UNIVERSITY OF LIVERPOOL

Information Technology Therapy (ITT) as a Catalyst for Micro Enterprise Development, and its Implications for Digital Payment Adoption: Evidence from Lagos Nigeria

Thesis submitted in accordance with the requirements of the University of Liverpool for the Degree of Doctor of Business Administration

By

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DECLARATION

I, Uwagbae Uzebu declare that this thesis is a presentation of my original research work, and has been developed as a result of my own original independent effort. Wherever contributions of others are involved, every effort has been made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The work was done under the guidance of Dr Ana Martins.

ACKNOWLEDGEMENT

First, I will like to express my gratitude to Dr Ana Martins, who worked closely with me throughout the thesis project as my primary supervisor. I am particularly grateful for her direction, guidance and candor, in ensuring I delivered to the best of my abilities. I will also like to express my sincere appreciation to my examiners, Dr Richard Tunstall and Dr Jason MacVaugh. Their feedback during the viva voce, not only challenged me to raise the bar, but also provided the roadmap for how.

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Finally, I will like to express my deepest appreciation to my family; my late father, my mother, my sisters and children, for their continued support. To my wife and my rock, who always saw in me the ability to complete this project despite my many doubts and held down the fort in my many absences due to research commitments, I am eternally grateful. I am also thankful to almighty God for the inspiration to begin, and the grace to complete this work.

ABSTRACT

In Nigeria, Africa's largest economy, the country's over 40 million micro enterprises account for 99% of all enterprises. As a consequence, they employ over 80% of the country's labour force, drive about 48% of its Gross Domestic Product (GDP) and enable over 7% of its export. Given their strategic importance, the subject of micro enterprise development has become of keen interest to a number of stakeholders, among them Mastercard, a global technology company with a bias for digital payments operating in the country. While several avenues exist for stakeholders like Mastercard to intervene in promoting micro enterprise development in Nigeria, experience garnered by the organization suggest, given its bias for technology, promoting efforts aimed at catalysing the adoption of Information and Communication Technology (ICT) among micro enterprises in the country, may represent the most feasible approach.

This document, details my experience as a novice researcher, studying for my doctorate degree in business administration at the University of Liverpool, while in full time employment at Mastercard. In this dual role as a scholar and practitioner, I sought to provide Mastercard with actionable knowledge on the considerations critical to catalysing the development of micro enterprises in Nigeria leveraging ICT. I also sort to assist the organization in understanding what these considerations mean, for proliferating digital payment adoption, among the country's micro enterprises. Given that this constitutes the company's primary business interest. In addition to creating value for Mastercard and organizations with similar interest, I also sought to employ the insights garnered from the experience in making significant contribution to the existing business and management discourse, on micro enterprise development.

In achieving the objectives articulated above, I employed a form of inquiry based on pragmatic research philosophy, known as insider action research. In doing so, I revisited a program designed by Mastercard in 2017, working with Grooming Centre, the largest micro finance institution in Nigeria. Dobbed the Mastercard-Grooming Centre Smart Business Initiative (SBI), the program sought to catalyse the development of 1000 micro enterprises through a series of interventions, among them the deployment of a smart device based, inventory management application called the Retail Smart Business Service (RSBS). Utilizing a theoretical framework forged from

reviewing extant literature as guide, the inquiry focused on 100 micro enterprises drawn from the SBI.

It entailed, establishing the profile of all 100 micro enterprises, identifying their level of adoption of the RSBS application, identifying the challenges to adoption, developing a series of interventions to address these challenges, and working closely with the Grooming Centre team, and the micro enterprises themselves, to implement the interventions for 25 of them, over a 3 month period. At the end of the intervention, the impact of the actions taken was assessed first with regards to the level of adoption of the RSBS application, and then on the development of the micro enterprises in the intervention group. At the end of the engagement, the learnings garnered and their implications for Mastercard, other stakeholders vested in micro enterprise development in Nigeria, and the academic community at large, was discerned.

For Mastercard as well as other stakeholders, the actionable knowledge created is three pronged. The first is that when it comes to catalysing micro enterprise development leveraging Information and Communication Technology (ICT) in Nigeria, it is critical to have contextual clarity with regards to 4 important variables that underlie the effort. These variables are; the profile of the micro enterprises in question, the way adoption is defined, how development is measured, and the specific ICT artefact under consideration.

The second actionable knowledge that emerged from the engagement for Mastercard is that in addition to having contextual clarity, it is important to approach efforts to catalyse micro enterprise development leveraging ICT in a structured way. This means employing the rigorous process of action research and Information Technology Therapy (ITT) for problem identification and resolution on an ongoing basis. It also means imbibing partnership and trust, as important virtues, and ensuring the coordinator of such efforts have the skill sets of a political entrepreneur. The third and final actionable knowledge created from this thesis project for Mastercard is that, given the fact that digital payment solutions are also ICT artefacts, the considerations established through this effort, also apply.

For business and management scholars, the actionable knowledge created asserts that, it is possible to create research on micro enterprise development, that is focused and granular in nature. In addition, the engagement also asserts that from a practitioner's perspective, there are a number of important variables to consider in

investigating micro enterprise development leveraging ICT. These variables include; the context of the investigation, the impact of partnership and trust, the role of political entrepreneurship skills in ensuring success, the impact of having a simple shared narrative across all stakeholders, and the importance of adopting a view of micro enterprise development as a journey as opposed to a destination.

Also with respect to scholarship, the engagement unearths a number of considerations for the practice of insider action research. They include, the idea that the practice of action and reflection is not peculiar to insider action research, but is crucial to success of both scholarship and practice, and the fact that knowledge created in action is controlled, with the shared purpose, values and intended outcomes of stakeholders acting as an anchor. The engagement also asserts that conducting insider action research means subscribing to a mindset that acknowledges constant change as a given, an understanding that the stages in the insider action research process do not represent ridged boundaries, and the fact that being an insider action researcher has both advantages and disadvantages, among others.

Aside from facilitating the creation of actionable knowledge discussed above, the engagement also aided my development as an individual, a scholar and a practitioner in multiple ways. Among them; creating in me a greater appreciation of my own bias, and how it affects my actions, helping me develop new competencies such as engaging in critical reflection, and horning skills critical to operating as a political entrepreneur; including effective communication, negotiation and problem solving.

Keywords: information and communication technology adoption, information technology therapy, micro enterprise, micro enterprise development.

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LIST OF ABBREVIATIONS

ABH-Area Business Head

AI-Artificial Intelligence

ATMs-Automated Teller Machines

BMGF-Bill and Melinda Gates Foundation

BTCA-Better than Cash Alliance

B2B-Business-to-Business

CBN-Central Bank of Nigeria

CEO-Chief Executive Officer

CGAP-Consultative Group to Assist the Poor

DBA-Doctor of Business Administration

DOI-Diffusion of Innovation Theory

DSA-Direct Sales Agents

EFInA-Enhancing Financial Innovation and Access

EU-European Union

FinTech-Financial Technology

GAV-Gross Acquiring Volumes

GDP-Gross Domestic Product

GSMA-Global System for Mobile Communication Association

G2P-Government-to-Person

IBIS-Integrated Business and Information Solutions

ICT-Information and Communication Technology

IDCs-Industrial Development Centres

IMF-International Monetary Fund

ITT-Information Technology Therapy

MGI-McKinsey Global Institute

MIS-Management Information System

ML-Machine Learning

MOU-Memorandum of Understanding

MSMEs-Micro, Small and Medium scale Enterprises

NBS-National Bureau of Statistics

NFC-Near Field Communication

NGO-Non-Governmental Organization

OECD-Organization for Economic Co-operation and Development

PCE-Personal Consumption Expenditure

POS-Point of Sales

P2B-Person-to-Business

P2P-Person-to-Person

QR-Quick Response Code

RSBS-Retail Smart Business Service

SBI-Smart Business Initiative

SME-Small and Medium scale Enterprises

SMEIS-Small and Medium Equity Investment Scheme

SMEDAN-Small and Medium Scale Enterprise Development Agency of Nigeria

TAM-Technology Acceptance Model

TOE-Technology-Organisation-Environment Framework

TPB-Theory of Planned Behaviour

TRA-Theory of Reasoned Action

U.K.-United Kingdom

UNIDO-United Nations Industrial Development Organization

U.S.A-United States of America

USSD-Unstructured Supplementary Data

UTAUT-Unified Theory of Acceptance and Use of Technology d

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CHAPTER ONE

INTRODUCTION

1.0. Introduction

The purpose of this chapter, is to provide the reader with an overview of this thesis project. In doing so, I begin by discussing the business need that inspired the project, before discussing the position of extant literature on the subject. I then move to present the envisaged outcomes, the specific questions the research poses, and its objectives. I also discuss why the research is important, for whom, and the approach employed in its delivery. In concluding, I establish my role in the enterprise, and how the insights garnered is articulated in this document.

The section that follows discusses the business need that inspired the project.

1.1. Business Need

The terms Small Businesses (SB) or Micro, Small and Medium scale Enterprises (MSMEs) are often utilized interchangeably, to describe commercial entities that fall outside the remit of what can be described as large corporates (Okpara and Wynn, 2007; Abor and Quartey, 2010; Edoho, 2015). Ajuwon et al. (2017), note that distinguishing between micro enterprises and other forms of small businesses, is an effort grounded in geographic context. In the United States of America for example, micro enterprises are differentiated from small and medium scale enterprises, utilizing a single criteria which is number of employees. In the United Kingdom on the other hand, they are differentiated utilizing number of employees, and either turnover or assets. In China and South Africa, these enterprises are differentiated from other small businesses based on number of employees, assets, as well as turnover.

In Nigeria where this thesis project is situated, micro enterprises are delineated on the basis of employees as well as assets; excluding land and property. Leveraging this approach, the country formally defines micro enterprises as commercial entities with less than 10 employees and less than 5 million naira (about 10,000 dollars) in assets. These enterprises represent approximately 99% of all commercial ventures in the country. They account for over 80% of Nigeria's total labour force, about 48% of its Gross Domestic Product (GDP) and over 7% of the country's export (SMEDAN, 2013).

Despite their obvious strategic importance, the consensus among scholars and non-scholars alike, is that micro enterprise development is highly challenged in Nigeria. This assertion follows numerous reports which paint a grim picture of the state of micro enterprises in the country. Utilizing survival rate as one measure for example, Ayanda and Laraba (2011) argue that most micro enterprises in Nigeria die within the first five years, with only about five to ten percent eventually thriving and growing to maturity. Similarly, Ajuwon et al. (2017), argue that more than 50% of the micro enterprises in Nigeria do not survive beyond five years of establishment.

In view of the above, the subject of how to promote micro enterprise development in Nigeria, continues to be top of mind for public as well as private sector stakeholders. Among the private sector stakeholders vested in micro enterprise development in Nigeria, is Mastercard; a global technology company with a focus on digital payments; that is payment made electronically leveraging an online payment instrument such as a credit or debit card or mobile phone, as opposed to cash. For Mastercard, addressing the subject of micro enterprise development in Nigeria has direct implications for its business in the country. This is because, experience garnered by the organization over the 50 years of its existence, establishes an intricate link between the development of small businesses and their adoption of Information and Communication Technology (ICT).

In 2017, Mastercard began actively experimenting with models for driving micro enterprise development leveraging ICT in Nigeria. One of these experiments, was a program called the Mastercard Grooming Centre Smart Business Initiative (SBI). The initiative was a partnership between Mastercard and the largest micro finance institution in the country, Grooming Centre. The partnership was based on the premise that ICT adoption was crucial to driving micro enterprise development, and by addressing the 'access challenge', micro enterprises could be encouraged to adopt ICT, with the believe that doing so would help these enterprises develop and naturally embrace digital payment.

The SBI involved the provision of a $250,000 grant by Mastercard to Grooming Centre. The fund was utilized to provide 1000 micro enterprises, who were part of the Grooming Centre network with three ICT artefacts namely; a smart device in the form of a Techno Droipad 10d Tablet, an inventory management application called the Retail Smart Business Service (RSBS), and a digital payment acceptance solution

called MasterPass QR. In addition to providing access to its network of micro enterprises, Grooming Centre was responsible for training the micro enterprises on the value of the ICT artefacts, and how to use them. They were also responsible for monitoring the overall performance of the program.

Figure 1.1, 1.2 and 1.3 below present a snapshot of these ICT artefacts.

Figure 1.1. Techno Droipad 10d Tablet

Source: Smart Business Initiative Memorandum of Understanding (2017, p.4)

Figure 1.2. The Retail Smart Business Service (RSBS) Application Landing Page
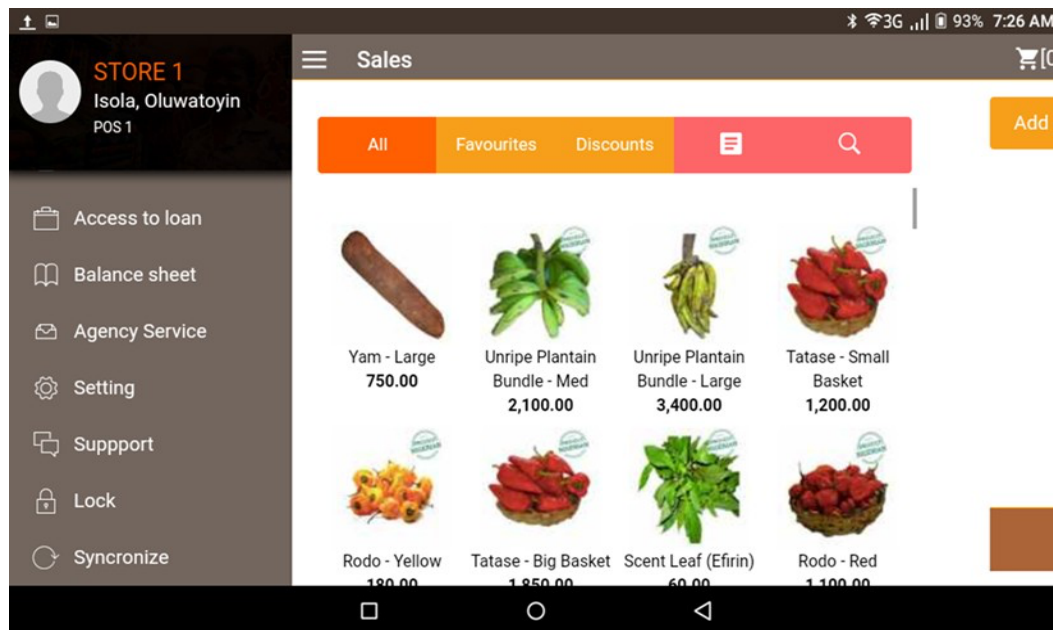
Source: Smart Business Initiative Memorandum of Understanding (2017, p.5)

Figure 1.3. MasterPass QR Solution

Source: Smart Business Initiative Memorandum of Understanding (2017, p.5)

As part of modalities to recognize 12 months of the initiative, Grooming Centre submitted a consolidated progress report to Mastercard in September 2018. The report which was garnered from a survey of all participants in the program, provided a number of insights. The first, was that while adoption of the smart device for texting, calling and browsing the internet was high, the utilization of the RSBS application within the device was significantly below expectation. The results revealed that, in the 30 days prior to the survey, only 29% of the micro enterprises participating in the program utilized the application as intended, which was immediately after every sale. The report also showed that 45% of the micro enterprises in the program had not utilized the application at all.

Figure 1.4. Below provides a summary of this insight.

Figure 1.4 Level of adoption of the RSBS
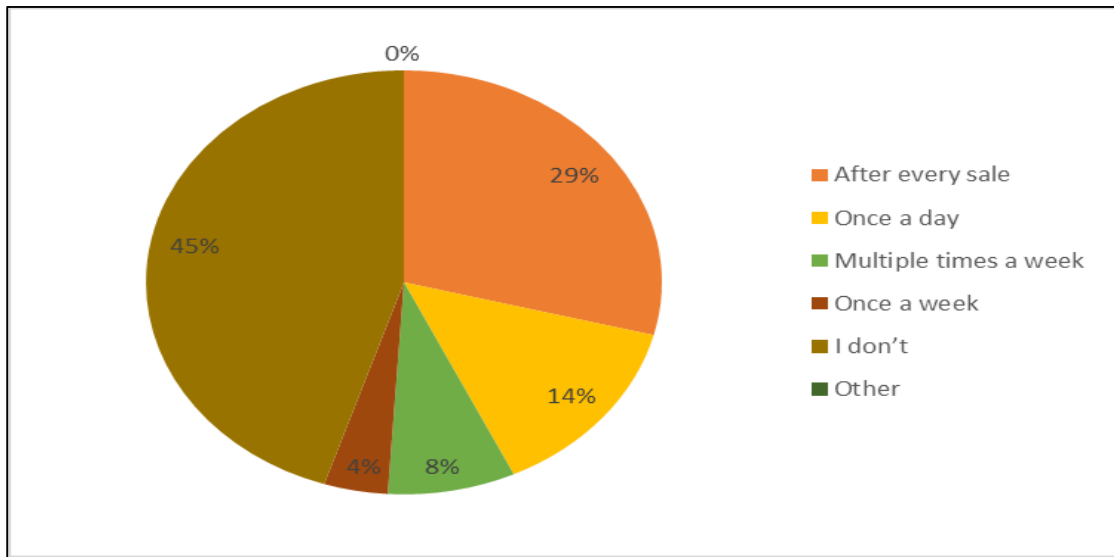
Source: Grooming Centre-Mastercard Smart Business Program Progress Report (2018)

The second insight gained from the report was that entering sales and cost of sales information immediately after every sale had several benefits for the businesses who did so. The top three benefits were; better understanding of profit (36%), keeping track of stock (36%) and keeping track of income (11%).

Figure 1.5. below provides a summary of this insight.

Figure 1.5 Key Benefits from Utilization
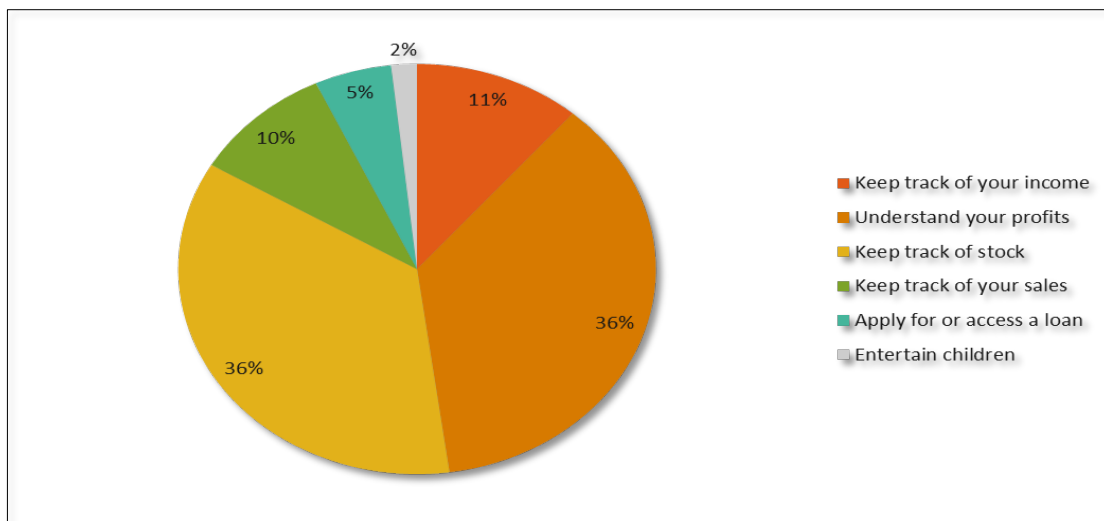
Source: Grooming Centre-Mastercard Smart Business Program Progress Report (2018)

The third and final insight gained from the report was that none of the enterprises in the program utilized the MasterPass QR solution.

From these insights, it became apparent to Mastercard that while the results of the SBI was promising, greater information was required, particularly in terms of (1) understanding the considerations critical to catalysing the development of micro enterprises in Nigeria leveraging ICT (2) developing an appreciation of what these considerations means for proliferating digital payment adoption among micro enterprises in the country. Addressing this business need, is the first priority of this thesis project.

The next section discusses the position of extant literature on Mastercard's business need.

1.2. Position of Extant Literature

Three concepts underlie Mastercard's business need, described in the preceding section. These concepts are; micro enterprise, micro enterprise development, and the adoption of Information and Communication Technology (ICT), among micro enterprises. A review of relevant literature on these concepts unearth a number of useful insights.

On micro enterprise, these insights can be organized around three broad topics. The first of these topics has to do with the difference between micro enterprises and other types of businesses. The second, has to do with entrepreneurship and the types of ventures entrepreneurs create, while the third has to do with the impact micro enterprises have on the environments where they exist. On micro enterprise development, the insights garnered from relevant literature can be organized into three broad topics. These topics are; what micro enterprise development is, and how it can be measured, the challenges to micro enterprise development, and what can be done to address them. On the concept of ICT adoption, insights from relevant research can be organized into four topics; the mechanics of ICT adoption, the impact of ICT on micro enterprise development, the factors that constrain ICT adoption among micro enterprises, and the possible solutions available for addressing those factors.

