated it substantially influences non-use of enterprise mobility. Another finding indicated that employees would prefer to both work from the office and from anywhere utilising enterprise mobility. Here, the emphasis to strike a balance between the two was the need for human interaction essence. Other elements of individual characteristics for example experience and self-efficacy highlighted by Goodhue and Thompson (1995) were found not to influence use of enterprise mobility.

5.2.4 Answers to Secondary Question 4

Research secondary question – “How do appropriateness of task-technology-fit influence the use of enterprise mobility application systems by individuals in a South African bank?”

The present study findings, agree and validate the TTF theoretical framework of Goodhue and Thompson (1995) in that tasks-technology fit leads to technology utilisation if the technology supports the user in performing the tasks at hand. In terms where enterprise mobility was utilised, the tasks at hand, individual characteristics and enterprise mobility technologies were in harmony. In the context of enterprise mobility, it was found that tasks readiness, technology readiness and employee readiness play an important role in driving use and non-use of enterprise mobility. Technology readiness speaks

to the underlying technology that is robust, flexible and scalable to accommodate the changing user tasks requirements. In instances where technology was supporting tasks, employees were working from anywhere. Then, in instances where technology did not support tasks at hand, such as tasks performed using desktops and printers, it hindered employees to work from anywhere. The use of personal data, which was found to negatively influence employees to use enterprise mobility technology indicated an ill fit between available technology capabilities and tasks at hand.

5.2.5 Synthesised Answers to Primary Research Question

Primary Research Question – “How can enterprise mobility applications systems be used in a banking environment?”.

Above-mentioned answers to the secondary research questions entirely addresses the primary research question. Holistically answering the research question, it was found that in a banking environment, enterprise mobility technologies should support the employee’s tasks at hand. The findings revealed that technologies such as mobile applications, mobile devices and network connections systems considerably influence the adoption of enterprise mobility. Banking organisations should look on the underlying technology capabilities to accommodate the changing user tasks requirements. The need to look at the underlying technologies was indicated by a litany of technology improvements suggested by participants and these recommendations precisely answers the primary research question – *“How can enterprise mobility applications systems be used in a banking environment?”*. Not all tasks in a banking environment can be supported by enterprise mobility technologies such as tasks where the individual require to use printers, write on white boards, perform customer facing tasks. In such instances the bank should look at scaling the underlying technologies and understanding the changing tasks requirements needs, so that there is harmony between the tasks and technology. The TTF theoretical framework sums it well by arguing that there should be a fit between the tasks and technologies. The findings further indicated that there is need to balance between working in the office and enterprise mobility. Thus, human interaction was found to be necessary for purposes of knowledge sharing and team building, hence, based on the finding it is suggested for organisations not to completely change work ethics to solely enterprise mobility.

5.3 Contributions to Theory

Research has indicated a notable use of mobile ICT “going digital” for daily activities including rise of mobile devices use by employees for work purposes, thereby transforming current business process and working norms. In the banking sector, technology use research has been dominated by individual consumer use of banking technologies that allows consumers to conduct banking from anywhere and anytime. There is, however, a noticeable gap for comprehensive “going digital” researches within the corporate world encompassing communications, business processes and working ethics norms. Thus, it will not only suffice to only research consumer centric banking technologies, but to also focus on employee centric banking technologies for holistic researches within all organisation divisions. The study aims to contribute to the existing body of knowledge in the following ways:

- Fill the gap of enterprise mobility body of knowledge as literature today is still relatively sparse as noted a decade ago by Basole (2007), Sorensen and Al-Taitoon (2008).
- Fill the literature knowledge gap on the phenomenon of technology use in the banking industry in the context of enterprise mobility.
- The research will theoretically edify the interpretative body of knowledge by using TTF theory, which was mainly used in the scientific paradigm.
- The conceptual framework will contribute theoretically (TTF) in the context of enterprise mobility in the banking environment as per the findings.