From the literature, it is evident that there is ample insight on the concept of micro enterprise, micro enterprise development, and the adoption of ICT among micro

enterprises which can be employed in investigating the concepts. Given the fact that current studies are generic in nature and have been conducted mainly by academics, development agencies and government establishments, what appears to be lacking however, is research that is more focused and granular in nature, that is conducted from a practitioners perspective. Addressing these gaps in extant literature is the second priority of this thesis project.

The next section discusses how this thesis project looks to achieve both priorities.

1.3. Project Outcomes, Research Questions and Objectives

As already established, this thesis project seeks to achieve two outcomes. The first is to deliver on Mastercard's business need for more information on (a) The considerations critical to catalysing the development of micro enterprises in Nigeria leveraging ICT (b) what these considerations means for proliferating digital payment adoption among micro enterprises in the country. The second outcome this project seeks to achieve, is contribute to the existing business and management literature on micro enterprise development leveraging ICT.

In achieving this two outcomes, this thesis project leverages an action based inquiry, designed to answer two important questions. The first is, 'why did the Mastercard Grooming Centre Smart Business Initiative deliver such poor adoption levels for the RSBS application, despite the obvious benefits of the service to the micro enterprises in the program?'. The second is, 'could anything have been done to improve the adoption levels, if so, what?.'

In answering these questions, the inquiry aims to deliver on the following objectives;

1. Establish the profile of the micro enterprises in the study.

2. Establish the level of adoption of the RSBS ICT artefact, deployed to the micro enterprises as part of the SBI program.

3. Establish the challenges to adoption, if any.

4. Establish the impact of taking deliberate steps to address these challenges, particularly as they relate to (i) level of ICT adoption (ii) the development of micro enterprises.

The section that follows discusses the methodology employed in delivering on the above.

1.4. Research Design and Methodology

Given the pragmatic orientation of the thesis project, the inquiry employed, subscribes to a research tradition known as insider action research. Reason and Bradbury (2008), describe action research as a democratic process concerned with developing practical knowing, in the pursuit of worthwhile human purposes. Bousbaine and Bryant (2016), describe insider action research as a flavour of action research, where the researcher is part of the organization being researched, and intends to remain part of the organization, even when the research is over.

In executing on this research design, the study draws on a sample of 100 micro enterprises who participated in the SBI. Utilizing this sample as its anchor, the inquiry is delivered in four stages in line with the practice of insider action research. The first of these stages, is the constructing stage, where the profile of the micro enterprises in question is established, the current level of adoption of the RSBS application is determined, and the challenges to adoption is identified. The second, is the planning stage, where the specific intervention required is articulated. The third is the taking action stage, where the intervention is implemented, while the fourth is the evaluating action stage, where the results of the intervention is distilled, and the insights they unearth for the research agenda is carefully articulated.

The stages described above are preceded by a context setting stage, where the general frame of reference for the investigation is defined. In parallel with the core action research stages, there is also a reflective action research effort, where I ruminate on the premise, the process and the content of the core action research. In line with the participatory ethos of insider action research, all stages of the inquiry are executed in close collaboration with relevant stakeholders including, the leadership and staff of Grooming Centre, and the micro enterprises participating in the study.

The section that follows discusses the significance of the study.

1.5. Significance of the Study

Delivering on the outcomes of this thesis project is important for several reasons. First, it will provide actionable knowledge that can help Mastercard, my employer in

addressing its business need. Second, this study holds promise for the existing business and management literature given its focus on examining the subject of micro enterprise development.

Beyond Mastercard, and extant literature, this study may also offer insights relevant to other stakeholders vested in promoting micro enterprise development in Nigeria. These stakeholders include Government Agencies such as the Small and Medium Scale Enterprise Development Agency of Nigeria (SMEDAN) and not for profit organizations like Enhancing Financial Innovation and Access (EFInA).

The section that follows discusses my role in the research enterprise.

1.6. My Role in the Enterprise

Enacting my role as an insider action researcher in this inquiry, entails taking on an array of personas, as noted by Saunders et al. (2009). The four must pertinent of these personas are; (i) The director; in this role I am involved in setting the overall direction for the engagement including articulating the 'what', the 'why' as well as the 'how' and garnering buy-in from key stakeholders. (ii) The directed; in this role I am participating fully in the execution of the day to day actions that the engagement entails. (iii) The investigator; in this role, I am asking questions about what is transpiring and why? In order to make sense of it. (iv) The curator; in this role, I am carefully presenting what I have experienced, in a way that makes sense and creates value for myself, Mastercard, the University of Liverpool and other stakeholders involved in the study.

Next, I discuss the structure of this document.

1.7. Structure of this Document

This document consists of six chapters. This first chapter, establishes the context within which the thesis project exists. It achieves this by discussing the business need, envisaged outcomes, research agenda, approach, significance and my role as an insider action researcher in the enterprise. The second chapter builds on this, by presenting the theoretical foundations upon which the inquiry that underpins the thesis project rests. The third chapter advances the thesis project, by providing a detailed account of the inquiry and how it was performed. The fourth chapter presents the result of the inquiry, and the learning that emerged.

The fifth chapter discusses the implications of these learnings for the research questions and thesis project, while the sixth draws the thesis project to a close. The chapter achieves this, by discussing the actionable knowledge created, its implications and the opportunities for future research.

The next section brings this chapter to a close.

1.8. Conclusion

This chapter sought to provide an overview of the thesis project. In doing so it discussed the business problem, envisaged outcomes of the thesis project and the research agenda. It also discussed at a high level how the research is designed, its significance, the overall structure of the document and my role in the enterprise.

In concluding, two points are worth reiterating. The first is that this thesis project exists within a defined context, and this context is largely responsible not only for the way the inquiry is structured, but also the value it brings to practice as well as business and management research. The second point worth reiterating is that, as an insider action researcher, I am not only directing the inquiry, I am also a key part of it, hence my role is multifaceted.

The implication of these insights for the thesis project is twofold. The first, is that by establishing the context, the thesis has a solid foundation upon which it can be built. The second, is that by establishing the journey at a high level, and my role in it, the reader has an appreciation of what to expect as the journey unfolds in the coming chapters.

Next I establish the theoretical foundations of the thesis project.

CHAPTER TWO

LITERATURE REVIEW

2.0.   Introduction

This chapter seeks to establish the theoretical foundations upon which the inquiry that underpins the thesis project rests. In achieving this, I begin by revisiting the relevant topics associated with the three concepts that underlie Mastercard's business need. These concepts are; micro enterprise, micro enterprise development, and Information and Communication Technology (ICT) adoption among micro enterprises.

Building on this, I explore the perspectives of scholars regarding the concepts, and what these perspectives mean for the thesis project. From there, I move to conduct a critical review of these topics and perspectives, before presenting the various elements associated with them, that are incorporated in the inquiry, and why they were selected. Finally, I discuss how these elements will be operationalized, highlighting the specific variables that will be investigated and why they were selected. The chapter concludes by taking stock of what has been achieved, and how they contribute to the attainment of the objective of the chapter.

The section that follows, discusses the main topics associated with each of the concepts.

2.1.   Key Concepts, Relevant Topics and Perspectives

2.1.1. Micro Enterprises

As highlighted in the introduction chapter, research conducted on micro enterprises that are relevant to this thesis project can be organized into three broad topics. The first of these topics has to do with the difference between micro enterprises and other types of businesses. The second, has to do with entrepreneurship and the entities entrepreneurs create, while the third has to do with the impact micro enterprises have on the environments where they exist.

On the difference between micro enterprises, and other forms of enterprises, Tambunan (2019), provides a useful framework

Table 2.1: Key Characteristics of Micro, Small and Medium scale enterprises

S/N	Aspect	Micro Enterprises	Small Enterprises	Medium Enterprises
1	Formality	Degree of informality is high (most are operated in the informal sector).	Degree of informality is lower (many are operated in the formal sector)	All are operated in the formal sector.
2	Organisation & management	Primitive/ traditional	Many are non-primitive units with modern management systems	All have formal organisational structure with modern management systems
3	Workers used	Most are family businesses; they use unpaid family members as workers/helpers	Many use wage-paid employees	All use wage-paid employees
4	Production process	Traditional/ manually	Many are highly mechanised	Degree of automation is much higher
5	Market orientation	Most are very local oriented; served local low-income households	Local, national and/or export	National and/or export

6	Economic & social profile of the owner	Non–/low educated and poor	Many are well educated and from non-poor families	Most are well-educated and from medium to high-income families.
7	Technology used	In general, they use 'out of date' machines or manually and do not utilise information technology (IT)	Many use machines and utilise IT.	Degree of modern technology used is much higher and all utilise IT.
8	Owner/ entrepreneur by gender	Many MEs are owned/ managed by women	Less women are involved as owners/ entrepreneurs	Very few women as owners/ entrepreneurs
9	Reason/motivation to run own business	In general, to survive	Mostly for profit	All for profit
10	Spirit of entrepreneurship	In general, low	Mostly high	All high

Source: Tambunan (2019, p. 4)

According to this framework, aside from generic measures such as number of employees, assets and turnover, the differences between micro enterprises and other businesses, can also be viewed in qualitative terms, along dimensions such as; level of formality, ownership, type of workers used, market orientation and so on. From a Nigerian perspective, several studies bring these attributes to life in attempting to profile the micro enterprises in the country. On degree of formality for example, reports by the International Monetary Fund (IMF, 2018) and Enhancing Financial Innovation and Access (EFInA, 2018) note that as much as 65% of the country's micro enterprise

operate within the informal sector; across agriculture (29.3%), artisan services (21.2%) and retail (19.1%).

On ownership, type of workers used, management approach, and market orientation, reports by stakeholders such as, the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN, 2013) and EFInA (2018), as well as studies by academics such as, Onourah (2009), and Ogunsiji and Kayode (2010) confirm that the majority of micro enterprises in Nigeria (more than 80%), are owned and run by individuals, with support where available from family members. These studies also confirm that these individuals oversee all aspects of the business (production, finance, marketing and personnel management) and operate within the confines of their local communities. On gender and economic profile, the SMEDAN (2013) and EFInA (2018) reports, also establish that almost half (46%) of micro enterprises in Nigeria are women owned, with more than 50% of these women lacking formal education.

On the topic of entrepreneurship, authors for example Simpeh (2011) argue that multiple theories exist due to the multi-disciplinary nature of the concept. In taking this argument further, Cherukara and Manalel (2011) provide a detailed categorization of entrepreneurship theories by discipline. Leveraging the sociology-based theory, Sheriff and Muffatto (2015) argue that entrepreneurs create enterprises with the goal of structuring political, social, and economic interactions between the entrepreneur and other individuals and groups in the environment. The authors posit that entrepreneurs do so, to minimize uncertainty. Multiple streams of discussions can be associated with this view of entrepreneurs as creators of enterprises.

The first of them has to do with the various ways the ventures created by entrepreneurs can be delineated. On this subject, the Global Entrepreneurship Monitor (GEM, 2019) identifies multiple approaches. Utilizing what stage the ventures are in their development life cycle for example, the report identifies four different types of entrepreneurial ventures, namely; nascent, new business, established business and discontinuation ventures. Utilizing the economic impact of the ventures on the other hand, the report differentiates between high growth, innovation and internationalization ventures. Finally, based on entrepreneurial activity, the report delineates between Total Early stage (TEA), Social (SEA), and Employee Entrepreneurial Activity (EEA).

GEM (2019), also asserts that a critical consideration in delineating the type of ventures entrepreneurs create is the stage of development of the economies, where the entrepreneurs exist. Building on this argument, the report identifies three stages of economic development and associated ventures. The first, is the factor driven economic development stage, where the country is dominated by ventures focused on subsistence agriculture and extraction, with a heavy reliance on unskilled labour and natural resources. The second, is the efficiency-driven stage where the country is more competitive, and ventures are focused on creating more efficient production processes, and increasing product quality. The third and final stage of economic development identified by GEM (2019), is the innovation-driven phase. Here, the report asserts that countries at this stage are more knowledge-intensive, and as such the ventures created by entrepreneurs, are more orientated towards the provision of services.

According to the GEM (2012) report, Nigeria is believed to have a mix of nascent and new business ventures, that are mainly high growth and best described as Total Early stage in terms of entrepreneurial activity. The report also asserts that the country can mainly be described as been in the factor driven stage of economic development. While later reports for example EFInA (2018) attest to this, there has been no investigation on Nigeria by GEM after 2012.

Remaining on the topic of entrepreneurship; a second stream of discussions relevant to the current research, has to do with the role motivation plays in entrepreneurship. Here, Gries and Naude´ (2010) and Mohan et al. (2018), argue that entrepreneurs can be classified into two groups; necessity-driven entrepreneurs or push, and opportunity-driven, or pull entrepreneurs. They add that necessity driven entrepreneurs operate at a subsistence level, viewing entrepreneurship as a means of escaping poverty. They note that opportunity driven entrepreneurs by contrast, see entrepreneurship as a means of value creation, that goes beyond subsistence.

Building on the above, Zwan et al. (2016), argue that motivation has important implications for the performance of the enterprises created. They note that ventures created by necessity entrepreneurs, typically perform lesser and are more likely to die earlier than those created by opportunity entrepreneurs. Furthermore, the authors argue, that at a macro level, ventures created by opportunity driven entrepreneurs have greater positive impact on matrices such as economic growth, and job creation

compared to those created by necessity driven entrepreneurs. According to the GEM (2012) report, Nigeria is dominated mainly by opportunity driven entrepreneurs. This said, as far as I am aware, there has been no other research conducted on the topic in the country.

The third stream of discussion on entrepreneurship relevant to the current study, has to do with gender. Central to these discussions, is the fact that women entrepreneurs appear to be marginalized in society. Authors such as Rico and Cabrer-Borrás (2018), Bastian et al. (2018) and De Melo et al. (2019), note that in most countries' men are more likely to start new businesses than women; in many cases twice as likely. The authors argue that these differences have little to do with ability or intention, rather they are the product of socio-cultural factors which limit female entrepreneurs, relegating them to domestic activities. Building on the above, Rico and Cabrer-Borrás (2018) and Holmquist and Sundin (2020) call for greater research on the subject of gender in entrepreneurship, particularly with regards to understanding how female entrepreneurs can be better incentivized to start businesses.

Aside from studies establishing the fact that female entrepreneurs are often marginalized in society, and a coordinated effort is required to incentivize their participation in setting up businesses, gender-based research on entrepreneurship have also sought to identify the differences between male and female entrepreneurs and the ventures they create. On this subject, authors such as Popescu (2012), Veena and Nagaraja (2013), and Salindo (2018) argue that based on empirical data, the most significant difference between male and female entrepreneurs have to do with; business experience background, types of business started, challenges faced, risk preferences and firm performance.

On business experience background, the authors argue that men and women come to entrepreneurship with varying business experience backgrounds. They note that in the case of men, the decision to start a business is often influenced by the desire to replicate a business where the man has good prior knowledge, in both technical and managerial terms, while for women this is seldom the case. Similarly, on type of business started, the authors argue that female entrepreneurs are more likely to set up businesses in sectors such as; personal services, and retail trade, compared to men who are likely to set up businesses in sectors such as; manufacturing, and high technology. They note that these differences are the product of socialization and

structural barriers which force women to work in certain occupation and industries, because these occupations and industries are more socially acceptable. From a Nigerian context, research into gender and entrepreneurship for example Vandefan (2018) and EFInA (2018) have focused on highlighting the need for better support for women entrepreneurs. As far as I am aware, none has explored the differences between male and female entrepreneurs and the ventures they create.

Moving away from entrepreneurship, the third topic associated with the concept of micro enterprises that is relevant to the current study, has to do with the impact these enterprises have on the economies where they exist. The Organization for Economic Co-operation and Development (OECD) notes that micro enterprises are the predominant form of enterprise, accounting for approximately 99% of all firms across its 36 member countries which include; the United States, United Kingdom, Germany, France, Japan, South Korea, and Mexico. The organization also states that across its member countries, micro enterprises constitute the main source of employment, accounting for about 70% of jobs on average, and between 50% and 60% of GDP (OECD, 2016b). Similarly, the 2016 European Union (EU) report on micro enterprises across all 28 member countries notes that, over 98% of all enterprises in the non-financial sector within the region are micro enterprises. The report also confirms that these micro enterprises employ 93 million people, accounting for 67% of total employment and 57% of Gross Domestic Product (GDP).

It is apparent from the literature that the above trend is not only restricted to countries in the global north. In Africa, the United Nations Industrial Development Organization (UNIDO) notes that micro enterprises contribute to more than 50% of GDP and represents more than 90% of private businesses in most African countries (UNIDO, 2015). Other country level reports; including Abor and Quartey (2010), Agyapong (2010) and SMEDAN (2013) have also affirmed the dominant role micro enterprises play in developing countries, showing that; in Ghana micro enterprises represent about 92% of businesses and contribute about 70% of the country's GDP and over 80% of employment, while in South Africa, they account for about 91% of all businesses contributing between 52% and 57% of GDP and provide about 61% of employment.

In concluding, the goal of this sub-section was to highlight the main discussions associated with the topics relevant to the concept of micro enterprise and establish the perspectives of scholars on the subject. From this exercise a few important insights

emerge for the current thesis project. The first is that, the existing premise among researchers and other stakeholders is that micro enterprises are not a homogeneous group; they differ from other enterprises as well as from each other.

The second insight that emerges from the above discussions, is that the study of entrepreneurs and the entities they create provides a useful approach for delineating the various types of micro enterprises utilizing multiple parameters. These parameters include entrepreneur variables such as gender, age, level of education, motivation, etc. as well as venture variables such as nature of business, type of ownership, years of establishment, etc.

The third insight that emerges from the above discussions, is that irrespective of the differences that exist across micro enterprises, these enterprises play a strategic role in all economies; regardless of whether these economies are in the global north or global south. The most important of these roles include employment creation and direct contribution to GDP.

Next I discuss the key topics associated with the concept of micro enterprise development.

2.1.2. Micro Enterprise Development

As noted earlier, relevant research on micro enterprise development can be grouped into three key topics. These topics are; what micro enterprise development is and how it can be measured, the challenges that affect micro enterprise development, and what can be done to address these challenges.

On the topic of what micro enterprise development is and how it can be measured, researchers offer multiple perspectives. Danes et al. (2009) and Lawder (2001) for example, equate micro enterprise growth, with micro enterprise development and describe the concept as 'increase over time'. Based on this definition, the authors utilize variables such as; number of enterprises and number of years in existence at a macro level, and number of staff, product lines, business locations, sales, revenue and so on, at a micro level, for measurement. Kemp et al. (2002) on the other hand, differentiate between micro enterprise growth, and micro enterprise development. On the later, the authors emphasize 'productivity over time' as opposed to 'increase over time', and utilize variables such as; efficiency, and degree of modernization for measurement.

A third perspective on what micro enterprise development is, and how it can be measured, can be seen in the works of authors such as; Qureshi (2005) and Zheng et al. (2018). Here, while a temporal approach to the subject is also adopted, focus is on the attainment of clear short to medium term outcomes. Variables employed for measuring development in terms of these outcomes include; access to information, knowledge and expertise, competitiveness and access to markets, administrative efficiency, learning and labour productivity, and poverty reduction. In Nigeria, scholars for example; Ayanda and Laraba (2011), Okpara and Wynn (2007), Ajuwon et al. (2017) as well as other stakeholders, for example SMEDAN (2013) often utilize all three definitions and their associated measures interchangeably, with life span typically the most frequently cited variable.

On the topic of the challenges that affect micro enterprise development, researchers offer ample explanations. In their survey of micro enterprises across multiple sectors, Effiom and Edet (2018) for example, found that internal factors such as; the absence of proper human resource management practices, marketing, and finance, as well as external factors such as, effective government policies, and infrastructure, were amongst the main issues affecting the development of micro enterprises in the country. Similarly, leveraging data from 200 micro enterprises selected from 5 local government areas, Muritala et al. (2012) found that lack of financial support, poor management, corruption, lack of training, poor infrastructure, insufficient profits, and low demand for product and services were some of the most common challenges affecting micro enterprise development in Nigeria. Osotimehin et al. (2012) and Osunde (2016) also arrived at similar conclusion. While the former focused on urban Nigeria (Lagos state) and the latter focused on the rural (Osun state), the results were consistent, with financial constraints and poor infrastructure highlighted as major factors affecting micro enterprise development in the country.

On the part of the Nigerian government, the 2005 and 2013 survey conducted by the Small and Medium Enterprise Development Agency of Nigeria (SMEDAN) and National Bureau of Statistics (NBS) also provide insights into the challenges of micro enterprise development in the country. Some of the major challenges identified by these studies collaborate those found in the research discussed earlier. They include; access to finance, poor infrastructure, inconsistent government policies, poor support and obsolete technology. In attempting to bring it all together, Okpara and Wynn (2007) categorize the challenges faced by micro enterprise in Nigeria into four. They

are; (1) administrative, which includes accounting, finance, personnel and management challenges; (2) operating, which includes marketing, inventory production and operations challenges; (3) strategic, which includes planning, market research, and challenges associated with financial analysis; and (4) external problems, such as infrastructure, corruption, technology and demand.

On what can be done to address these challenges, Authors provide multiple recommendations. These recommendations include; improved access to finance, greater government support, improved training for entrepreneurs to build their competency, better coordination on the part of interventionist agencies, improved physical infrastructure, and greater adoption of Information and Communication Technology (Cecchini and Scott, 2003; Arinaitwe, 2006; World Bank, 2012; Edoho, 2015; OECD, 2016). It is important to note here that the government of Nigeria through the Central Bank, has attempted to implement a number of these interventions.

On access to finance for example, the Central Bank launched the Small and Medium Equity Investment Scheme (SMEIS) which mandated banks to set aside 10% of their profit before tax to finance micro enterprises. Also, on the issue of access to finance, the Central Bank set up the Micro, Small and Medium Enterprises Development Fund, which sought to provide financing for micro enterprises, particularly women owned enterprises at discounted rates. Similarly, on the issue of capacity development, the government setup Industrial Development Centres (IDCs), a shared service platform where micro enterprises could get support in areas such as; project appraisal, capacity development, product development and production planning (Sanusi, 2003; Ayodeji and Balcioglu, 2010).

This said, Ojo (2003) notes that majority of government programmes in Nigeria have failed to promote micro enterprise development. The author argues that this reality is the result of decades of abuse by beneficiaries and operators alike, which has left micro enterprises in the country in a perpetual state of quagmire. Baro (2011) lends support to this argument, citing corruption as a major impediment to the ability of government backed initiatives to deliver any real value for micro enterprises in the country.

In concluding, this sub-section sought to highlight the important discussions and perspectives associated with the topics relevant to the concept of micro enterprise development. In doing, so several important insights emerge for the current thesis

project. First among them; is the fact that the concept of micro enterprise development can be defined and measured in multiple ways. A second important insight that emerges from the preceding discussions, is that irrespective of the approach to definition, the consensus among stakeholders is that micro enterprise development generally, and in Nigeria particularly is severely challenged for several reasons. Among them; lack of access to finance, poor infrastructure, inconsistent government policies, poor support and obsolete technology. The third and final insight that emerges from the above discussions, is that these challenges can be addressed in multiple ways, among them; through the adoption of Information and Communication Technology (ICT).

Next I discuss the key topics and perspectives associated with the concept of ICT adoption among micro enterprises.

2.1.3. Information and Communication Technology Adoption among Micro Enterprises

Globally as well as in Nigeria, the terms Information and Communication Technology (ICT) is utilized to describe a wide array of artefacts, and their purpose. In line with this, Afolayan et al. (2015) argues that ICT solutions encompass a wide range of software, hardware, telecommunication and information management techniques and applications utilized in the creation, processing, packaging, distribution, and storage of information.

As noted in the introduction chapter, relevant research into the adoption of ICT among micro enterprises can be organized into four main topics. These topics are; the mechanics by which adoption occurs, the impact of this adoption on micro enterprise development, the factors that constrain adoption and possible solutions. On the mechanics by which the adoption of ICT occurs, existing discussions underscore the existence of multiple theories with none universally accepted.

A summary of these theories and their underlying premise is provided in table 2.2.

Table 2.2: Summary of Technology Adoption Theories

Year	Theory/Model	Developed By	Construct/Determinants of Adoption
1960	Diffusion of Innovation Theory	Everett Roger	The innovation, communication channels, time and social system
1975	Theory of Reasoned Action	Ajzen and Fishbein	Behavioural Intension, Attitude (A) and Subjective Norm.
1985	Theory of Planned Behaviour	Ajzen	Behavioural intention, Attitude (A), and Subjective Norm, Perceived Behavioural Control
1986	Social Cognitive Theory	Bandura	Affect, anxiety
1989	Technical Adoption	Fred D Davis	Perceived usefulness and perceived ease of use
1991	The Model of PC Utilization	Thompson et al.	Job-fit, Complexity, Long-term consequences, Affect Towards Use, Social Factors, Facilitating Conditions
1992	The Motivation Model	Davis et al.	Extrinsic motivation (such as perceived usefulness, perceived ease of use and subjective norm) and Intrinsic motivation (such as perceptions of pleasure, and satisfaction)
2000	Extended TAM2 model	Venkatesh and Davis	Social influence processes (subjective norm, voluntariness and image) and cognitive instrumental processes (job relevance, output quality, result demonstrability and perceived ease of use).

2003	Unified Theory of Acceptance and Use of Technology (UTAUT)	Venkatesh et al	Performance expectancy, effort expectancy, social influence and facilitating conditions
2009	Model of Acceptance with Peer Support (MAPS)	Sykes et al.	Behavioural intention, System use, facilitating conditions, Network density, Network centrality, Valued network centrality, Valued network density

Source: Sharma and Mishra (2014 p.27)

According to Igudia (2017), technology adoption theories have been employed in studying the adoption of a wide range of ICT artefacts within the context of micro enterprises including; websites, spreadsheets, and e-commerce activities. This said, Jeyaraj et al. (2006) argue that these studies show very little consistency in their results. They sight factors such as the context of research, interest of the researcher, and type of innovation as some of the key reasons for this lack of consistency. It is important to note here that to the best of my knowledge, none of these studies have focused exclusively on micro enterprises in Nigeria.

Moving away from mechanics, the next topic associated with ICT adoption relevant to the current study, considers the impact of adoption on micro enterprise development. The consensus in the literature for example, Melchioly and Saebo (2010), Aggarwal and Klapper (2012), Omwansa and Sullivan (2013) as well as Asongu and Asongu, (2017) and Mbuyisa and Leonard (2017) is that ICT adoption has a positive impact on micro enterprise development. In dimensioning the nature of this impact, Mbuyisa and Leonard (2017) propose a three-pronged lens anchored on the role ICT adoption plays in micro enterprises. These lenses are; automation, information and transformation.

According to the author, in their automation role, ICT can improve the speed and accuracy of information processing between buyers and sellers. They continue by arguing that in their information role, ICT can aid micro enterprises in gaining access to valuable, timely and accurate information on potential buyers and sellers. Finally, in their transformational role, they argue that ICT can fundamentally alter the processes and relationships within as well as between micro enterprises. Other benefits ICT adoption is believed by scholars to have on micro enterprise development include; improved access to markets (Ramsey et al., 2003; Ojukwu, 2006), greater learning and knowledge transfer (Barba-Sanchez et al., 2007; Ongori and Migiro, 2010; Roberts, 2000) and increased staff productivity (Esselaar et al., 2007).

With specific reference to Nigeria, there is also ample empirical evidence that ICT adoption holds significant benefits for micro enterprise development. In their study of micro enterprises across multiple sectors, Oluwatayo (2014) identified cost reduction, and ease of marketing, as two of the most important benefits of ICT adoption amongst the micro enterprises in their study. Similarly, Afolayan et al. (2015) found evidence to support the view that the adoption of mobile phones by micro enterprises involved in

retail trade, leads to considerable operational improvements in the supply chain of these enterprises. Also, on supply chain, Jagun et al. (2008) in their case study of micro enterprises in the cloth weaving industry in Nigeria, found that the adoption of mobile phones, created competitive advantages for the businesses in their study by addressing the informational challenges faced by the enterprises.

Similarly, in their study of micro enterprises in manufacturing and service sectors in Nigeria, Kajogbola (2004) found that the adoption of ICT had a plethora of benefits; which include improvements in operating efficiency, greater capacity utilization, and improved sales and profitability. The author argues that profitability for the enterprises they studied went up 14% on average per year for the post adoption period considered for the manufacturing businesses, and 11% for the service enterprises investigated. In the same vein, Ojukwu and Georgiadou (2004) identified that increases in the sales of the micro enterprises in their study, was positively correlated with the introduction of Integrated Business and Information Solutions (IBIS) by the micro enterprises.

The third topic associated with ICT adoption among micro enterprises that is relevant to this thesis project, has to do with the challenges associated with adoption. There is a consensus among scholars; for example Ongori and Migiro (2010), Herrington et al. (2010) and Olawale and Garwe (2010) that multiple factors constrain micro enterprise from adopting ICT and harnessing its benefits. The authors argue that these factors include; ignorance, absence of strategic vision, incompetence, fear and lack of trust, cost, poor government policies, and inadequate infrastructure.

In attempting to provide a holistic view on the argument, Wolcott et al. (2008) consolidates the factors presented by scholars into six categories. These categories are; (1) capabilities, for example the absence of ICT skills and knowledge, (2) resources for example, lack of money, time and/or information, (3) access, for example poor infrastructure, (4) attitude, for example, lack of awareness, trust and confidence,(5) operations, for example lack of support and (6) context, for example cultural factors.

In the case of Nigeria, some authors argue that the challenges to ICT adoption among micro enterprises are external, and inherent in the Nigerian environment for example weak government support and corruption (Adeye and Iweha, 2005; Baro, 2011; Ochulor and Bassey, 2010), poor infrastructure such as power and telecommunication

(Agyeman, 2007; Akpan–Obong, 2007; Achimugu et al., 2009) and absence of low cost finance (Apulu et al., 2011; Folorunso et al., 2006). Others, however, argue that rather than being external, the challenges to ICT adoption amongst micro enterprises in the country are internal to the micro enterprises themselves and include; low level of education (Olatokun, 2006) and absence of required skills (Mambula, 2004).

The fourth and final topic of discussion associated with ICT adoption among micro enterprises relevant to this study, has to do with establishing the steps that can be taken to address these challenges. Heeks et al. (2008) for one contend that the paybacks of ICT can only be recognized if fundamentals such as; inexpensive telecommunication infrastructure, proficient transportation, effective government policies, and affordable access to finance are in place. Similarly, Ongori and Migiro (2010) argue that addressing the challenges of ICT adoption amongst micro enterprises requires an interplay of interventions targeted at infrastructure, financing, public policy and human capital development.

In attempting to move from the generic to the specific, several authors provide insights. Werber et al. (2015), Woodley et al. (2015), Kalman and Hernandez (2018) and Omiunu (2019) for example propose the concept of Technology Literacy or e-Literacy. Leveraging an array of techniques including the deployment of technology mentors and the use of action-based learning, the authors make the case that by improving access to relevant information on ICT, micro enterprises can overcome their aversion to its adoption.

Aside from Technology Literacy, authors for example; Wolcott et al. (2008), Qureshi et al. (2008), Kamal et al. (2010) and Qureshi (2016) have also introduced the concept of Information Technology Therapy (ITT). According to them, ITT can be viewed as a coordinated attempt to develop and implement interventions that seek to address ICT adoption challenges. Highly context specific, the authors through their work establish that ITT interventions are much more holistic in nature and could include not only Technology Literacy practices but other engagements as well. It is important to note here that none of the studies discussed have focused exclusively on Nigeria.

In concluding, this sub-section sought to discuss the main topics associated with the adoption of ICT among micro enterprises. In doing so, it unearths several important insights. The first of them is that several theories exist that attempt to explain the way

micro enterprises adopt ICT. However, none is universally accepted. One reason for this is varying research context.

The second insight that emerged from the discussions, is that there is ample evidence to support the argument that the adoption of ICT has positive implications for micro enterprise development, and Nigeria is no exception. Third, there is also ample evidence that while ICT adoption among micro enterprises in Nigeria is significantly challenged by a plethora of factors, these challenges can be addressed in a pragmatic manner utilizing techniques such as Technology Literacy, and Information Technology Therapy.

The next section presents a critical review of these topics and perspectives.

2.2. Critical Review of Relevant Literature

As discussed in the preceding section, the perspectives of scholars on the topics associated with the concepts that underlie this study unearth several important considerations for this thesis project. This said, these perspectives also highlight two important gaps in extant literature.

The first of these gaps is an absence of focus and granularity. On the concept of micro enterprises for example, the existing literature establishes that while micro enterprises differ from other small businesses (for example Tambunan, 2019; IMF, 2018; EFInA, 2018), they also differ significantly from each other depending on their level of development, the level of development of the locations where the entrepreneurs that set up these enterprises exist, whether the entrepreneurs are male or female, driven by opportunity or necessity and so on (for example GEM, 2012; GEM, 2019). Inferring from these discussions, it would appear that while ample research has been conducted on the differences that exist and the reasons for these differences, no attention has been paid to what they mean, particularly as it relates to concepts such as micro enterprise development or the adoption of ICT, more so within a Nigerian context.

Similarly, on the concept of micro enterprise development, the existing literature (for example; Lawder, 2001; Kemp et al., 2002; Qureshi, 2005; Danes et al., 2009; Zheng et al., 2018) suggests micro enterprise development can be defined and measured in multiple ways. It also suggests while there is an overlap in definitions and measures within the Nigerian context, there is a consensus among stakeholders (for example

Ayanda and Laraba, 2011; Muritala et al., 2012; SMEDAN, 2013; Ajuwon et al., 2017; Effiom and Edet, 2018) that micro enterprise development in the country is severely challenged, for multiple reasons.

From the above discussions, existing research on micro enterprise development seems to have focused on very generic aspects of the concept. For example, while there are discussions around various ways micro enterprise development can be defined and measured, there is no study that links specific definitions and measures to specific challenges and solutions. Similarly, while there are discussions around possible challenges to micro enterprise development in Nigeria and the various ways of addressing them, there has been no study on how these relate to specific definitions and measures or specific profiles of micro enterprises or ICT artefacts.

With regard to ICT adoption, the same pattern can be observed. Researchers for example; Esselaar et al. (2007), Ongori and Migiro (2010), CGAP (2016), Afolayan et al. (2015) and BMGF (2016) present multiple ways by which ICT adoption is believed to positively impact micro enterprise development, the many challenges micro enterprises face in adopting ICT, and possible solutions for addressing these challenges. Yet the authors fail to ground these discussions within any specific context, for example the profile of micro enterprises in question, the specific ICT artefact been considered, how adoption is measured and so on. Qureshi et al. (2008), Qureshi (2016), Kalman and Hernandez (2018) and Omiunu (2019) attempt to provide some level of detail, however their research focus on geographies outside Nigeria and leverage a variety of ICT artefacts.

The second gap that can be observed in the literature is a lack of research from the perspective of a practitioner. While there seems to be ample research conducted by academics, government agencies, development organizations and even trade associations, there is no research as far as I am aware on micro enterprise development leveraging ICT, that has been performed from the perspective of a practitioner. More by a practitioner working in a multi-national digital payment company operating in Nigeria.

From the above discussions, it is apparent that the opportunity exists for the current study to address multiple gaps in extant literature.

2.3. Theoretical Foundation and Framework

As noted in the introduction chapter, this thesis project aims to achieve two outcomes. The first, is to deliver on Mastercard's business need for more information regarding (a) The considerations critical to catalysing the development of micro enterprises in Nigeria leveraging ICT (b) what these considerations means for proliferating digital payment adoption among micro enterprises in the country. The second outcome this project seeks to achieve, is contribute to the existing business and management literature on micro enterprise development leveraging ICT.

In achieving the above, this section revisits the relevant topics associated with the concepts that underpin Mastercard's business need, paying special attention to the elements within these topics that form the foundation upon which the theoretical framework that will guide a more detailed inquiry rests. Table 2.3. below presents these topics.

Table 2.3: Theoretical Foundations

Concept	Relevant topics of discussion	Elements selected for this study	Justification for selection	Anchor Literature
Micro enterprises	• Differences between micro enterprises and other small businesses. • Entrepreneurship and venture creation. • Impact of micro enterprises on the environments where they exist.	• Quantitative and qualitative characteristics of micro enterprises. • Types of entrepreneurial ventures and their delineators.	• These elements provide the clarity required to establish the profile of micro enterprises that constitute the focus of this study.	• GEM (2019) • SMEDAN (2013)
Micro enterprise development	• The definition of micro enterprise development and ways of measuring it. • The challenges associated with micro enterprise development.	• Framework for defining and measuring micro enterprise development. • ICT adoption as a contributor to micro enterprise development.	• These elements provide useful ways of defining and measuring micro enterprise development. • They also establish ICT adoption as an important	• Qureshi (2005) • Qureshi (2016) • Zheng et al. (2018).

	How the challenges of micro enterprise development can be addressed.		contributor to micro enterprise development.	
ICT adoption as an enabler of micro enterprise development	• The mechanics of ICT adoption. • The impact of ICT adoption on micro enterprise development. • The factors that constrain ICT adoption among micro enterprises. • Possible ways of addressing these factors.	• Frameworks for reviewing ICT adoption and its developmental impact. • Framework for defining low adoption and considering challenges to ICT adoption among micro enterprises. • Framework for addressing the challenges to ICT adoption.	• These elements help establish how to measure ICT adoption • They also establish how the challenges of ICT adoption can be identified and addressed.	• EFInA (2016) • Kamal et al. (2010) • Qureshi et al. (2008) • Qureshi (2016) • Wolcott et al. (2008)

An important first step in achieving the outcomes envisaged for this thesis project is establishing a pragmatic way of profiling micro enterprises, given the insight from the literature that micro enterprises differ significantly from other small businesses and from each other. To this end, only studies that offer ways of profiling micro enterprises are utilized in the inquiry. In the same vein, delivering on the inquiry require clarity on how micro enterprise development can be defined and measured, given insights from the literature that there are multiple ways to doing this. To this end, only studies that offer pragmatic ways of defining and measuring micro enterprise development have been included.

Given the pragmatic focus of the thesis project to deliver actionable knowledge that is relevant to Mastercard as a stakeholder, and the fact that there is wide consensus among scholars that greater ICT adoption is one way of fostering micro enterprise development, studies that address other challenges to micro enterprise development and ways of addressing them have also been excluded.

Finally, delivering on the inquiry project require clarity on how ICT adoption can be measured, how the challenges to adoption can be identified, what can be done to address the challenges and what the impact is likely to be. Hence studies that discuss ICT adoption theories broadly as well as those that do not offer practical insights on how to address the challenges to ICT adoption among micro enterprises have also been excluded.

Building on the above, the theoretical framework this thesis project employs in its inquiry is built on four interrelated ideas. These ideas are; (1) Micro enterprises are not an homogenous group. They differ from other enterprises as well as from each other. (2) Despite its benefits, micro enterprises experience low levels of ICT adoption which is due to multiple challenges (3) deliberate steps can be taken to identify and address these challenges (4) Taking these deliberate steps will lead to greater ICT adoption, and the development of these enterprises.

The next section discusses how the above framework will be operationalized in the inquiry. It achieves this by drawing attention to the specific variables that will be measured, the specific works from which these variables are derived, and why they were selected.

2.4.   Operationalizing the Framework

As noted in the introduction chapter, this study utilizes the Mastercard Grooming Centre, Smart Business Initiative (SBI) as its frame of reference. Figure 2.1 below provides a diagrammatic representation of how the four ideas that constitute the theoretical framework of this study will be investigated in the insider action research. The specific studies that inform the variables considered under each idea is also presented.

Figure 2.1: Theoretical Framework for the Study

	Mastercard Grooming Centre Smart Business Initiative

① Micro enterprises are not an homogenous group. They differ from other enterprises as well as from each other; SMEDAN (2013) and GEM (2019).

② Despite its benefits, micro enterprises experience low levels of ICT adoption which is due to multiple challenges; EFInA (2016). This may be due to multiple challenges; Wolcott et al. (2008).

③ Deliberate steps can be taken to identify and address these challenges; Qureshi (2016), Qureshi et al. (2008), Wolcott et al. (2008) and Kamal et al. (2010)

④ Deliberate intervention can lead to greater ICT use and micro enterprise development; EFInA (2016), Qureshi (2005).

On the idea that micro enterprises are not an homogenous group, the quantitative and qualitative variables identified in SMEDAN (2013) and GEM (2019) will be utilized in profiling the micro enterprises in this study. Based on these studies, micro enterprises can be delineated utilizing entrepreneur variables such as; gender, age, level of education, motivation, etc. as well as venture variables such as nature of business, type of ownership, years of establishment, income, number of staff and so on.

Variables from these studies are adopted in the inquiry for two reasons. First, they provide a workable framework for establishing the profile of the micro enterprises in the SBI which will be investigated. This will help in bringing focus and granularity to the research. Secondly the works from which these variables are drawn represent the leading authorities on micro enterprises both locally in Nigeria, and globally.

On the idea that despite its benefits, micro enterprises experience low levels of ICT adoption due to multiple challenges, this study leverages EFInA (2016) as well as Wolcott et al. (2008) to develop a measure for ICT adoption and a framework for identifying the challenges to adoption. On the former, EFInA (2016) defines an active user or adopter as someone that utilizes the ICT artefact under consideration at least once in 30 days. Anything below this is considered low level adoption. On the challenges that limit adoption, Wolcott et al. (2008) identifies six categories; namely (1) capabilities, for example the absence of ICT skills and knowledge (2) resources, for example lack of money, time and/or information (3) access, for example poor infrastructure (4) attitude, for example lack of awareness, trust and confidence (5) operations, for example lack of support (6) context, for example cultural factors.

The variables from these studies are adopted here because they represent pragmatic approaches to investigating the topic. They also represent an amalgam of the considerations already identified by other researchers both globally and within Nigeria. It is important to note here that in addition to EFInA (2016), Mastercard's own expectation with regards to the adoption of the ICT artefact under consideration will also be utilized. The reason for doing this, is to bring further focus and granularity to the study and its outcomes.

On the idea that deliberate steps can be taken to identify and address the challenges to ICT adoption among micro enterprises, the concept of Information Technology Therapy proposed by Qureshi (2016), Qureshi et al. (2008), Wolcott et al. (2008) and Kamal et al. (2010) is adopted in the inquiry. According to these studies ITT involves a

deliberate attempt to address the challenges of ICT adoption among micro enterprises leveraging highly customized interventions that are implemented through a four-step process of identifying the challenge, planning the intervention, taking action and evaluating results. This framework is adopted in this study for three reasons; first, it offers a pragmatic approach considering the limitations of the study. Second, it has been tried and tested in research context very similar to the present study. Third, given the fact that the interventions ITT proposes can be anything, they represent an amalgam of other pragmatic solutions such as Technology Literacy that have been identified in the literature.