5.4 Contributions to Practice

Many businesses believe in the potential benefits of using mobile devices, however, it is estimated that less than 50% of organisations have holistic strategies to fully adopt enterprise mobility. In answering the research question, this research will contribute to practice in edifying how enterprise mobility applications systems can be used in a banking environment. Through the lenses of TTF, the findings suggest that the key to understanding user decisions to use a technology lies in understanding how the functions of the technology fit the needs of the user. Thus, informing practitioners to understand the underlying capabilities of their technologies and the changing task needs so that they can make informed decisions in investing in enterprise mobility. The study aims to inform practitioners with elements that may influence use and non-use of enterprise mobility application systems. This study

findings and recommendations will inform practitioners on how enterprise mobility technologies can best support employee tasks in these changing working practices and environment.

5.5 Relevance of the Research to Practice and Theory

IS research has been criticised to lack relevance of studies and Benbasat and Zmud (1999) suggested guidelines that IS community can follow to ensure relevance to practitioners and theory. The table below adapted from (Benbasat & Zmud 1999) summarises relevance of this research in relation to practice and theory.

Table 6: Dimensions of Relevance - adapted from Benbasat and Zmud (1999)

| Category | Dimension of Relevancy | Description | Researcher's Viewpoints |
|--------------------------|------------------------|--|---|
| Article's Content | Interesting | Does IS research address the problems or challenges that are of concern to IS professionals and scholars? | Due to the explosive growth of mobile devices current working ethics and norms are changing and this is bringing challenges to professionals on how use of mobile devices can be incorporated into daily working norms. The research sought to address: <ul style="list-style-type: none"> - Enterprise Mobility challenges in practice. - Sparse literature on the body of knowledge |
| | Applicable | Does IS research produce the knowledge and offer prescriptions that can be utilized by practitioners and scholars? | Through the lenses of conceptual framework TTF, the findings inform how enterprise mobility applications systems can be used in a banking environment. Elements that influences use and non-use of enterprise mobility were highlighted. |
| | Current | Does IS research focus on current, at the time of publication, technologies and business issues? | Enterprise mobility discourses focus on current technologies and business issues such as changing working norms due to explosive growth of mobile devices and issues of strategically rolling out enterprise mobility. |
| Article's Style | Accessible | Are IS research articles able to be understood (in terms of tone, style, structure, and semantics) by IS professionals and scholars? Are they written in a style that professionals would enjoy reading? | The study effort was to present technology use acceptance phenomenon through a case study under the lenses of a theoretical framework and in so doing put effort to present the findings in a tone and structure that aims to capture the intended readers. |

The table shows how the study was relevant to practice and theory, consistence with the contribution to theory and practice discussed in previous sections.

5.6 Limitations of the Study

Despite the study's contributions explained above it had certain limitations that must be acknowledged. These limitations include the following:

- Limited time of research resulted in a conceptualised theoretical framework to be used without extending the theory further which might not yield enough data as in case where grounded theory was used which had a possibility to surface new themes and extend the theory.
- This study was limited to a cross-sectional study where data was collected in a particular time, longitudinal studies might provide profound insights.
- Existing literature within the phenomenon of employee use of enterprise mobility was sparse which limited the investigation of literature in the context of banking sector in general and specifically within the context of South Africa
- The single site nature of the case study might influence generalisation of the findings.

5.7 Recommendations for Future studies

This section provides recommendations for future studies that can be done by Enterprise Mobility researchers. Firstly, the study was done on one case study, it is therefore recommended to replicate the study with a different case study in the South African banking sector to determine consistency in findings and see if it yields different findings.

Secondly, another recommendation came from the present study findings, for future researchers to investigate how to strategically transform an organisation into enterprise mobility in the banking environment especially in the context of South African banking industry.

Thirdly, Enterprise mobility touches different dimensions such as data security, it is suggested from the present findings if other studies can look on security of personal information data that is shared amongst use of these digital devices. A decade ago Basole (2008), made calls for researchers to consider enterprise mobility security studies as he argued that security levels are critical enablers of enterprise mobility.