On the idea that implementing a deliberate approach like ITT to address the challenges to adoption identified will lead to greater adoption of ICT; The EFInA (2016) framework as well as Mastercard's own expectations is also adopted. On the idea that increased adoption will lead to development, Qureshi (2005, 2016)'s framework is employed for measuring development. The framework delineates micro enterprise development into five major effect dimensions. These effect dimensions are (1) access to information, knowledge and expertise (2) competitiveness and access to markets (3) administrative efficiency (4) learning and increased labour productivity and (5) contribution to poverty reduction. These variables were employed for two reasons. First, they offer pragmatic approaches to addressing the research problem considering the limitations of the study. Second, they have been tested and trust in research context similar to the current study.

Table 2.4 below describes what the focus of the insider action research will be in relation to the theoretical framework

Table 2.4: Operationalizing the Conceptual Framework in the Research

S/N	Framework Component	Insider Action Research Focus
1	Micro enterprises are an heterogenous group of enterprises	Establish the profile of the micro enterprises selected from the Mastercard Grooming Centre Smart Business Initiative (SBI) to participate in the current study.
2	Despite its benefits, micro enterprises may experience low levels of ICT adoption due to multiple challenges	Identify within the sample, the level of adoption of the ICT artefacts provided to participants as part of the SBI.
		Identify the challenges to ICT adoption within the sample.
3	Deliberate steps can be taken to identify and address these challenges	Implement an ITT based intervention leveraging the insider action research process
4	Deliberate intervention will lead to greater ICT use and micro enterprise development	Identify the impact of the ITT intervention on the level of adoption of the ICT artefact within the sample.
		Identify the impact of the ITT intervention on the development of the intervention group within the sample.

2.5. Conclusion

This chapter sought to identify insights from extant literature that are relevant to the thesis project, and in doing so established the theoretical framework that will guide a more detailed inquiry. In achieving this, it highlighted the relevant topics associated with the main concepts related to the research, discussed the perspectives of scholars on the topics and the insights these perspectives offer for thesis project.

Building on this, the chapter then moved to critically review the topics and perspectives that were discussed before highlighting the elements incorporated in the planned inquiry, those excluded and why. Following this effort, the theoretical framework was carefully articulated and details surrounding the specific variables that would be investigated as part of the inquiry was provided. In concluding, two points are worth reiterating. The first is the potential significance of this study to not just Mastercard but also the business and management research community at large. The second point worth reiterating is that based on the literature review, a clear road map now exists for conducting the inquiry.

The implication of this, for the thesis project is twofold. First, the areas where the thesis can add value to Mastercard, extant literature and other potential stakeholders is now clear. Second, the logic behind the approach to the inquiry is also clearly articulated. This means a solid footstone now exists upon which the thesis project can proceed. In line with the above, the next chapter discusses the research methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0. Introduction

As noted in the introduction chapter, to achieve the envisaged outcomes, this thesis project leverages an action based inquiry designed to answer two important questions; the first is 'why did the Mastercard Grooming Centre Smart Business Initiative deliver such poor adoption levels for the RSBS application, despite the obvious benefits of the solution to the micro enterprises in the program?', the second was 'could anything have been done to improve the adoption levels, if so what?

To this end, I begin by discussing my philosophical orientation and implicit assumptions before presenting how the research was designed and why. From there I discuss how the research was delivered and the approach adopted to managing change and ensuring credibility. In concluding, I revisit the critical points raised and discuss their implications for the thesis project.

The next section discusses my philosophical orientation.

3.1. Philosophical Assumptions

Creswell (2013) contends that knowingly or unknowingly, researchers bring certain philosophical assumptions to bear in the way they conduct their work. Saunders et al. (2009) note that these philosophical assumptions represent the way researchers view the world. In taking the discussion further, Cassell and Johnson (2006) as well as Brannick and Coghlan (2007) add that there are two major ways of thinking about philosophical assumptions in business and management research. They are ontology; which deals with the nature of reality and existence, and epistemology; which deals with what constitutes acceptable knowledge in a given field of study.

Following this line of thought, Easterby-Smith et al. (2012) argue that ontology debates in the social sciences exist across four contrasting perspectives when viewed through the prism of truth and fact. The first of these perspectives the authors claim is realism. According to them, researchers who embrace this perspective believe in the existence of a single truth as well as the notion that facts exist and can be revealed. The second ontological perspective the authors identify is internal realism. Here, they argue that researchers who subscribe to this view believe truth exists but is obscure

and facts are concrete but cannot be assessed directly. The third ontological perspective discussed by Easterby-Smith et al. (2012) is relativism. The authors argue that those who align with this view believe there are many truths and facts, depending on the viewpoint of the observer. The fourth and final ontological perspective presented by Easterby-Smith et al. (2012) is nominalism. According to the authors researchers who adopt this perspective believe there is no truth and facts are all human creations.

The authors go further to present a similar argument for epistemology, identifying two contrasting perspectives utilizing the properties of reality and approach to measurement as a north star. These epistemological perspectives are, positivism where researchers subscribe to the view that the social world exists externally, and its properties should be measured through objective methods, rather than subjectively through sensation, reflection or intuition and, social constructivism where researcher subscribe to the view that reality is not objective and exterior but is socially constructed and given meaning to by people. In concluding, the authors argue that relationships exist between the various ontological and epistemological stance, with positivist epistemology fitting into realist ontology and social constructivism, fitting into nominalism at two extremes.

Saunders et al. (2009) contend that choosing between one ontological or epistemological position and another is somewhat unrealistic in practice, as each comes with its own strengths and weaknesses. Building on this, the authors argue that a pragmatic philosophical stance is often the default for business and management researchers. They note that researchers who belong to this stance assume it is possible to adopt more than one ontological and epistemological position depending on the research question. The authors add that doing so enable such researchers to move away from abstract constructs such as truth and fact and focus on the main task of conducting their research.

It is important to highlight here, that an important consideration in adopting a pragmatic philosophical stance is the concept of paradigm incommensurability; by this, I mean the perspective of researchers regarding the level of interaction that should exist between the various epistemological perspectives. Building on the highly influential work of Kuhn (1962/1996), three perspectives are evident on the subject in the literature. The first, is based on an ideology of segregation and can be seen in the

works of authors such as Burrell and Morgan (1979) as well as Jackson and Carter (1993). This view maintains that different research paradigms cannot be related in any meaningful way. Hence the goal of paradigm incommensurability from this perspective is to (a) advocate for the legitimacy of different research paradigms (b) prevent the domination of any one paradigm (Wang and Segal, 2014). It achieves this by affirming that each research paradigm must be separately developed and applied.

The second perspective on paradigm incommensurability can be observed in the works of authors such as Pfeffer (1993) and Donaldson (1998). This perspective is based on the notion of integration. It argues that without some degree of consensus between different research paradigms, disciplines such as business and management cannot expect to produce knowledge in an incremental fashion. Following this line of thought, this view calls for researchers to abandon all but one paradigm to unify scientific research and increase its influence. The goal of doing this according to supporters of this view, is to achieve a level of paradigm maturity, where mutual understanding between paradigms exist, and new rules and grounds for conducting research can be developed and established.

The third and perhaps more contemporary perspective on paradigm incommensurability seeks to transcend both extremes of segregation and integration by making the case that multiple research paradigms can co-exist simultaneously. Evident in the works of authors such as Romani et al. (2011), Currie et al. (2010) and Okhuysen and Bonardi (2011), this perspective is based on the idea that each research paradigm represents an idiosyncratic worldview which is authentic in its own right. Hence it goes without saying, that the associations and interactions between these paradigms need to be encouraged in a way that neither discounts differences nor force fit similarities. Building on this argument, the goal of this perspective, is to promote the development of novel and relevant insight through the cultivation of a much more holistic view of the world, leveraging multiple philosophies, assumptions and methodologies (Wang and Segal, 2014).

As a researcher, I embrace a pragmatic research philosophy, anchored on a multi paradigm stance on incommensurability. I do so for a number of reasons. First, I believe a pragmatic, multi paradigm view allows me leverage the strengths of multiple research paradigms for example, the rigor that comes from adopting a

positivist position and the depth that comes from being context specific in line with a social constructivist stance. Second, I believe adopting a pragmatist philosophical stance enables me tap into the universe of research methodologies available across paradigms to get to the core of the topic I am investigating. Third and perhaps most importantly a pragmatic philosophical stance is in tune with my own experience as both a researcher and a practitioner. Having worked as a management consultant investigating business problems from an outsider's perspective, as well as a business manager researching these problems as an insider, I have learned that a pragmatic philosophical stance is not only apt for the reasons highlighted earlier, it is also the most practical, given real life research limitations such as time, money, man power, scope and so on.

The next section discusses the research design.

3.2. Research Design

Saunders et al. (2009) argues that the research design builds on philosophical assumptions to articulate how a research project is to be delivered. The authors identify several possible options. Amongst them; experiments, case study, grounded theory, ethnography, archival research and action research. Of these possible research design options, action research comes across as a natural fit for the current study.

Reason and Bradbury (2008) describe action research as a democratic process concerned with developing practical knowing in the pursuit of worthwhile human purposes. Coghlan and Brannick (2014) argue that underlining the concept of action research are three overarching ideas. The first is that being essentially social in nature, communities such as organizations and societies are best understood experientially through action. The second is that the goal of action research is three-fold; create knowledge, instigate change, and develop self-help competencies in the individuals involved. Third, in actualizing its goals, action research employs a process which has at its core, an iterative cycle of action and reflection. The authors go on to add that four key factors must be considered when doing action research; the context, the quality of relationships between members and researchers, quality of the action research process itself, in terms of both the inquiry process and implementation, as well as the outcomes.

It is important to establish at this point that there are a number of variants of action research practices. Raelin (1999) for one identifies five of such variants based on the type of intervention strategy employed. They include; participatory research, action learning, collaborative inquiry and action science. Similarly, Cassell and Johnson (2006) identifies five incarnations of action research based on slight variations in philosophical assumptions and associated practices. These incarnations include; inductive action research, participatory action research, participatory research and deconstructive action research. In the same vein, Chandler and Torbert (2003) produced a conceptual typology of twenty-seven different flavors of action research which are underpinned by three dimensions of voice, practice and time.

In establishing the action research bearing of this study, Roth et al. (2007), Coghlan and Brannick (2014) as well as Bousbaine and Bryant (2016) provide an anchor. They do so by introducing a flavor of action research referred to as insider action research. According to the authors, insider action research is a form of action research conducted by researchers who are part of the organization being researched, and intend to remain part of the organization even when the research is over. They argue that insider action research plays a critical role in the development of new organizational capabilities; that is the know-how that enables an organization to achieve its intended outcomes. In addition to developing new organizational capabilities, the authors also advocate that insider action research creates significant value for business and management research, as they enable the deeper aspects of organizational life to be uncovered.

In my view, action research represents the most appropriate research design option for this study for a number of reasons. First as noted by Dick and Greenwood (2015) it espouses a commitment to pragmatism and in doing so; action, participation and flexibility. As noted earlier, I also subscribe to a pragmatic world view, hence it aligns with my research philosophy. The second reason this study employs action research is consistency. As noted in the literature review, this research incorporates elements from several studies into catalyzing micro enterprise development utilizing Information and Communication Technology (ICT). These studies include Qureshi (2005), Qureshi et al. (2008), Wolcott et al. (2008) and Kamal et al. (2010). In addition to having a similar focus, these studies employ action research in their design. By remaining consistent with this design tradition, the current study has the foundation upon which to build.

Third, being an explanatory study, this inquiry is focused on establishing the 'how?' Saunders et al. (2009) argue that because of its emphasis on action and promoting change within organizational contexts, action research is particularly useful for research of this nature.

On why insider action research was selected from the plethora of action research options, two reasons come to mind. First, as an employee of Mastercard conducting research for Mastercard, the setup of the current inquiry aligns well with the description of insider action research provided by authors such as Roth et al. (2007) as well as Coghlan and Brannick (2014). Second, the goal of the current study is akin to that of insider action research. Namely; the creation of new organizational capabilities for Mastercard, as noted by authors such as Bousbaine and Bryant (2016).

The next section discusses how the insider action research design of this study was executed.

3.3. Research Delivery

Leveraging the works of authors such as Coghlan and Brannick (2014) delivering the insider action research design proceeded in three steps. The first was context setting. The second was the insider action research proper while the third was documentation.

Figure 3.1. below presents a summary of these steps and associated activities.

Figure 3.1. Insider Action Research Delivery Process

Step 1: Context Setting

April -October 2018

Formalizing the Research Proposal

Defining the Research Approach

Engaging Relevant Stakeholders

Designing and Pilot Testing the Research Tool for the Constructing Stage

Step 2: Insider Action Research

November 2018 -September 2019

Constructing

Evaluating Action

Planning Action

Acting

Reflective cycle

Step 3: Knowledge Sharing and Documentation

September – November 2019

Drafting, Review and finalization

3.3.1. Context Setting

This step began in April 2018 and ended in October of the same year. Its goal was to establish a clear frame of reference for the insider action research. The paragraphs that follow describe the main activities that were associated with the step.

Formalizing the Insider Action Research Proposal: This activity focused on articulating a formal research proposal to the University of Liverpool working with a university assigned supervisor. Integral to the process was conducting a literature review. The review began with defining the principles that would guide the pursuit for relevant literature. The first principle I adopted in this regard, was to approach the literature search from a global perspective before honing in on the Nigerian view. This decision was based on an appreciation of not just the business need but also its potential relevance beyond Nigeria. The second principle I adopted for locating relevant literature, was to go beyond theoretical and empirical academic sources. The reason for this was to ensure alignment with the highly pragmatic tone of the study. The third and final principle I employed for the search was to leverage publications that were no more than a decade old. The reason for this was to ensure the review remained contemporary. The only exception to this principle, were instances where such publications held strategic value to the research and I could not locate any resource that was more recent.

Aside from establishing guiding principles, the use of key words and repositories also formed key aspects of my literature review strategy. For example, key words such as action research, insider action research, micro enterprise development leveraging Information and Communication Technology and digital payments proved useful in identifying relevant literature. Similarly, databases such as EBSCO and JSTOR, proved very effective as did search engines such as Google and Google Scholar. Also employed was the websites of industry associations like Better Than Cash Alliance (BTCA) and Global System for Mobile Communication Association (GSMA) in addition to Mastercard's own research repository.

Once potential publications were identified leveraging the above strategies, I conducted a quick review of the abstract and conclusion chapters to establish their level of relevance to my research. For those that were relevant, I utilized note taking to capture the essence of their arguments. Once this was done, I leveraged a thematic approach to organize and present the insights garnered. This approach was

employed for two reasons; first, thematic analysis is widely adopted in sense making within business and management research. Second, it offered an efficient way of examining the vast body of literature that underlay the concepts being discussed.

Executing this strategy was not without its challenges. For me the two most pertinent of these challenges were; finding Nigeria specific research on the concepts under investigation and locating relevant publications on contemporary constructs like digital payment adoption. The former was addressed by utilizing proxies and assumptions as workarounds while the latter was addressed by looking beyond academic to non-academic publications particularly the works of industry stakeholders.

Based on the findings of the literature review, I worked with my supervisor to develop and submit a formal research proposal to the University of Liverpool. The proposal was approved in July, 2018.

Defining the insider Action Research Approach: The focus of this activity was on articulating broadly how the insider action research would be conducted. The literature on micro enterprise development leveraging ICT, as well as insider action research provided ample insights. In following through on these insights, my overall approach was defined as follows;

- **Stage 1: Constructing**
    - Revisit the Grooming Centre Mastercard Smart Business Initiative (SBI).
    - Leveraging a cross section of participants, establish the profile of the micro enterprises, their level of adoption of the ICT artefacts and the challenges to adoption being experienced.
- **Stage 2: Planning Action**
    - Develop solutions to address those challenges working with Grooming Center.
    - Articulate a strategy for implementation.
- **Stage 3: Acting**
    - Implement the solutions in the form of an Information Technology Therapy (ITT) intervention.
- **Stage 4: Evaluating Action**
    - Evaluate the impact of the intervention and its implications for the research agenda.

In parallel to the core insider action research process described above, I planned to reflect on what was happening as the insider action research took place and document my observations as the engagement unraveled, as part of the reflective action research cycle.

Once the insider action research approach was articulated, I developed an initial plan and shared it with my supervisor in August 2019.

Engaging Relevant Stakeholders-The Grooming Centre Team: The next activity in the context setting step was engaging the leadership team at Grooming Centre. The purpose of this engagement was multifaceted. First, it served as a platform to share with the Grooming Centre team my intention to address the feedback garnered from the progress report on the SBI. Second, it provided an opportunity to inform the team of my intension to utilize the engagement for my doctoral thesis at the University of Liverpool and to obtain their formal approval in the form of a Gate Keeper Letter. Third, it served as an avenue for me to share the research design and plan for their inputs.

The engagement took the form of 3 face to face meetings each between 30 to 45 minutes long over a one-week period. These meetings took place at the Grooming Centre Head Office in Lagos, Nigeria and were of immense value particularly with regards to providing critical input on the plan. With regards to the sampling methodology for example, it was agreed with Grooming Centre that probability sampling will be employed given the fact that it is possible to be precise about the relationship between the sample and the population as the population was the Smart Business Initiative (SBI).

Based on the sampling approach, it was agreed that 100 micro enterprises would be selected from the SBI to participate in the research. The choice of 100 which represents 10% of the sampling frame of 1000 was based on a number of considerations. First, it met the minimum number of 30 recommended by authors like Saunders et al. (2009) in the literature. Second, a sample size of 100 for a population of 1000 represents a margin of error of approximately 10% which was acceptable also following extant literature. Third, 100 micro enterprises represented the maximum number of enterprises Grooming Centre was willing to support considering the organization's capacity.

On how the 100 micro enterprises would be selected, it was agreed with Grooming Center that systematic sampling would be the best sampling technique given the fact that engaging the micro enterprises would be face-to-face, participants would be geographically concentrated, and there were no relevant strata or periodic patterns present in the population. Leveraging Saunders et al. (2009), the participant selection process began by first calculating the sampling fraction utilizing the below formula;

$$\text{Sampling fraction} = \frac{\text{Actual sample size}}{\text{Total population}}$$

Given that the actual sample size was agreed at 100, and the total population was 1000 a sampling fraction of 1/10 was derived. This meant that 1 in every 10 micro enterprises in the SBI would be selected. Using the number assigned to each micro enterprise when they registered for the program as guide, every 10th micro enterprise from the SBI was selected and invited to participate in the study.

It was also agreed with the Grooming Centre team that rather than address all three ICT artefacts that made up the SBI, the focus of the insider action research would be on the Retail Smart Business Service (RSBS). There were several reasons for this consensus. The first was that the RSBS represented the focus of the SBI, given the fact that the smart device was merely a channel for delivering the application, and the Masterpass QR solution was only included as a bonus. The second reason for the consensus was the fact that Grooming Centre has significant control over the RSBS application, hence making any improvement and tracking the impact of such improvements on adoption would be relatively easy. Finally, making the RSBS the focus of the research would provide a clear reference point for the study in terms of ICT artefact, bringing greater granularity to the inquiry.

Once the inputs from the Grooming Centre leadership team was received, the insider action research plan was finalized and submitted to the University of Liverpool Ethics Committee for approval. The plan was approved on 1st October, 2018.

Engaging Relevant Stakeholders-The Sample Micro Enterprises from the SBI: Following the identification of the 100 micro enterprises that would participate in the study, Grooming Centre organized for me to speak to the micro enterprises in groups of approximately 35 over a 3 day period. Designed as 45 minute informal sessions, with light refreshments, the session took place at the Grooming Centre branch in the Oke

-Odo market cluster in Alimosho Local Government Area of Lagos State where the micro enterprises were situated.

I utilized the time to introduce myself, share with the participants the purpose of the study, its benefits, the confidentiality of their data, the overall research design and what the participants should expect in the course of the study. The session also served as an opportunity for me to distribute the Consent Forms and Participant Information Sheet as well as further build credibility and relationship with the participants. The micro enterprises engagement was completed in mid-October 2018.

Engaging Relevant Stakeholders-Mastercard Leadership Team: This activity involved engaging the Area Business Head of the Mastercard business in West Africa who also happened to be my manager. Its purpose was to inform her of my intention to re-engage on the SBI and utilize the initiative for my doctoral program at the University of Liverpool. While she offered no particular input in terms of research design or execution, the discussion was none the less fruitful as it positioned me as a loyal employee truly committed to helping the organization achieve its objectives. The discussion also helped me garner her buy in on the project which was instrumental given that I was dedicating substantial amount of Mastercard paid time to it and could not risk it being perceived as only a personal initiative. This engagement was also completed in mid-October 2018.