Fourthly, another dimension is for future studies to look at employee work monitoring matrices. It is suggested that when employees work from home there should be matrices to monitor what they say they are doing.

Lastly, when this study was conducted enterprise mobility was at its infancy in the case study involved, it is recommended that future researchers study the individual impacts of adopting to enterprise mobility.

5.8 Reflection on the Research Journey

The research was a personal journey for the researcher as previously the researcher has not been involved in undertaking an in-depth intensive empirical research that requires academic rigour. It involved a lot of learning curves, especially in undertaking the qualitative data analytical process where coding and interpretation of data was involved to successfully present credible findings.

The study required dedicating vast amount of personal time. Trying to balance school, work, and personal life demands; made the journey demanding, challenging and sometimes exhausting as each context requires different state of mind. It came with challenges of separating myself from being a worker, student, mother, sister and friend. However, the support from all people involved made the journey lighter, bearable, endurable, manageable and above all enjoyable.

In a nutshell, the researcher aimed for the research content to be of interest, applicable and value to both practitioners and academics. Though challenging, the researcher enjoyed the research process and experiences in writing up the research report and hopes more importantly the reader would also enjoy reading the report.

5.9 Conclusion

The research employed a case study strategy in addressing the problem statement and answering the research question. Findings were extracted from the data collected during the semi-structured interviews to give an in-depth understanding of the phenomena. The study highlighted that in a banking environment, enterprise mobility technologies should support the individual's tasks at hand. Consistence with literature, through the lenses of TTF theoretical framework, the findings shows that in the banking environment context there should be harmony between the tasks at hand and the technologies, to influence individual use of enterprise mobility applications systems. For enterprise mobility technologies to be used, banking organisations should look on improving the underlying technology capabilities so that they are scalable to accommodate the changing user tasks requirements. The study further highlighted that, organisations should strike a balance between enterprise mobility and working in the office so that the essence of human interaction is not completely lost.

In an effort to bridge the knowledge gap of sparse literature on Enterprise Mobility, the study has edified the body of knowledge by providing a study in the context of Enterprise Mobility in a banking environment specifically in South Africa. Theoretically the study has contributed to bridging the gap of task-technology fit elements, that were identified to be some of the missing or implicit constructs in user acceptance and adoption models. Further, the knowledge gap on individual employee level literature in comparison to customer centric level, this study, will bridge the gap by providing a study at individual employee level in the context of banking.

This research report communicates and provides an understanding on how enterprise mobility application systems can be used in a banking environment.

5.10 Chapter Summary

This chapter gave a summation of the entire study. In evaluating and reflecting on the entire research journey, the chapter reflected on answers to the research question first. Thereafter, contributions of the study to both theory and practice were discussed. Then, relevance of the research to practice and theory was reflected. The limitations of the study and suggestions for future studies were then stated. Subsequently, a reflection of the study journey by the researcher was briefly narrated. In closing the study, a conclusion of the research report was presented.

The next sections, provide the reference list and appendices of the report: Appendix A) Ethical Clearance Certificate, Appendix B) Individual participation Request Letter, Appendix C) Research instrument Guide

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Appendix A- Ethical Clearance Certificate

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CLEARANCE CERTIFICATE

PROTOCOL NUMBER: CINFO/1196

PROJECT: INDIVIDUAL USE OF ENTERPRISE MOBILITY APPLICATION SYSTEMS IN A BANKING ENVIRONMENT

INVESTIGATOR: Abigail Manhuwa

STUDENT NUMBER: 1479684

SCHOOL: SEBS

DATE CONSIDERED: 30 August 2018

DECISION OF THE ETHICS COMMITTEE: Approved

NOTE

Unless otherwise specified this ethics clearance is valid for 1 year and may be renewed upon application.
Please remember to include the protocol number above to your participation letter.