Designing and Pilot Testing the Data Collection Tool: The goal of this activity was to test the data collection tool which would be utilized in the constructing step of the insider action research process. A descriptive survey was selected as the most effective data collection strategy for the constructing stage. This decision was based on extant literature, particularly Apulu (2012). In his work, the author recommends descriptive surveys for instances where the following three conditions are in place. Namely; the objectives of the research call for quantitative data, the researcher has significant pre-understanding of the research context as well as the range of possible responses, and the information required is reasonably precise and familiar to the respondents. I believe the constructing stage of the insider action research met all three conditions.

Building on the above, I constructed a questionnaire to facilitate data collection. The choice of questionnaire was borne from its proven effectiveness in facilitating surveys. As suggested by Saunders et al. (2009), building the questionnaire began by creating a data requirement table. This was achieved by following the below steps;

1. Revalidating the main outcome of the research as explanatory.
2. Sub-dividing each research objective into more specific investigative questions.
3. Identifying the variables about which data needed to be collected to answer each investigative question.
4. Establishing the level of detail required from the data for each variable.
5. Developing measurement questions to capture the data at the level required for each variable.

The goal of doing this was to ensure the data collected through the questionnaire could be utilized in achieving the intended purpose. As noted earlier, the questions employed in the questionnaire were inspired by extant literature. The final questionnaire contained eleven list, as well as category questions which focused on attributes and behaviours. These questions were all close ended and required respondents to select one, from a basket of multiple potential answers.

In addition to the close ended questions, the questionnaire also contained one open ended question which focused on establishing the challenges the participants in the study were experiencing in adopting the Retail Smart Business Service (RSBS). The choice to use an open ended, as opposed to close ended question for this part of the questionnaire, was because I wanted to capture raw feedback directly from the participants, given the centrality of this artefact and question to this step of the core action research cycle. A sample of the questionnaire utilized is contained in appendix D.

In line with the recommendations put forward by Apulu (2012), a small scale replica of the study was designed leveraging the established sampling frame prior to the commencement of the actual inquiry. The pilot was important for many reasons. Key amongst them; identifying potential flaws in the research design, so that they could be addressed prior to actual data collection, and establishing the reliability and internal validity of the data to be collected. The pilot study also served as a way for me to develop an appreciation of the kind of micro enterprises that would constitute the participants, as well as the resource requirement in terms of time and money needed to complete the effort. In delivering on the above, I worked with Grooming Centre to identify 10 micro enterprises who would serve as the pilot enterprises in the study.

Feedback from the pilot served as key inputs for the research. For example, while the pilot participants felt the reasons for the questions being asked was clear, they believed the language utilized was a little too academic. They also believed that there was a need to reduce the number of questions and clearly indicate in each question set the number of possible choices that could be selected. In addition to the above, I also got to understand the value of the trust that existed between Grooming Centre and the micro enterprises in the Smart Business Initiative (SBI) and what this meant for garnering active participation of the micro enterprises. Essentially, I would need to work closely with the Grooming Centre relationship managers in order to be successful. Designing and pilot testing the data collection tool was completed in late October 2018.

The next section discusses the second step of the research delivery process, the insider action research.

3.3.2. The Insider Action Research

This step began in November 2018, and ended in September 2019. Its goal was to deliver on the core, as well as the reflective insider action research cycle. The objective of the core insider action research was to (1) establish the profile of the micro enterprises in the study (2) establish the level of adoption of the RSBS application (3) establish the challenges to adoption of the RSBS (4) establish the impact of an intervention to address these challenges both on the adoption of the RSBS application, and the development of the micro enterprises that use the application. The objective of the reflective action research cycle on the other hand, was to present a reflective account of the observations garnered from the core action research particularly as they relate to the practice of insider action research, as well as catalysing micro enterprise development leveraging ICT.

The paragraphs that follow describe what transpired in each stage of the process.

Constructing: This first stage of the insider action research process was focused on the first three objectives of the core insider action research. Actualizing these objectives began with visiting each participant in their place of business to administer the questionnaire developed, and tested during the context setting step. Working with a Grooming Centre assigned relationship manager, each visit commenced with a phone call to ensure the owner of the micro enterprise was at location. Once

availability was confirmed, a visitation time was agreed, with the micro enterprise owner. Each visit lasted about 30 minutes and involved the micro enterprise owner completing the questionnaire and me answering any question(s) the micro enterprises owner had. The completed questionnaire was picked up after each visitation.

All enterprises engaged agreed to participate in the study and made themselves available for the constructing stage. This represented a response rate of 100%. A number of factors were responsible for this. The first, was the face to face engagement. As noted earlier, being able to meet with potential participants in person, share with them the research goals and its likely benefits as well as address any questions or concerns they had, was particularly effective as it helped instil a high level of confidence in the effort. The second reason for the high response rate, was the nature of the research. Being action oriented, potential participants were much more convinced about the value of their participation. For all of them, the fact that they were going to be part of a process of identifying and addressing their challenges working with who they viewed as an expert, was particularly motivating.

A third reason for the high rate of participation, was the way I positioned the research. All the participants engaged had a loan based, business relationship with Grooming Centre which had ran for multiple years. This meant a high level of trust already existed. These businesses were then given free ICT artefacts as part of the SBI. This further enhanced the trust that existed, positioning both Mastercard and Grooming Centre as credible partners genuinely vested in their development. By positioning the current research as yet another initiative to further help them maximize their use of the ICT artefacts, the respondents where fully aligned. Finally, the fact that participation was going to be free, also provided an addition impetus for the micro enterprises. As far as the enterprises were concerned, they were getting access to world class consulting absolutely free. Data gathering was completed between November 2018, and mid-January 2019.

Once data gathering was completed, the next activity was analyzing the information gathered. To achieve this, descriptive statistics in form of frequency distribution using Microsoft Excel was utilized in analyzing the close ended questions, while summarizing, categorizing and narrating leveraging descriptive manual coding was utilized in analyzing the open ended questions. The latter was chosen because the qualitative data collected was relatively small, consisting of a few sentences. These analytical

methods were employed because of their simplicity, the relatively small sample size and their ability to present the data collected in a way that met the objectives of the stage. I experienced no challenges with utilizing these analytical methods in this stage of the study.

Planning Action: This second stage of the insider action research process was focused on working with Grooming Center to develop solutions to the challenges identified, and articulating a strategy that would drive execution. The Grooming Centre engagement was structured as a 3 hour design session, organized at the Grooming Centre Head Office in Lagos Nigeria. It involved me presenting to the Grooming Centre team the findings from the survey, with particular emphasis on the level of adoption of the RSBS application, and the challenges experienced by the participants in utilizing the solution.

Once the findings were presented, the discussion was opened up to allow the Grooming Centre leadership, as well as the relationship managers who had accompanied me on the field visits provide their input. The input provided by the Grooming Centre team collaborated the findings from the survey. Once this stage was completed, the next step was to jointly agree on the Information Technology Therapy (ITT) intervention. This was achieved via a three-step process. The first step, involved brainstorming all possible solutions to the challenges identified. The second, entailed selecting the most suitable solution for each challenge using envisaged impact, cost as well as ease of implementation as acceptance criteria. The final step involved, agreeing the approach to implementation and developing a detailed execution plan.

Table 3.1. below details the challenges identified and ITT intervention developed for each challenge.

Table 3.1. Challenges Identified and ITT Intervention

S/N	Challenge identified	ITT Intervention
1	Network Access	• Identify best network in terms of data availability • Purchase and deploy for respondents at zero cost
2	Data Access	• Identify best network in terms of data cost • Purchase and deploy for respondents at zero cost
3	Faulty Application	• Implement the following improvements to the app. • Faster sign in • Faster data capture/entry • Stable reporting • Re-train enterprises on importance and how to use
4	Lack of follow up/reminder	• Implement in app reminder to prompt customer daily • Get call centre representative to call the micro enterprises twice a day to remind them to capture data.
5	Faulty Device	• Fix all faulty devices at no cost • Review existing policy on insurance and communicate • Implement faster TAT for replacement • Create and communicate hardware support desk.
6	Power	• Provide power banks at no cost

Overall, thirteen interventions were designed to address the six challenges identified. Planning how the ITT interventions developed would be implemented involved; (1) agreeing a few guiding principles on the ITT intervention (2) detailing all the tasks and activities that had to be completed as part of the intervention (3) identifying the responsible party for each activity (4) setting clear start and finish times for each activity (5) establishing what exactly the deliverable would be under each activity and (6) setting up a governance structure to track progress.

On the broad principles of the ITT intervention, five items were agreed with the Grooming team. The first of them was that the intervention would focus only on 25 micro enterprises given existing resource constraints. The remaining 75 micro enterprises would form the control group. It was also agreed that the same systematic sampling techniques employed in selecting the 100 would be utilized in selecting the 25, with the 100 participants this time serving as the sampling frame. The second principle agreed was that these 25 micro enterprises would be consulted to garner their inputs, before the intervention would commence. The third principle agreed, was that both Grooming Centre and Mastercard would lead the interventions. The fourth principles agreed during the session, was that the ITT intervention would run over a 3 month period, after which impact would be measured.

The fifth and final principle agreed, was that a combination of quantitative and qualitative methods will be employed in measuring the impact of the intervention. The above decision to employ mixed methods was born out of two considerations. The first was that mix methods research is common practice in insider action research studies as noted by authors such Johnson and Gray (2010), Creswell and Clark (2011) and Brierley (2017). Second, it represented the most workable approach considering how impact was going to be measured.

Building on the above, it was agreed with Grooming Centre that a quantitative approach would be employed for establishing the impact of the intervention on the level of adoption of the RSBS application, while a qualitative approach would be employed in establishing the impact of the intervention on the development of the micro enterprises. On how? It was agreed that the quantitative approach would employ another descriptive survey of participants, as well as data from the RSBS Management Information System (MIS) while the qualitative approach would leverage semi structured interviews. It was also agreed that there would be touch

point meetings every month to review progress, and implement any further action required. The planning action stage of the insider action research was concluded in January 2019.

Table 3.2 below, presents the final execution plan maintained with the Grooming Centre team in line with the above agreements. It details all the other steps planned as part of the ITT intervention.

Table 3.2. Retail Smart Business Information Technology Therapy (ITT) Intervention Plan

S/N	Task	Activity	Responsible Party	Start	Finish	Deliverable
1	Identification of 25 Participants for ITT Intervention	Hold stakeholder meeting to explain Phase 2 dynamics	Mastercard	28th Jan	28th Jan	Execution Plan
		Identify 25 micro enterprises and share list with Mastercard	Grooming Centre	28th Jan	1st Feb	List of 25 respondents
		Hold session with selected micro enterprises to debrief them about phase 2, re-confirm issues and garner their input on intervention	Grooming Centre	4th Feb	8th Feb	Visit schedule or session schedule
		Organize participants according to intervention need	Grooming Centre and Mastercard	11th Feb	15th Feb	1on1 sessions with all 25 respondents
2	Scope intervention	Dimension Grooming and Mastercard led interventions	Grooming Centre and Mastercard	11th Feb	15th Feb	ITT intervention schedule
		Make available resources	Grooming Centre and Mastercard	11th Feb	15th Feb	Confirmation to kick start intervention
3	Monitor and evaluate	Implement interventions and monitor	Grooming Centre and Mastercard	15th Feb	1st Mar	Execute Intervention

		Measure impact	Grooming Centre and Mastercard	1st Mar	30th Mar	Report of Retail Smart Business App Usage
		Align on next steps	Grooming Centre and Mastercard	1st Apr	1st Apr	Next line of actions to drive usage of RSBS application
		Implement interventions and monitor	Grooming Centre and Mastercard	2nd Apr	30th Apr	Execute intervention
		Measure impact	Grooming Centre and Mastercard	30th Apr	1st May	Report of Retail Smart Business App Usage
		Align on next steps	Grooming Centre and Mastercard	2nd May	2nd May	Next line of actions to drive usage of RSBS application
		Implement interventions and monitor	Grooming Centre and Mastercard	2nd May	30th May	Execute Intervention
		Measure impact	Mastercard	1st Jun	2nd Jun	Report of Retail Smart Business App Usage
		Conduct semi structured interviews	Mastercard	2nd Jun	30th Jun	Impact report
4	Collate final report	Consolidate data and present final report	Mastercard	1st Jul	30th Jul	Presentation of findings

Acting: This stage in the insider action research was focused on implementing the ITT intervention plan. As communicated in the above plan, execution commenced with engaging the 25 micro enterprises selected to receive the ITT intervention. Designed as a 2 hour informal engagement, I used the opportunity to thank participants for their level of commitment in the constructing stage. I also used the session to share with them the findings of the stage, and the ITT interventions that had been developed with Grooming Centre.

It is important to note here that one key feedback that emerged from the participants during this session was that, while the challenges identified and solutions developed were apt, the challenges were not consistent across every micro enterprise. Hence a key step in delivering the ITT intervention would be to map out which challenges was relevant for which micro enterprise. This was critical to ensuring the interventions were customized appropriately.

Table 3.3 below presents the result of this mapping.

Table 3.3. Mapping Challenges to Participants

S/N	Initial of Business Owner	Type of Business	Network	Data	Faulty App	Follow Up	Faulty Device	Power
1	N.U	Other Retail	Yes	Yes	Yes	No	No	Yes
2	L.G	Bar and Lounge	Yes	No	No	No	No	Yes
3	N.R	Groceries	Yes	Yes	No	Yes	Yes	Yes
4	E.C	Grocery	Yes	Yes	No	Yes	No	No
5	E.G	Other Retail	Yes	Yes	No	Yes	No	Yes
6	M.I	Other Retail	Yes	Yes	Yes	Yes	No	Yes
7	D.O	Grocery	Yes	Yes	No	Yes	No	No
8	A.F	Grocery	Yes	No	Yes	No	Yes	No
9	M.B	Other Retail	Yes	Yes	Yes	No	No	Yes
10	R.A.	Other Retail	Yes	Yes	Yes	Yes	Yes	Yes
11	O.L.	Bar and Lounge	Yes	Yes	Yes	No	No	Yes
12	A.P	Other Retail	Yes	No	Yes	Yes	No	Yes
13	A.O.	Bar and Lounge	Yes	Yes	No	Yes	No	Yes
14	A.R	Bar and Lounge	Yes	Yes	No	No	No	Yes
15	O.A.	Other Retail	Yes	Yes	Yes	Yes	Yes	Yes
16	A.R.	Business Centre	Yes	Yes	No	No	Yes	Yes
17	S.A.	Other Retail	Yes	Yes	No	Yes	Yes	Yes

18	M.A.	Grocery	Yes	Yes	No	No	Yes	Yes
19	S.A.	Grocery	Yes	Yes	No	No	No	Yes
20	A.O.	Other Retail	Yes	Yes	Yes	Yes	No	Yes
21	A.B.	Grocery	Yes	Yes	Yes	Yes	No	Yes
22	A.B.	Other Retail	Yes	Yes	Yes	Yes	No	Yes
23	O.B.	Grocery	Yes	Yes	No	No	No	Yes
24	D.B	Bar and Lounge	Yes	Yes	Yes	No	No	Yes
25	B.A.	Textile and Clothing	Yes	Yes	Yes	No	No	Yes

Once the mapping exercise was completed, the next step was agreeing with the Grooming Centre team which ITT interventions Mastercard will lead, and which interventions Grooming Centre will lead. This segregation of duties was based on the idea that, each party had its own strengths which were more relevant in deploying certain interventions than others. Grooming Centre for example, had built the RSBS application and set up mechanisms for customer training and support. They also had existing relationships with the micro enterprises. Hence it was agreed that the organization will handle the interventions tied to challenges around ease of use, lack of follow up or reminder, and issue with the device.

On ease of use, the Grooming Centre team worked with the developer of the RSBS application to make the required improvements and upload a version 2 of the solution on the Google Play Store. Once this was done, they worked with the relationship managers to ensure all 25 micro enterprises updated the application on the Techno Droipad 10d Tablet. On lack of follow up or reminder and faulty device, the same approach was adopted, with the Centre taking the lead, to work with relevant internal and external stakeholders including vendors to implement the intervention. The relationship managers also confirmed the engagement with the micro enterprises, to ensure the intervention was delivered to the last mile.

On my part, I was tasked as Mastercard with the responsibility of implementing the ITT interventions related to network access, data access and power. As with the Grooming team, in delivering these interventions I also relied on relevant internal and external stakeholders including vendors, and utilized the Grooming relationship managers to ensure delivery at the last mile. All ground work related to delivering the ITT interventions were completed within two weeks of the session and mapping exercise.

It is important to note here that, irrespective of the segregation approach taken, the interventions were implemented with a single team mind set. This meant that I worked hand in glove with the Grooming team, irrespective of whether or not I was leading the delivery of an intervention or not. For example, in addressing the issue with device, I accompanied the team on visits to micro enterprises to pick up devices, take them to the identified vendor for repairs and return them to the micro enterprises.

Similarly, in purchasing the data which was provided free to the micro enterprises over the three months of the intervention, the Grooming Centre team accompanied me

in visiting providers to assess, the best quality, at the best price, and helped with the distribution of the new data plans to the micro enterprises. This partnership based approach to delivering the interventions, was further strengthened by the monthly status meetings utilized to track progress. Even though there were minor slippages in terms of timelines and budget, this 'taking action' step of the action research cycle was largely executed in line with the plan developed. The only deviation to plan was on developing additional interventions after each monthly review. This was not required as the monthly progress tracking exercise showed that there was significant response to the interventions. The acting stage of the insider action research was completed in June 2019.

Evaluating Action: The goal of this stage of the insider action research was achieving the last objective of the core insider action research, which was establishing the impact of the ITT intervention after the 3 months intervention period. It involved executing on the evaluation plan articulated during the planning stage. In line with that plan, the first phase of data collection and analysis focused on establishing the impact of the ITT intervention on the adoption of the RSBS application. It employed quantitative data from two sources; the first was a descriptive survey. Unlike the questionnaire utilized in the 'constructing' stage, the questionnaire employed for evaluating action, only had two questions specific to the level of use of the RSBS application. For the enterprises that were part of the intervention group, as well as those in the control group, this questionnaire was administered face to face as part of the activities that marked the end of the 3 month intervention period. Employing exactly the same approach as in the constructing stage, 100% of the micro enterprises in the study participated. As noted earlier, a key reason for this high level of response was the high level of engagement with participants during the research.

Analysis of the quantitative data collected from the descriptive survey leveraged descriptive statistics in the form of bar charts generated through Microsoft Excel. Bar charts were utilized in comparing responses to the two questions on the use of the RSBS application between the core and control group of micro enterprises that participated in the study. Microsoft excel was used because of the relatively small sample size and the fact that it was the analytical tool I was most familiar with. Bar charts on the other hand were used to present the information because I believed it was the most effective way of displaying the data succinctly. I had no challenge with utilizing Microsoft Excel or bar charts for this stage of the study.

The second source of quantitative data for this evaluating action stage was the RSBS Management Information System (MIS). This data was collected monthly and utilized for two purposes. The first was to ensure the interventions were yielding fruit. The second was for triangulation. Two parameters were collected as part of this process; the first was average frequency of log on; that is how many times on average the micro enterprises logged into the application, while the second was average duration of log on; that is how long on average the micro enterprise stayed logged-on every month. These parameters were selected because they were the most relevant indicators available on the system. Analysis of this data also employed descriptive statistics. However, unlike the survey which employed bar charts, here a line graph was adopted. The line graph was selected because it was the most effective way to present how both parameters were changing over time as a result of the ITT intervention. I had no challenge with retrieving data from the RSBS system or utilizing a line graph for the data analysis.

The second phase of the evaluating action stage, focused on establishing the impact of the ITT intervention on the development of the micro enterprises in the control group. As noted in the planning stage, it leveraged semi structured interviews with all 25 micro enterprises that were part of the intervention group. Employing the same strategy as the constructing step, the interviews were conducted face to face with each micro enterprise at their business location. Each interview lasted about 45minutes. It began with pleasantries being exchanged between myself and the micro enterprise, before getting into the detail of the task at hand.

As noted earlier, the questions that informed the broad direction of the interviews were guided by the concept of micro enterprise development articulated in extant literature. In addition to the concepts of development established in the literature, I also allowed room for questions that allowed myself and the micro enterprises to explore other dimensions of development not covered in the literature. Where required, I asked additional questions to probe issues further.

The 'voice memo' application on my smart phone was utilized in recording the interviews. These voice memos were later transcribed into a Microsoft Word document. As much as possible, every detail of the interview was transcribed including pauses, laughter and breaks in conversations. The purpose of this, was to paint a rich picture of the conversations, with the goal of unearthing any none verbal

ques that existed. Where possible, transcription occurred on the same day as the recording while the engagement was still fresh in my mind. Once I finished transcribing the interview for each micro enterprise, I called them by telephone as soon as possible to share what I had documented at a high level. The purpose of this was to ensure what had been documented was accurate. Largely, the micro enterprises concurred with my summary. This said, there were a few cases where the micro enterprises felt the need to further elaborate on the context behind what I had documented. These additional insights were duly captured and utilized in further enhancing the transcript.

Capturing data in this format did not present any major challenges, as participants were informed ahead and provided their consent as part of the initial engagement process. As noted by Apulu (2012), I found the process of recording the interviews very effective, as it provided a complete description of the interviews, responses, and comments. This enabled me to go back to reconfirm themes during the analysis stage.

Given the size of the data gathered, analysis required a much more elaborate approach. Directed content analysis was selected as that approach. Following Owolabi (2018), the first step in the analysis involved reading through the transcripts generated from the semi structured interviews several times; first to familiarize myself with the manuscript, and also to make brief notes, as I came across interesting and relevant subjects. Once this was completed, the next step in the process involved reviewing the notes I had taken to identify the fundamental ideas emanating from them, and labelling those ideas. Leveraging this step, I proceeded to generate a list of common ideas, to which I associated codes; by code I mean a word or short phrase that summarizes the salient point within the ideas. From the review of the documents, I generated about 20 codes.

Once the codes where generated, I perused them again to get a deeper sense of the data, before breaking them into meaning units; by this I mean collections of sentences that represent the smallest unit of insights. Each identified meaning unit was again labelled with a code. Following the coding exercise, I proceeded to condense the meaning units into sub categories which were then condensed into categories or themes. These themes were utilized in addressing the research questions.

Directed content analysis was utilized for this study for a number of reasons. First, as noted by Owolabi (2018), it is apt for classifying and summarizing data from qualitative sources including interviews. Second, it provided a framework for capturing the

richness of data without sacrificing structure. Third, it provided a way for me to more effectively communicate my observations, findings, and interpretation to a wide array of stakeholders including those with separate research traditions.

It is important to note here, that while the use of data analysis software such as Atlas Ti or NVivo was considered, the idea was jettisoned based on the limitations of such programs as highlighted in the literature. Denscombe (2007) for example, argues that computer programs are unable to discern the implied meanings which often characterize qualitative data, as such meanings often come from the researcher's immersion in the context of the research. Building on this point, Waring and Wainwright (2008) contends that such immersion represent an integral part of meaning making, and that the use of technology can negatively impact this process. Hence, I conducted the thematic analysis manually. The evaluating action stage of the insider action research was completed in September 2019.

The Reflective Action Research cycle: As noted earlier, the reflective insider action research cycle, ran in parallel with the core insider action research. Its objective was to present a reflective account of the observations garnered from the core action research particularly as they relate to the practice of insider action research as well as catalysing micro enterprise development leveraging ICT. On an ongoing basis, it involved me stepping back to consider; the assumptions I was making regarding the research, the process of constructing the ITT intervention, planning the intervention, delivering it and evaluating its impact. It also involved me thinking about how this experience was impacting the kind of actionable knowledge I was creating, and how I was growing both as a scholar and a practitioner in the process. As noted by Raelin (2003), this was done in some instances before action, and in other instances during or after action. To ensure my thoughts were captured in the moment and in an orderly manner, I utilized journaling as much as possible.

The next section discusses the third and final step in the research delivery process, documentation.

3.3.3. Knowledge Sharing and Documentation

This final step in the inquiry involved four key activities. The first of them, entailed creating a draft of the findings from the insider action research in a way that could be shared easily with external stakeholders. This was achieved utilizing a combination

of technology in the form of Microsoft PowerPoint, and good story telling. The goal of doing this was to enable me succinctly recap the context that gave rise to the thesis engagement, its goals and how those goals were achieved. In addition, I also sought to utilize the document in communicating the actionable knowledge created.

Once this was completed, the second step involved presenting the document; first to my manager, and then externally to the relationship managers and project lead at Grooming Centre. The objective of doing this was threefold. First, I wanted to share with the stakeholders, the insights we had co-created and thank them for their participation. Second, I wanted to also review the content with them and ensure it represented our shared view. Finally, I also wanted their input, before presenting to senior stakeholders. The meeting with my manager at Mastercard took the form of a 45 minute debrief session, which took place over Skype as she was travelling. The meeting with the Grooming Centre team on the other hand, was face to face and lasted about 2 hours. The meeting with the Grooming team took longer because it was more interactive.

Leveraging the insights garnered from the above, the next step involved scheduling time with senior management at Mastercard and at Grooming Centre to present the updated document. The goal of doing this was to share the insights garnered and also secure the commitment of both organization's leadership on potential next steps. This engagement took the form of two separate meetings.

The first was with the Mastercard team, and was again over Skype as many of the participants such as the Division President (DP) for Sub Saharan Africa (SSA) as well as other members of the leadership team were not based in Lagos, Nigeria. Hence, the session had to be delivered remotely. In total, four attendees including the DP for SSA participated in the session. Other attendees at the session were the head of the West Africa business who was my manager, the head of Product Development and the head of Customer Delivery. The meeting lasted about an hour. The second meeting was with the Grooming Centre team. It was face to face at the company's corporate headquarters in Lagos. In attendance was the Executive Director (ED) in charge of operations and technology and the project lead. Also in attendance was the relationship managers. The session also lasted about one hour.

Following these sessions, two requests were made by the stakeholders to me as the insider action researcher. Both of them had to do with planning next steps in greater

detail. The first request was around knowledge dissemination particularly among other stakeholders, such as governments and developmental organizations. The Mastercard and Grooming Centre leadership both saw the research as an opportunity to position the organizations as thought leaders in micro enterprise development.

The second request I was tasked with, was establishing how the considerations articulated in the study could be progressed. While the Grooming Centre team was also interested in this plan, the request was more from the Mastercard leadership team. Specifically, the DP wanted to understand the activities that needed to be delivered, who needed to be involved at Mastercard, what investment was required, what timelines and what success would look like. I committed to have the first draft of both plans in place by the end of 2020 for consideration. Post these engagements, the final draft of the thesis project was submitted to the University of Liverpool in November 2019.

Having discussed how the research was delivered, the next section presents the approach employed in managing change during research delivery.

3.4.   Managing Change

Given its focus on action, this insider action research was characterized by multiple challenges which required constant course correction. In navigating these changes, I employed multiple principles drawn from extant literature. The first of these principles entailed emphasizing workability; by this I mean, adopting a pragmatic mind set focused on actualizing the research agenda. While authors such as Greenwood and Levin (2007) and Johansson and Lindhult (2008) have long discussed the importance of workability in action research, what was interesting for me to see in this study, was that the concept played out not just in designing the research but also in implementing it. From considering how many micro enterprises will participate in the study, to what options of intervention to implement. From deciding how long the interventions should last, to how its impact should be measured. Workability was a guiding principle throughout this insider action research.

Emphasizing workability in this research was important for multiple reasons, the most important of which had to do with the limitations that existed in terms of resources such as man power, time and cost. While I would have loved to have all 1000 micro

enterprises in the SBI participate in the study for example, neither Grooming Centre nor I had the resources to make this a reality. Similarly, while there were several ITT interventions that could have addressed the issues with adoption observed, we had to constrain ourselves to the interventions that could be implemented in the time we had, and within an acceptable budget.

Another principle that was critical in successfully managing the changes encountered during the insider action research, was the concept of being a political entrepreneur. Björkman and Sundgren (2005) argue that while there is an uneasiness that comes from this knowledge, the reality is that organizations are not the stably ordered, predictable, rule-based systems we have come to expect. Rather they are an amalgam of people and agendas. Building on this, the authors highlight the need for insider action researchers to develop and horn what they refer to as political entrepreneurship skills. According to the authors political entrepreneurship refers to the ability of insider action researchers to act in a way that combines a variety of skills which facilitate key activities such as pushing particular agendas, intervening in political processes, influencing decision makers, dealing with criticism and challenge, promoting credibility and coping with resistance in order to achieve pre-determined goals or objectives.

Being a political entrepreneur, was perhaps the most important factor in successfully managing change during the research. From engaging the leadership at Grooming Centre to inform them of my intent, to carrying along my manager at Mastercard in the right way. From convincing the micro enterprises to participate in the study, to working with the Grooming Centre relationship managers to implement the interventions. Applying political entrepreneurship skills was central to everything I did. It is noteworthy to mention that the way these skills were applied differed greatly in the course of the insider action research. In some instances it was pronounced, for example in ensuring the Grooming Centre team felt part of the intervention design so they could co-own its execution. In other instances being a political entrepreneur was more subtle for example in 'selling' as opposed to 'telling' the micro enterprises about the need for participation and serving refreshments during the sessions to show their participation was greatly appreciated.

The third and final principle I employed in successfully managing the changes encountered during this insider action research was emphasizing the virtue of

participation. By making Mastercard, Grooming Centre and the micro enterprises in the study an essential part of every key decision in the insider action research process, I was able to identify best in context solutions and implement them with relative ease. This was as true when I was deciding the sample size during the constructing intervention stage, as it was deciding to employ data from the RSBS MIS in evaluating the impact of the ITT intervention.

The next section discusses the approach employed in ensuring credibility in the research.

3.5. Ensuring Credibility

According to Saunders et al. (2009), a key feature of any good research is the credibility of its findings. The authors describe credibility as the ability of the evidence gathered and the conclusions drawn from the research to stand up to the closest scrutiny. This said, Shah and Corley (2006) note that research philosophies need to be taken into account when considering research credibility. They argue for example that interpretive research is based on a different set of ontological and epistemological assumptions than positivist research, hence the notions of credibility cannot apply in the same fashion. In addition to research philosophy, Greenwood and Levin (2007) argue that for action research projects such as the current study, workability goes hand in hand with credibility. Hence, any discussion on credibility needs to take into consideration workability. The authors suggest that in moving from workability to credible knowledge that can be shared beyond the local context, researchers must subject their studies and its outcomes to scrutiny.

Given its pragmatic orientation, my inquiry considered credibility from a number of dimensions. Key amongst them, reliability, validity, generalizability, transferability, my role as an insider action researcher and ethics. The sections that follow discuss the approach taken to address credibility along each dimension.

3.5.1. Approach to Ensuring Reliability

Saunders et al. (2009) describe reliability as a focus on the degree to which data collection procedures or analysis techniques employed during research will yield consistent findings. They argue that the reliability of any research enterprise can be assessed by posing three questions; first, will the measures employed produce the same outcomes on other instances? Second, will comparable observations be arrived

at by other observers? Third, is there transparency in the sense making process that builds on the raw data? Building on these questions, the authors identify several threats to reliability. Among them; participant bias, which may arise from the context within which the research is conducted, observer error, which may arise from the way data is captured, and observer bias, which may arise from the way data is interpreted.

In addressing these potential threats to reliability, I took a number of steps. First, I utilized existing literature in developing the instruments and measures employed in investigating the key constructs in the study including the challenges to ICT adoption, micro enterprise development and technology adoption. Second, research instruments such as questionnaires were tested first, by piloting them with a small group of respondents that were part of the same sampling frame, before their use in the main study. Third, sampling was deliberate employing approaches that were able to deliver on the research objectives. Fourth, confidentiality played a central role in the overall research design. Finally, data capture and analysis for this research employed tried and trusted tools and techniques, as evidenced by their wide use in business and management research of this nature. These steps helped increase consistency in data gathering, collection, analysis and interpretation, while reducing the risk of bias.

3.5.2. Approach to Ensuring Validity

Saunders et al. (2009) describe the concept of validity as being concerned with establishing whether the findings of a given research represent what they are intended to represent. They identify several potential threats to validity. These include, the existing context or history, the way testing is done, instrumentation, morality, maturation and ambiguity about causal direction. To reduce these potential threats to validity, I took a number of steps during the inquiry. First, as noted earlier constructs for this study were derived from existing literature, hence their validity had been established. Also as noted earlier, survey instruments were first piloted before their use at scale. Third, quantitative as well as qualitative data collected where presented to respondents for their concurrence where required, prior to being used. These steps helped ensure the approaches employed in the research were consistent with the intent.

3.5.3. Generalizability

In addition to reliability and validity, authors such as Oates (2006) and Saunders et al. (2009) identify generalizability and transferability as other important consideration in establishing the credibility of any research enterprise. They describe generalizability as the degree to which outcomes from a given research are applicable to different people, settings or times. Given its philosophical orientation as well as its current scope and focus, my inquiry makes no claims regarding the generalizability of its findings. Its only aspiration is to demonstrate that the insights gained can be leveraged in furthering Mastercard's business objectives, and that they also contribute meaningfully to current discussions on micro enterprise development.

3.5.4. Transferability

Oates (2006) and Saunders et al. (2009) argue that transferability refers to the degree to which outcomes from a given research context can be applied to similar context or situations. As with the generalizability of its findings, my inquiry makes no claims regarding transferability. As noted earlier my only aspiration is to demonstrate that the insights gained can be leveraged in furthering Mastercard's business objectives and in making meaningful contribution to micro enterprise development. This said, the opportunity exists to transfer the insights garnered from this study to similar research contexts.

3.5.5. My Role as an Insider Action Researcher

Coghlan and Brannick (2014) note that from a credibility stand point, two considerations are key for researchers engaged in insider action research. These considerations are; pre-understanding and role duality. Coghlan and Brannick (2014) and Roth et al. (2007) define pre-understanding as the researcher's knowledge, insights and experience before engaging in the research. They note that while this knowledge is an advantage for the insider researcher, as they can participate freely without drawing attention to themselves or suspicion, it can also be a disadvantage as the researcher is part of the organization making it difficult to stand back and critique. On role duality, the authors note that being complete members of the organizations they are researching, researchers play the role of both actors and directors in the research. They add that while this role duality may have advantages

such as empathy and motivation, they may also have the disadvantage of the researcher drawing wrong conclusions due to bias.

I took a number of steps to address the above risks in my inquiry. The first of these steps entailed me becoming more aware of these limitations, and how they may manifest in the research. This involved reviewing relevant studies on insider action research including Coghlan and Brannick (2014), Björkman and Sundgren (2005), Roth et al. (2007) and Moore (2007). Another important step taken to address the potential risks identified with being an insider action researcher, involved me identifying and developing the required skills highlighted in the extant literature discussed above. These skills include becoming more attentive, questioning assumptions and engaging in reflection. This was mainly achieved through practice, with the taught component of the University of Liverpool Doctor of Business Administration (DBA) Program playing a key role, in helping me hone these skills.

3.5.6. Ethical Considerations

Saunders et al. (2009) note that at the core of ethics in management and business research, is the consideration that the research design does not subject the research population, by this I mean those involved in the research to embarrassment, harm or any other material disadvantage. In ensuring this, the research subscribed to the ethical standards, policies and procedures set forth by the University of Liverpool. Amongst other factors, this involved documenting the research proposal and methodology for approval by the University's ethics committee, ensuring participants were duly informed of what the research would entail, and their right not to participate or to drop off at any time, and garnering their consent before kicking off any form of data collection.

In addition to adhering to the standards of ethics mandated by the University of Liverpool, I also took a number of steps on my part to ensure my inquiry was conducted ethically. This involved being open and transparent in my communication with all stakeholders including Mastercard and Grooming Centre not just the micro enterprises in the study of my motivation for conducting the study, and what they should expect. It also entailed making sure that key ethical values such as ensuring data from respondents were treated with confidentiality was adhered to strictly. In addition to the above, I also ensured that where relevant, data captured from

participants were validated by the participants before being used in the research. An example of this was in the semi structured interview stage of the research.

Finally, I ensured that while all participants that were engaged agreed to participate, this was done out of the value they perceived as opposed to any feeling of coercion given their relationship with Grooming Centre, or the fact that Mastercard who had provided the ICT artefacts in the SBI was conducting a study, and as such they had to participate. This was achieved mainly by taking a 'selling' as opposed to a 'telling' approach to the engagement.

3.6.   Conclusion

This chapter sought to detail how the insider action research was conducted. In doing so it discussed my philosophical stance and underlying assumptions, the chosen research design option, the reasons for its selection, the research process and the activities that transpired at each step of that process. It also presented the approach employed in managing change as well as the approach taken to ensure the credibility of the research process and its findings.

In concluding, two points are worth reiterating. The first is that, this study progressed through a number of carefully articulated steps underpinned by a set of ontological and epistemological assumptions guided by the theoretical framework. Approaching the research in this manner not only ensured the research conformed to the quality expectations of a doctorial level study, it also ensured that the actionable knowledge it claims to have created was borne out of a process that is both coherent and internally consistent. The second point worth reiterating, is that true to form, engaging in research of this nature was not without its challenges. Addressing these challenges required adopting a number of tried and tested principles drawn from extant literature.

The implications of the above for the thesis project is twofold; first, the logic behind the method employed in conducting the inquiry has been clarified. Second, the process of inquiry itself has been described in as much detail as possible. Hence the stage is now set to present the outcome of the process.

The next chapter achieves this by presenting the findings from the inquiry.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.0.   Introduction

The goal of this chapter, is to present the findings of the insider action research, and the learnings that occurred as a result of the process. In actualizing this goal, the chapter is divided into three sections. The first, lays the foundation for the discussion by revisiting the objectives of the insider action research, and the modalities employed in achieving those objectives. Building on this, the second section presents the results of the core insider action research, as they relate to the objectives discussed and the learning derived.

The third and final section, presents the observations from the reflective insider action research and the learnings, first as they relate to the practice of insider action research, and then as they relate to catalysing micro enterprise development leveraging Information and Communication Technology (ICT). The chapter concludes by reiterating some of the key points made.

Next, I revisit the research agenda, process, associated methods and objectives.

4.1.   Recap of Research Objectives, Methods and Process

As discussed in the previous chapter, the insider action research project was conducted to answer two important questions; the first was, 'why did the Mastercard Grooming Centre Smart Business Initiative, deliver such poor adoption levels for the Retail Smart Business Service (RSBS), despite the obvious benefits of the application to the micro enterprises in the program?' The second was, 'could anything have been done to improve the adoption levels, if so what? In line with this, the core insider action research sought to deliver on four key objectives. These objectives were (1) establish the profile of the micro enterprises in the study (2) establish the level of adoption of the RSBS application (3) establish the challenges to adoption of the RSBS (4) establish the impact of an intervention to address these challenges both on the adoption of the RSBS application and the development of the micro enterprises that use it.

The reflective action research on the other hand, was conducted in parallel with the core action research. Its objective was to present a reflective account of the

observations garnered from the core action research, particularly as they relate to the practice of insider action research, as well as catalysing micro enterprise development leveraging ICT. Underlying both the core and reflective insider action research were four interrelated ideas which constituted the theoretical framework of the study. These ideas are; (1) Micro enterprises are not an homogenous group. They differ from other enterprises as well as from each other. (2) Despite its benefits, micro enterprises experience low levels of ICT adoption which is due to multiple challenges (3) deliberate steps can be taken to identify and address these challenges (4) Taking these deliberate steps will lead to greater ICT adoption, and the development of these enterprises.

The modalities followed in delivering both the core and reflective insider action research are presented in table 4.1. below.

Table 4.1: Insider Action Research Process and Methodology

Insider Action Research Process	Theoretical Framework Component	Data Collection Methodology	Data Analysis Methodology	Objective
Constructing	Micro enterprises are an heterogenous group of enterprises.	Descriptive survey utilizing a questionnaire with close ended questions administered face to face to all 100 micro enterprises in the sample.	Quantitative. Descriptive statistics in the form of frequency distribution.	Establish the profile of the 100 micro enterprises in the study.
	Despite its benefits, micro enterprises may experience low levels of ICT adoption due to multiple challenges.	Descriptive survey utilizing a questionnaire with close ended questions administered face to face to all 100 micro enterprises in the sample.	Quantitative. Descriptive statistics in the form of frequency distribution.	Establish the level of adoption of the Retail Smart Business Service (RSBS) across all profiled micro enterprises.
		Descriptive survey utilizing a questionnaire with open ended questions administered face to face	Qualitative. Summarizing, categorizing and narrating.	Establish the challenges to adoption of the Retail Smart Business Service (RSBS) within all profiled micro enterprises.

		Journaling observations in action	Qualitative. Summarizing, categorizing and narrating	Reflection on insider action research process and micro enterprise development effort leveraging ICT.
Planning and Taking Action	Deliberate steps can be taken to identify and address these challenges	Journaling observations in action	Qualitative. Summarizing, categorizing and narrating	Reflection on insider action research process and micro enterprise development effort leveraging ICT.
Evaluating Action	Intervention will lead to greater ICT use and micro enterprise development	Descriptive survey utilizing a questionnaire with close ended questions administered face to face to 25 micro enterprises selected from the initial 100 which formed the Intervention Group.	Quantitative. Descriptive statistics in the form of frequency distribution.	Establish the level of adoption of the Retail Smart Business Service (RSBS) within the intervention group post intervention.
		Monthly Retail Smart Business Service (RSBS) Management Information System (MIS) data on average frequency of log on; that is how many times on	Quantitative. Descriptive statistics in the form of a line graph measuring the frequency and	

		average the 25 micro enterprises in the intervention group logged into the application and average duration of log on; that is how long on average the micro enterprise stayed logged-on every month. This data was utilized for triangulation.	duration of logon into Retail Smart Business application Service during intervention. .	
		Semi structured interview conducted face to face with the 25 micro enterprises selected from the initial 100 which formed the Intervention Group.	Qualitative. Manual directed content analysis leveraging transcripts of interview.	Impact of the intervention on the development of the 25 micro enterprises which formed the intervention group.
		Journaling observations in action	Qualitative. Summarizing, categorizing and narrating	Reflection on insider action research process and micro enterprise development effort leveraging ICT.

The next section discusses the result of the core insider action research as they relate to the research objectives.

4.2.   Results from the Core Insider Action Research

The paragraphs that follow present the results of the core insider action research.

Objective 1: Establishing the Profile of the Micro Enterprises in the Study

As noted in Table 4.1. above, the first idea espoused in the theoretical framework that underlies this study is that micro enterprises are not a homogeneous group; they differ from other enterprises as well as from each other. Leveraging the parameters articulated in SMEDAN (2013), GEM (2012) and GEM (2019), the constructing stage of the insider action research sought to establish the profile of the one hundred micro enterprises that participated in the study. In achieving this, a descriptive survey was utilized for data gathering while descriptive statistics in the form of frequency distribution was utilized for data analysis.