DATE: 10/09/2018

CHAIRPERSON: Jean-Marie Bancelhon

cc: Supervisor:

Ray Kekwaletswe

A handwritten signature in cursive script, likely belonging to Jean-Marie Bancelhon.

**SCHOOL OF ECONOMIC
& BUSINESS SCIENCES**

Appendix B: Individual Participation Request Letter

Individual Participation Letter (IPL)



Date: 27 September 2018

Good Day

My name is Abigail Manhuwa and I am a Masters student in the Information Systems Division at the University of the Witwatersrand, Johannesburg. I am conducting research to understand and describe use of Enterprise Mobility application systems by individual employees in a banking environment. Enterprise mobility application systems enables employees access to organisational systems through use of mobile devices such as smartphones, tablets and laptops to perform work tasks from any location and at any time.

As an employee of Data Bank*, you are invited to take part in this interview. The purpose of this interview is to find out what determines use and non-use of Enterprise Mobility application systems. The interview will focus on your work tasks, experience and attitude towards Enterprise Mobility application systems.

Your response is important and there are no right or wrong answers. This interview is both confidential and anonymous. You are not required to provide your name or any personal information. If I want to quote you in my report or publication, I am not going to use your name; I am going to use a pseudonym (false name) and you are free to choose your pseudonym. Your participation is completely voluntary and involves no risk, penalty, or loss of benefits whether or not you participate. You may withdraw from the interview at any stage.

The interview is structured into three parts and each part consists of about eight questions. The interview should take between 20 minutes to 30 minutes to conduct. The survey was approved by the SEBS Ethics Committee (Non-Medical), Protocol Number: CINFO/1196.

Thank you for considering participating. Should you have any questions, or should you wish to obtain a copy of the results of the survey, please contact me on 078 460 4353 or at 1479684@students.wits.ac.za

My contact details: 1479684@students.wits.ac.za– Cell number: 078 460 4353

My supervisor's name and email are: Ray Kekwaletswe – Ray.Kekwaletswe@wits.ac.za

Kind regards

Abigail Manhuwa

Masters Student: Division of Information Systems

School of Economic and Business Sciences

University of the Witwatersrand, Johannesburg

Appendix C: Research Instrument Guide (Interview Schedule)

Objective 1: To analyse the nature of individual employee's tasks in a South African banking environment.

What is the nature of your work tasks?

Probe Tasks:

- Please describe your position and role
- Please describe your daily activities
- What are the process and procedures for doing your work?
- What applications do you use to complete your work?
- What tools do you use to complete your work?

Objective 2: To analyse the nature of use and non-use of enterprise mobility application systems by individual employees in a South African banking environment.

Are you using or not using enterprise mobility applications systems?

Probe Use:

- In your view, what is enterprise mobility
- To what extent are you familiar with Enterprise mobility applications?
- What apps or tools are used as part of Enterprise mobility applications?
- Where do use enterprise mobility applications systems (home, travelling)?
- What mobile device (smartphone, tablet or laptop) do you use when you are working away from office?

Probe Non-Use:

- Why do you not use enterprise mobility applications systems?

Objective 3: To analyse the nature of individual characteristics towards using Enterprise Mobility in a South African banking environment.

What are your values or perceptions on utilizing enterprise mobility?

Probe:

- What are your values or perceptions in working away from office?
- What are your productivity perceptions in working away from office?
- What motivates or influences you to use or not to use enterprise mobility technologies?

Objective 4: To determine the appropriateness and fit of enterprise mobility applications systems to employee tasks in a South African banking environment.

How do you find the available technology and your work tasks appropriate to work from anywhere?

Probe:

- How are enterprise mobility applications appropriate or inappropriate for your work tasks?
- Do you find enterprise mobility technologies useful or suitable to performing your work duties?
- What are the work activities that you can do here at work but cannot do away from office premises?
- Do your work tasks needs require the use enterprise mobility technologies?
- What is your experience in relation to using enterprise mobility applications systems?
- Are they any advantages or benefits of using enterprise mobility technology?