The charts that follow present the questions posed to participants and the insights garnered from analysing their responses.

Question 1: What is your gender?

Analysis of the responses to this question revealed all participants in the study where women.

Figure 4.1. Response to Question 2: What age group do you belong?
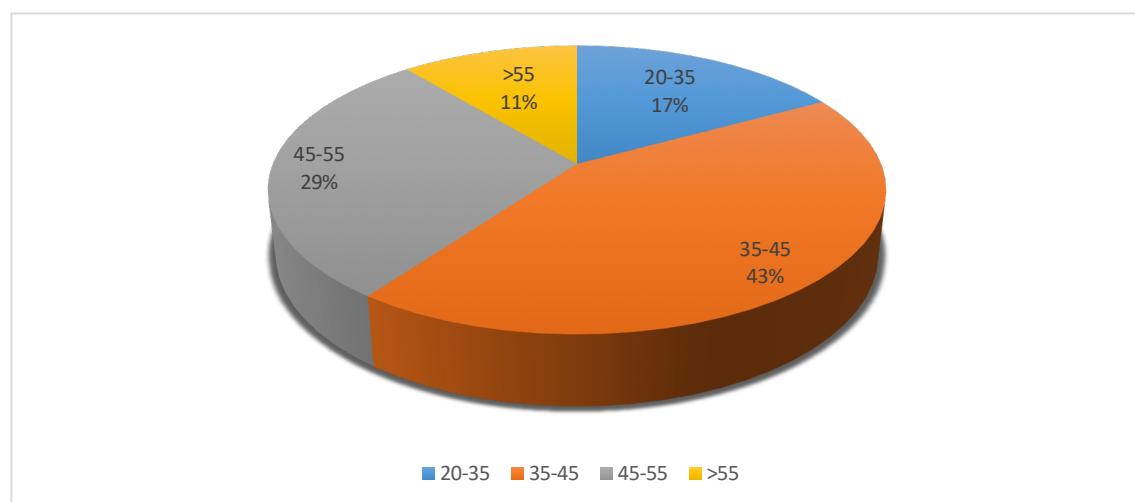
Analysis of the responses to this question showed the majority of the women in the sample (43%) where between 35 and 45 years old.

Figure 4.2. Response to Question 3: What is your level of Education?
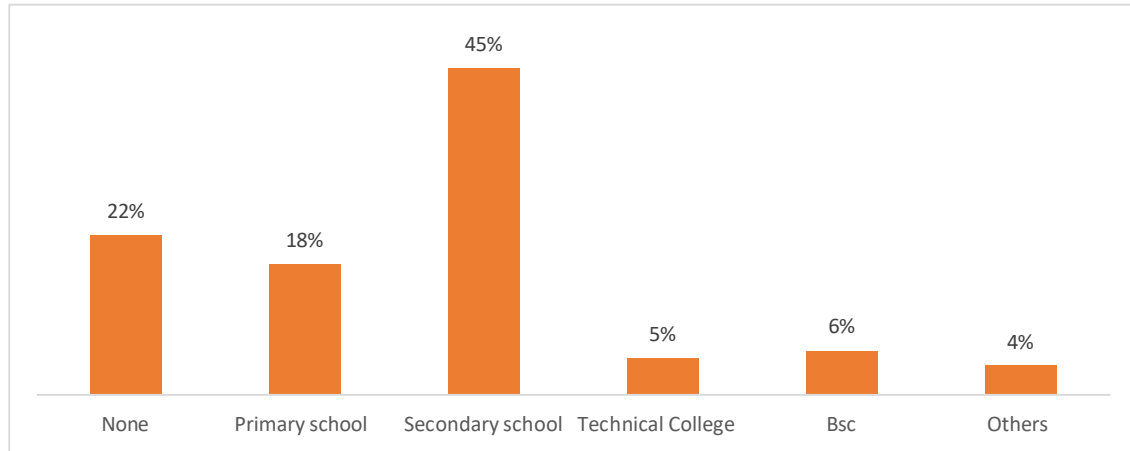
Analysis of the responses to the question revealed that while a significant number (22%) of the micro enterprises in the sample had no education, majority (45%) had secondary school education. The survey also revealed that 18% had only primary education, while 6% had a bachelor's degree.

Figure 4.3. Response to Question 4: What was your motivation for going into this business?
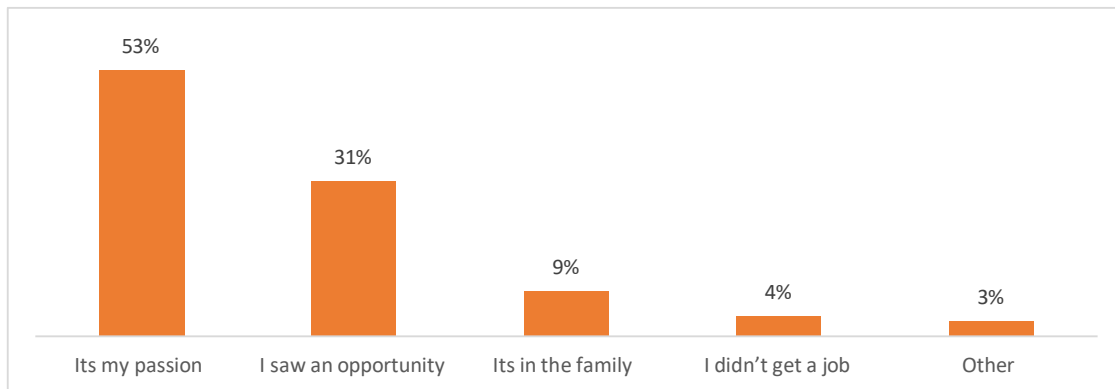
Analysis of the responses to this question revealed that, for the businesses in the sample; passion was the highest motivator (53%) followed by opportunity (31%) and family legacy (9%).

Figure 4.4. Response to Question 5: What type of business do you run?

Legend: Grocery Retail · Other Retail · Clothing and Textile · Bar and Lounge · Hair Saloon
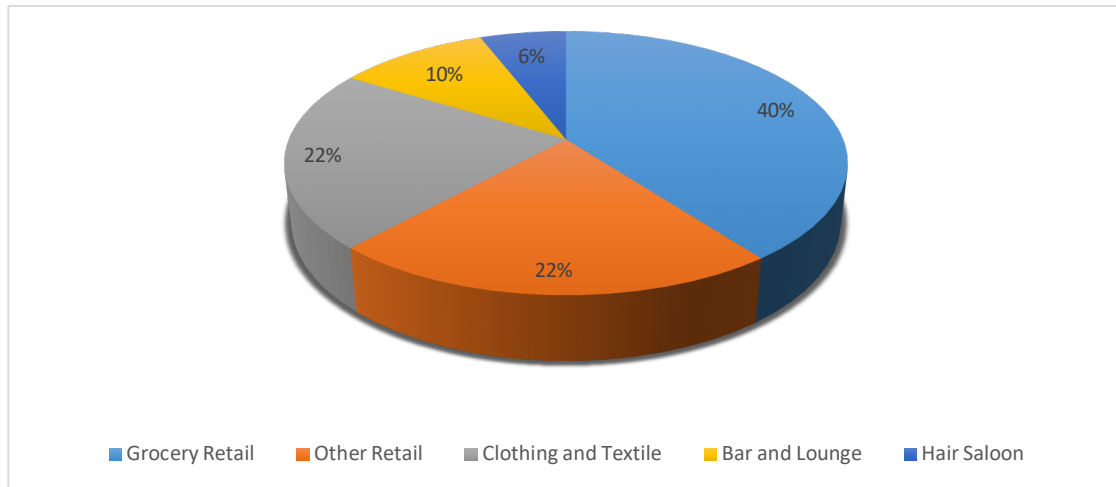
Analysis of the responses to this question revealed that majority (62%) of the micro enterprises in the sample were retail businesses, selling groceries (40%) as well as other retail products (22%). Examples of products which fall into the 'other retail' category include beauty and health care products.

Figure 4.5. Response to Question 6: What is the nature of the ownership of the business?

Categories: One Man (Sole Proprietorship) 90% · Family Business 8% · Partnership 2% · Limited Liability Company 0%
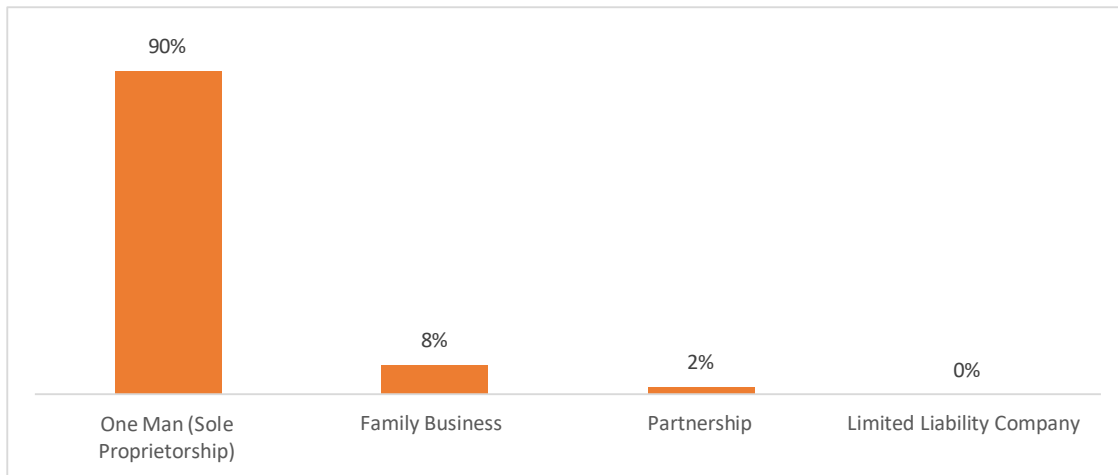
Analysis of the responses to this question revealed, the overwhelming majority (90%) of the businesses in the sample were sole proprietorships. None were limited liability companies.

Figure 4.6. Response to Question 7: How long have you been in this business?
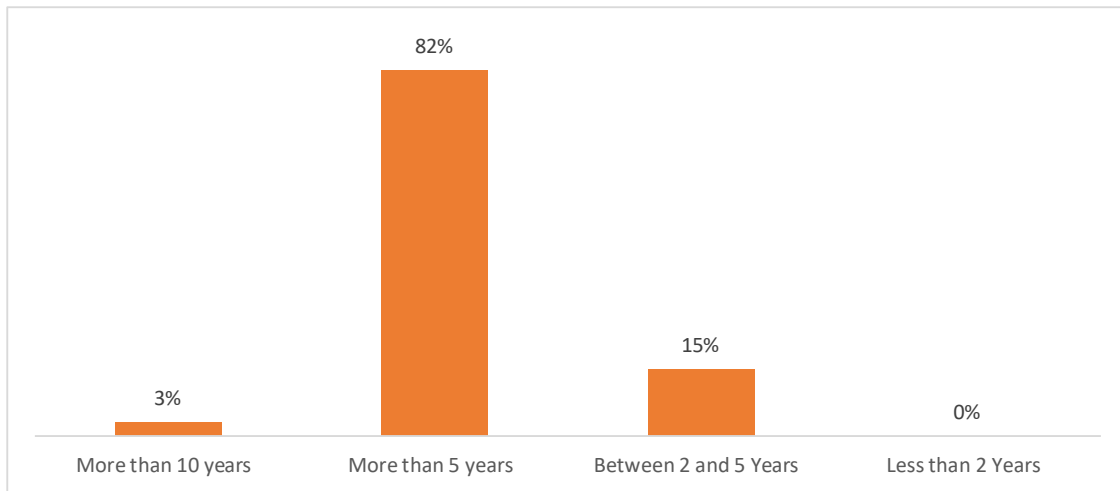
Analysis of the responses to this question revealed that the overwhelming majority (82%) of the micro enterprises in the sample, were relatively established businesses with operations spanning between 5 to 10 years. Only 3% of the enterprises surveyed had been in business for more than 10 years, while none of the micro enterprises in the sample had been in business for less than 2 years.

Figure 4.7. Response to Question 8: How many people does your business employ?
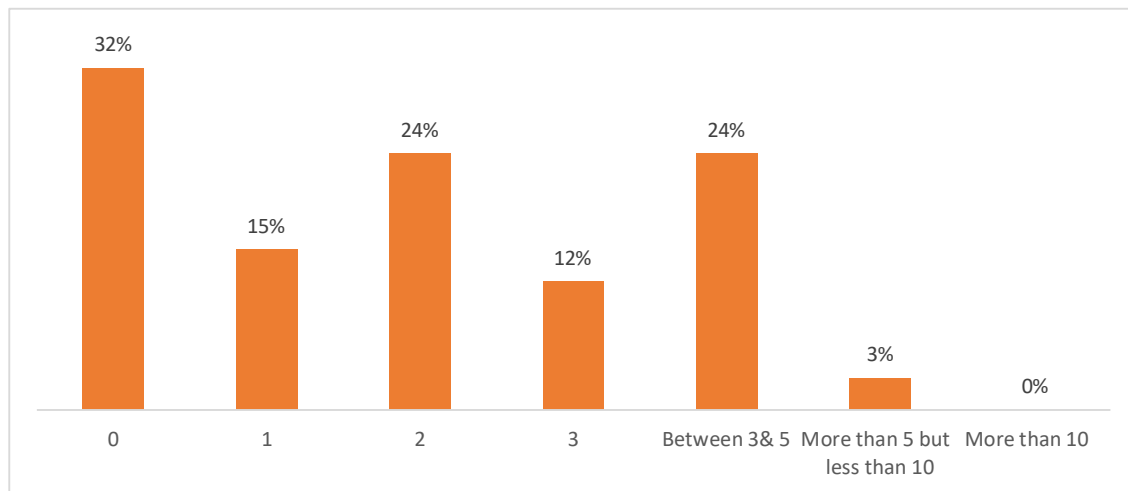
Analysis of the responses to this question revealed, 32% of the micro enterprises in the sample had no employees while 24% had 2 and another 24% had between 3 and 5 employees. No enterprise in the study had more than 10 employees.

Figure 4.8. Response to Question 9: What is the average monthly income of your business?
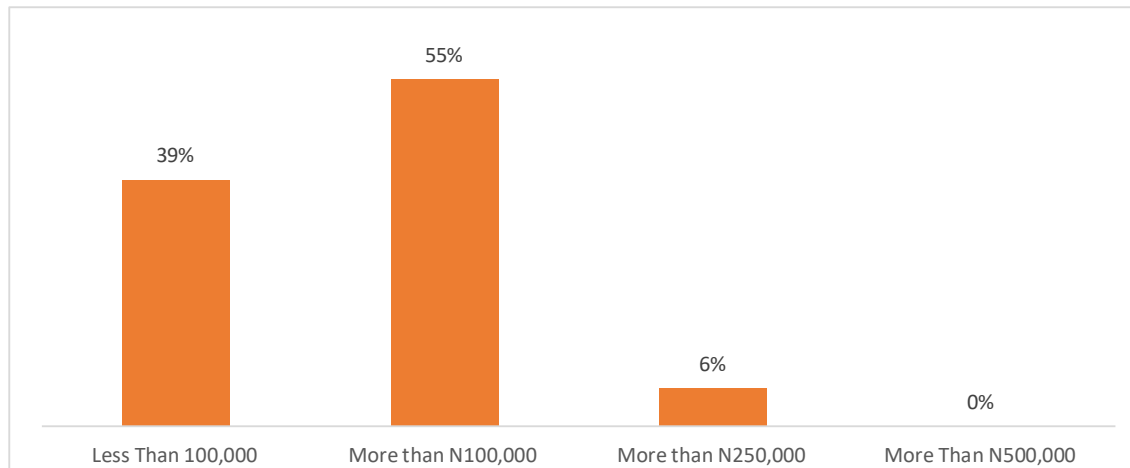
On this question, the survey revealed more than half (55%) of the businesses in the sample had on average, a monthly income of more than N100, 000 (approx. $300). 39% had less than this amount, while only 6% reported making more than N250, 000 (approx. $700) on average monthly. None of the micro enterprises in the sample reported making more that N500,000 ($1,400) on average monthly.

In summary, the results revealed that the micro enterprises in the study were owned by women, majority of who were between 35 and 45 years old. Most of these women had secondary school education and went into business because they were passionate about the trade and saw an opportunity in the market place. On the nature of the ventures, they were mainly sole proprietorships within the retail sector with no additional staff except the owner. The survey also revealed that these ventures were relatively established, with operations spanning between 5 to 10 years with monthly income on average of between N100,000 (approx. $300) and N250,000 (about $700).

Objective 2: Establishing the Level of Adoption of the Retail Smart Business Service (RSBS) Application

In addition to establishing the profile of the one hundred micro enterprises in the study, the constructing stage of the insider action research also sought to establish the level of adoption of the Retail Smart Business Service (RSBS), among the micro enterprises in the study. In achieving this, the definition of 'active' adopter provided by EFInA (2016) as well as Mastercard's own expectation on the use of the RSBS was utilized.

Under this definition, an active adopter is an ICT user who employs the artefact in question at least once in 30 days. Descriptive survey was also utilized for data gathering while descriptive statistics in the form of frequency distribution was also used for data analysis.

The charts that follow present the questions posed and the result garnered from analysing the responses.

Figure 4.9. Response to Question 10: Have you used the RSBS application in the last 30 days?
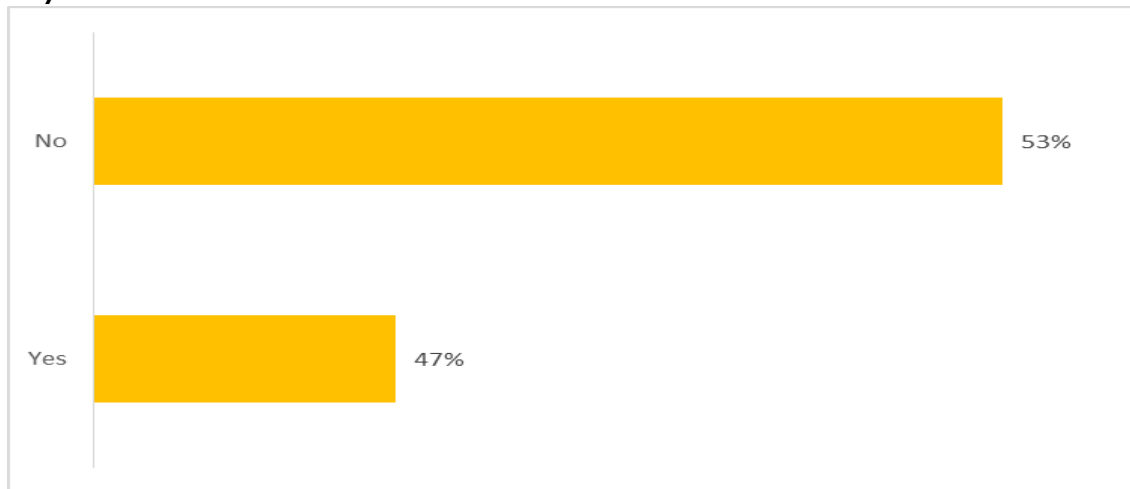
Analysis of the responses to the above question revealed that more than half of the micro enterprises in the sample (53%) had not used the application in the 30 days leading to the survey.

Figure 4.10. Response to Question 11: If yes how often have you used it in the last 30 days?
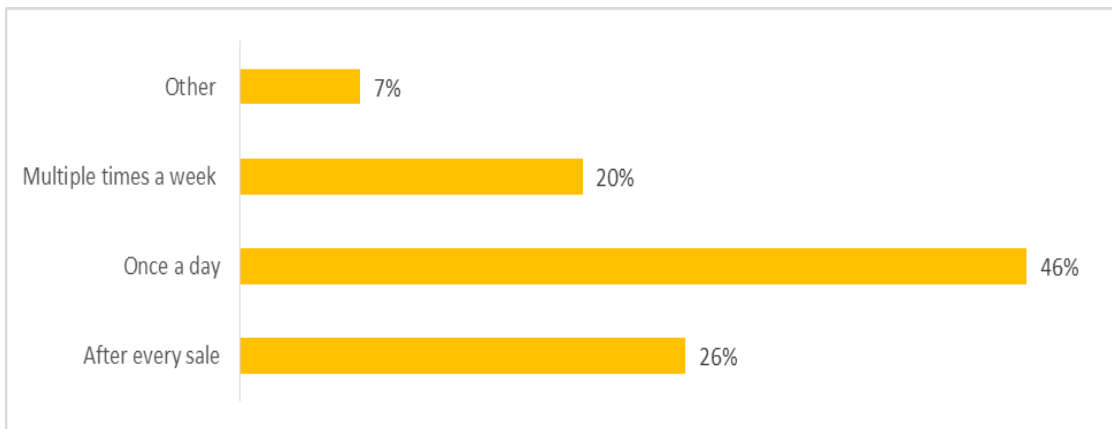
Analysis of the responses to the above question revealed that while more than half of the respondents had not used the application in the 30days leading to the survey, only 26% of those that did, utilized it as expected which was after every sale.

In summary, less than half of the micro enterprises in the study were 'active' users of the RSBS application in the 30 days leading to the study. In addition, of those that could be considered as 'active' users, only a small number utilized the application as expected.

Objective 3: Establishing the Challenges to Adoption of the Retail Smart Business Service (RSBS) Application

The second idea espoused in the theoretical framework that underlies the insider action research was that despite its benefits, multiple challenges prohibit micro enterprises from adopting ICT. Hence another important goal of the constructing stage of the insider action research, was to establish the challenges that hampered the adoption of the RSBS among the micro enterprises in the study. The challenges to ICT adoption articulated by Wolcott et al. (2008) was utilized as guide while descriptive survey was also utilized for data gathering. Unlike the previous effort, data analysis here took the form of summarizing, categorizing and narrating, leveraging descriptive coding.

The question posed and the insights garnered from analysing the responses received are provided below.

Table 4.2: Response to Question 12: What are the challenges you have experienced using the Retail Smart Business Service (RSBS) application?

Sample Raw Data	Code	Challenge Category
'For a week or 2 the network might go and never return' 'Network coverage is very bad in this area' 'Most times when I want to use the app there is no network' 'It's a very good app but the network frustrates me from using it' 'I will use the app more if my SIM can be replaced with a more reliable network'	Network Availability Network Reliability	NETWORK ACCESS
'Using the app makes my data get exhausted quickly. I don't like this and so don't use the app' 'I consume more data when I used the app. It's expensive for me' 'The internet is very slow. It takes too long and so I don't bother.	Cost of internet	DATA ACCESS

'The internet comes and goes. It's very frustrating using the app with this kind of internet' 'The internet in this area is not strong at all. This makes it hard to use the application'	Reliability of internet	
'Entering the app takes forever even when the internet is available' 'The app is always asking for my pin. Even when I provide it, it still takes forever. It's a major head ache' 'The Loan application function is not working' 'The profit section doesn't display properly' 'It doesn't display some features on the dashboard properly for example low stock'	Log in delays Features not working at all Features not working properly	FAULTY APPLICATION

'No calls from Grooming Centre to remind me'	Forget to use	LACK OF FOLLOW UP/REMINDER
'Most times, I forget to use it'		
'I plan to use it but I usually forget because am busy'		
'I plan to use it but it always skips my mind'		
'Since I stopped hearing from the office, I felt I can stop using the app'	No follow up from Grooming	
'I stopped making use of it since the device screen got damaged'	Screen Problem	FAULTY DEVICE
'My tablet screen got broken and I have been scared to return it'		
'The battery is not good again that is why I can't run the application anymore'	Battery Problem	
'The device doesn't last long when turned on. I reduced the screen light to enable the battery to stay long but the same problem'		

'My device has refused to come on for 3 weeks. I don't know who to call. Right now I have taken it to Ikeja to repair it myself'	Support Process Problem	
'Power is a major challenge. Many times I am unable to charge the device to use it' 'I don't have light to charge the device.' 'The major problem I have is charging the device.' 'The power fluctuates a lot. I am afraid it will damage the device' 'Our power supply is not very stable which makes it hard to charge the device'	Power Availability Power Quality	POWER ACCESS

The results of the analysis revealed that the challenges encountered by the micro enterprises in adopting the RSBS application can be grouped into six categories. These categories are; network access; for example network availability and reliability, data access; for example cost and reliability of internet, faulty application; for example log in delays, features not working properly and features not working at all, lack of follow up/reminder; for example forgetting to use the service or receiving no follow up from Grooming, faulty device; for example screen problem, battery problem and support process problem and finally power access; for example power availability and power quality.

Comparing these results with the anchor literature from the theoretical framework, two of the six challenges identified in this study are similar to those identified by Wolcott et al. (2008). These two challenge categories are; access for example poor infrastructure, and operations for example lack of support. The access challenge category is akin to the infrastructure challenges encountered by the micro enterprises in the current study identified under network stability, data availability and power quality. In the same vein, the operations challenge category is similar to the lack of follow up/reminder and the process problem identified under faulty device.

This said, it came as no surprise that there was no indication from the inquiry that capabilities; for example the absence of ICT skills and knowledge, resources; for example lack of money, time and/or information, and attitude; for example lack of awareness, trust and confidence where not identified as major challenge categories in this study. This is because under the Smart Business Initiative (SBI) participants in the study received the RSBS at no cost. They also received training on the value of the application and how to use it. These activities most likely played a key role in eliminating the challenge categories listed.

Objective 4: Establishing the Impact of the ITT Intervention on ICT Adoption and Micro Enterprise Development

The third idea espoused in the theoretical framework that underlies this study, asserts that deliberate steps can be taken to address the challenges micro enterprise experience in adopting ICT, while the fourth idea is that this intervention will lead to greater ICT adoption and development among the micro enterprises. Leveraging the works of Qureshi (2005), Qureshi et al. (2008), Wolcott et al. (2008) and Kamal et al. (2010) establishing the former involved designing and implementing an intervention

conceptualized as Information Technology Therapy (ITT). As discussed in the research methods chapter, the intervention was completed during the planning and acting stages of the core insider action research and focused on twenty-five micro enterprises selected from the initial sample of one hundred.

Establishing the latter on the other hand involved, first ascertaining the level of adoption of the RSBS application among the micro enterprises that received the ITT intervention. This was achieved by conducting a second round of descriptive survey to gather data after the three month intervention period. Data analysis also leveraged descriptive statistics in the form of frequency distribution. The definition of 'active' user provided by EFInA (2016) as well as Mastercard's expectation regarding the use of the RSBS was also utilized here.

The chart below, presents the questions posed during this second round of data gathering, and the insights garnered from analysing the responses between the control group (made up of the 75 micro enterprises that received no intervention) and the core group (made up of the 25 micro enterprises that received the Information Technology Therapy intervention) are provided below.

Figure 4.11. Response to Question 1: Have you utilized the Retail Smart Business Service Application in the last 30 days? Control vs Intervention Group
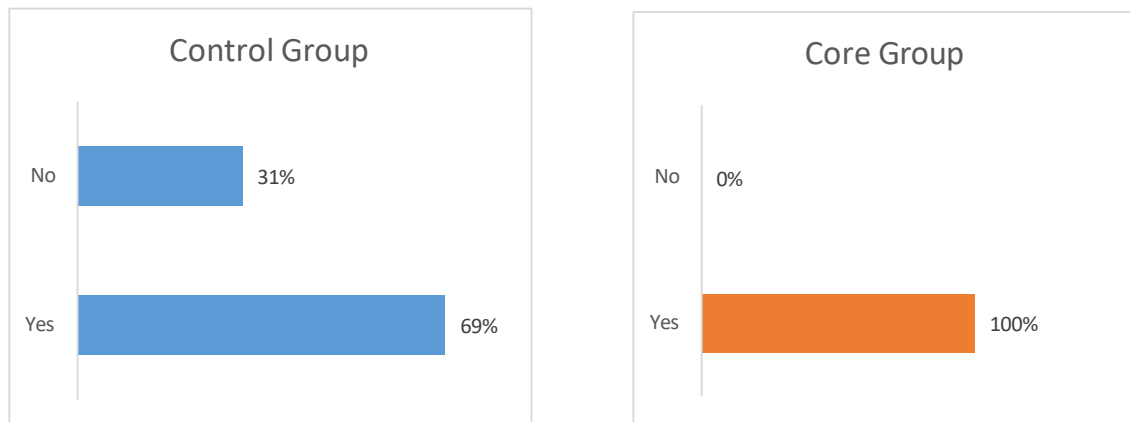
Analysis of the responses to the above question revealed that while only 69% of the micro enterprises in the control group responded that they had utilized the application in the 30 days leading to the evaluation, 100% of the micro enterprises in the core intervention group affirmed that they had used it.

Figure 4.12. Response to Question 2: If yes, how often have you used the device in the last 30 days?
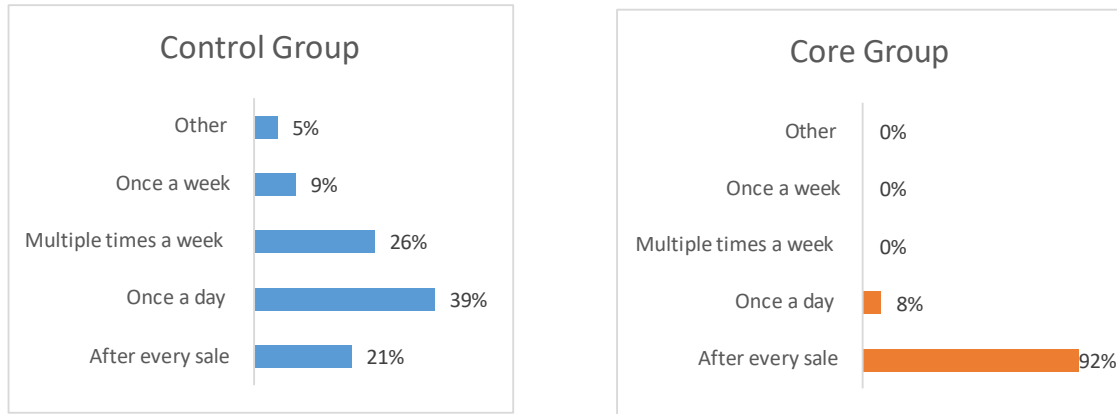
Analysis of the responses to the above question revealed that while only 21% of the micro enterprises in the control group were using the application as intended; that is after every sale, 92% of those in the intervention group were using it as intended.

In summary, the evaluation of the impact of the ITT intervention on the adoption of the RSBS application showed that there was significant improvement in adoption within the intervention group compared to the control group. This improvement in adoption as a result of the ITT intervention was further collaborated by system generated data from the RSBS application Management Information System (MIS). This data revealed that during the period of intervention, micro enterprises in the intervention group not only logged in more frequently, they also spent more time in the application as can be seen in Figure 4.1 below.

Figure 4.13. RSBS Application Usage Patterns of the Core Intervention Group
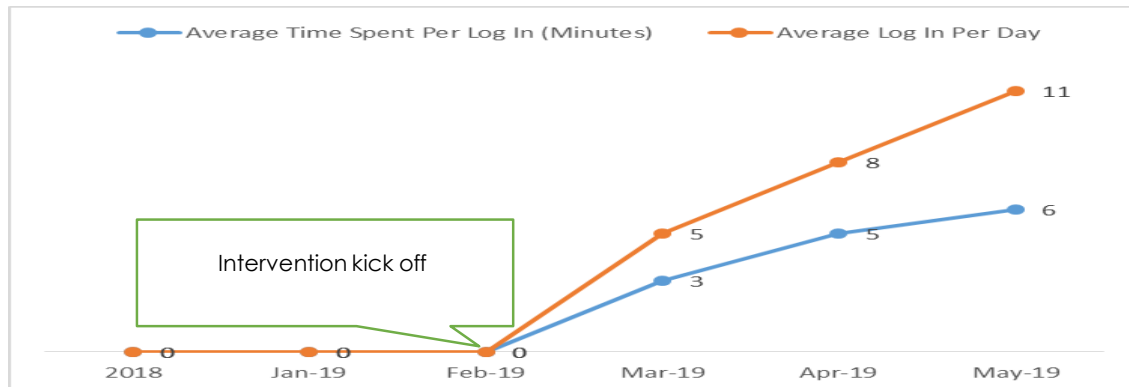
In addition to establishing the impact of the ITT intervention on the adoption of the RSBS application among the micro enterprises within the intervention group, the evaluation stage of the insider action research also aimed to ascertain the impact of the intervention on the development of the micro enterprises in the same group. In achieving this, data gathering utilized semi structured interviews which leveraged measures of development adopted from Qureshi (2005, 2016) while data analysis employed manual directed content analysis.

The question posed and the result of the analysis of the response received is provided below.

Table 4.3. Response to Question 13: What impact has this intervention and your Subsequent Increased Usage of the RSBS Application had on your Business?

Meaning Unit	Code	Sub Categories	Categories and themes
'With the app I am able to see what I have sold, which helps me know how my business is doing'	Turnover insights	Business Information	Greater access to Information
'The app shows me how much I have sold every day and throughout the week. So I know if business is good or bad'	Turnover insights	Business Information	
'Now I know how much I have outside and who is owing me'	Receivables insights	Operational Information	
Sometimes I used to forget the people owing me. I don't anymore. The app tells me who and how much.	Receivables insights	Operational Information	

'*I now know what I am making from each crate of Guinness I sell.*'	Margins insights	Bottom-line Information	
'*I had to remember how many detergents or cooking oil needed replacing at the shop, often, I will get to the market and forget. But now with the Smart Biz application I can just check anytime anywhere*'	Performing stock count	Back office	Greater administrative efficiency
'*I don't need to be counting stock every time….every time. Now I count once and the system shows me what is left for each thing I am selling.*'	Performing stock count	Back office	
'*I used to have to write down who was owing me. Sometimes the paper will get lost or I will forget. Now I can just check the application.*'	Performing receivables review	Mid office	
It's a faster way for me to get sales information on my business even when am not in the shop'	Sales performance review	Front office	
'*It's a more convenient way of tracking what I have sold, what I have left and how much I have made*'	Sales performance review	Front office	

'I now know how I make money, from where, when and how much'	Better appreciation of profitability	Business acumen	Increased learning and productivity
'I knew I had more business in the evenings but didn't know exactly how much. Through the RSBS I now know and can plan properly to make the most of these high sales times. This has helped me grow my sales.'	Better appreciation for sales patterns	Business acumen	
'I never use to trust things like this. But now I know there is nothing to fear and it can only help my business grow'.	Better appreciation of smart device	Technology acumen	
'Before when I go to the market I don't know which quantities of which product to buy. I just use experience. Now I know what I should be buying and how many'	Better appreciation of stock planning	Business acumen	
'Now I use the app for stocking up. It tells me what moves market and what to buy'	Better appreciation of stock planning	Business acumen	
'Before, I didn't know how to use things like tablet for anything except making call, browsing and chatting. Now I know it can help my business run well'	Better appreciation of smart device	Technology acumen	

'I don't waste money anymore buying what doesn't move the market and so I am able to do more with what I have'	Better appreciation of business planning	Business acumen	
'I believe my business is doing better and I have better finances'	What improves the business improves my life	Better life	Positive contribution to poverty reduction
'My business is doing better so I am doing better financially'	What improves the business improves my life		
'This is what sustains me. Since it is doing better I am doing better'	What improves the business improves my life		
'I can say exactly by how much but I know the smart biz application has relay helped my business grow and me with it.'	What improves the business improves my life		
'When customers come to my shop and see me with the tablet, they believe I am woke and want to do business with me'	More aware	Affinity based on perceived responsiveness	Increased customer affinity based on positive perception
'Customers believe I know what's up when they see me with the tablet'	More aware		

'Customer's believe I am in tune with latest trends when they come to my shop and see the tablet. It's good for business'	More aware		
When customers see that I use the tablet for selling, they are very impressed because they believe I am on top of my game'	More effective	Affinity based on perceived know how	
'Since I started using the tablet, customers see me differently. To them I have upgraded the way I work and this has had a positive impact on my business'	More effective		
'When they see the tablet they see me as a serious person'	More effective		
'When other shop owners see me with my tablet they come to me to ask how they can get their own'	Trendsetter	Leader and advisor	Increased peer affinity based on positive perception
'My friends in the market see me different now. They see me as someone that they can ask about how to improve their business.'	Trendsetter		
'Since I started using the tablet other market people always ask my advice on things they don't understand particularly when it comes to using things like this'	Trendsetter		

'People always ask my advice now on how they can improve their business also using technology'	Trendsetter		
'I like the way people in the market see me now because of the tablet. It is good'	Trendsetter		

As shown above, a number of insights emerged from the analysis. Central to these insights was the fact that the ITT Intervention and the subsequent increased usage of the RSBS application had a positive impact on the development of all 25 micro enterprises that were part of the intervention group. On how? The themes that emerged point to six main impact dimensions, four of which were consistent with the works of Qureshi (2005, 2016). The paragraphs that follow discuss each of these impact dimensions.

The first impact dimension that emerged from analysing the semi structured interviews that was consistent with the literature was 'improved access to information'. Based on the feedback received from participants, this impact dimension consisted of three different facets. As seen from comments such as *'with the app I am able to see what I have sold, which helps me know how my business is doing'* and *'the app shows me how much I have sold every day and throughout the week. So I know if business is good or bad.'* The first of these facets had to do with being able to access business information such as sales. As can be seen in comments such as *'Now I know how much I have outside and who is owing me'* the second facet of the improved access to information impact dimension that emerged from the analysis had to do with being able to access operational information such as the status of receivables, while the third facet as can be seen in comments such as *'I now know what I am making from each crate of Guinness I sell'* had to do with access to bottom-line information such as the margins on products.

The second impact dimension that emerged from analysing the semi structured interviews was 'greater administrative efficiency'. From feedback such as *'I don't need to be counting stock every time….every time. Now I count once and the system shows me what is left for each thing I am selling.'* and *'It's a faster way for me to get sales information on my business even when am not in the shop'.'* at least three aspects of this impact dimension could be identified. A back office aspect, which denoted an ability to perform tasks such as stocktaking much more efficiently. A mid-office aspect, which denoted an ability to perform tasks such as receivables review much more efficiently, and a front office aspect which denoted an ability to perform tasks such as sales reviews much more efficiently.

The third impact dimension that emerged from analysing the semi structured interviews was 'increased learning and labour productivity'. For this impact dimension,

three perspectives were identified from analysing responses. The first was a business acumen perspective which spoke to the development of a better appreciation of activities such as stock planning. This can be seen in comments such as *'Before, when I go to the market I don't know which quantities of which product to buy. I just use experience. Now I know what I should be buying and how many'* and *'Now I use the app for stocking up. It tells me what moves market and what to buy'*. The second perspective that emerged on the increased learning and labour productivity impact dimension, was a technology acumen perspective which involved the development of a better appreciation for the use of smart device for business. This could be observed in comments such as *'Before, I didn't know how to use things like tablet for anything except making call, browsing and chatting. Now I know it can help my business run well'* and *'I never use to trust things like this. But now I know there is nothing to fear and it can only help my business grow'*.

The final impact dimension that emerged from analysing the responses from the semi structured interviews that was consistent with the anchor literature is positive contribution to poverty reduction. For the micro enterprises in the study, this was mainly tied to the contribution of the RSBS to their business growth. A few of the comments from the micro enterprises that buttressed this point include; *'I believe my business is doing better and I have better finances'*, *'My business is doing better so I am doing better financially'*, and *'This is what sustains me. Since it is doing better I am doing better'*.

Aside from the four impact dimensions discussed above that were consistent with extant literature, the analysis of the semi structured interviews also identified two additional impact dimensions. The first of them was increased customer affinity based on positive perceptions. Following the analysis of the responses garnered from the micro enterprises, this increased customer affinity based on positive perceptions was enacted in two ways. The first was an affinity based on perceived responsiveness. This affinity seemed to be driven by an assumption on the part of the customers of the micro enterprises that using a smart device for sales meant the micro enterprises were aware and in tune with current trends. Comments such as the ones that follow emphasized this point; *'When customers come to my shop and see me with the tablet, they believe I am aware and want to do business with me'*, *'Customers believe I know what's up when they see me with the tablet'* and *'Customer's believe I am in tune*

with the latest trends when they come to my shop and see the tablet. It's good for business.'

The second way increased customer affinity was enacted among the micro enterprises in the study was an affinity based on perceived know how. This affinity seemed to be driven by customers of the micro enterprises assuming, using a tablet for sales meant the micro enterprises somehow knew what they were doing. Comments such as the ones that follow buttress this point; *'When customers see that I use a tablet for selling, they are very impressed because they believe I am on top of my game'* and *'Since I started using the tablet, customers see me differently. To them I have upgraded the way I work and this has had a positive impact on my business.'*

The second impact dimension identified from the study unrelated to the existing literature, was increased peer affinity also based on positive perception. For the micro enterprises in the core intervention group, this impact dimension was driven mainly by an association drawn by other micro enterprises between the use of the tablet and being a trendsetter. A number of comments made by the micro enterprises during the interview alluded to this point. They include; *'My friends in the market see me different now. They see me as someone that they can ask about how to improve their business.' 'Since I started using the tablet other market people always ask my advice on things they don't understand particularly when it comes to using things like this',* and *'People always ask my advice now on how they can improve their business also using technology'.*

In summary, the core insider action research provided ample learning particularly with regards to validating the four ideas that make up the theoretical framework upon which the inquiry was based. Table 4.2. below provides a synopsis of these learnings and the evidence provided by the study.

Table 4.4. Summary of key Learnings from the Core Insider Action Research

Theoretical Framework Component	Key Learning	Evidence from the insider action research
Micro enterprises are an heterogenous group of enterprises.	A distinct profile can be established for micro enterprises utilizing a clear framework.	• Micro enterprises in the study were owned by women, majority of them between 35 and 45 years old. These women mainly have secondary school education but are driven by their passion for the trade and the opportunity they see. • The ventures these women created were mainly sole proprietorships, relatively well established (between 5-10 years old) within the retail sector with monthly income on average of between N100,000 (approx. $300) and N250,000 (about $700) and no additional staff outside the owner.
Despite its benefits, micro enterprises may experience low levels of ICT adoption due to multiple challenges.	The level of adoption of an ICT artefact within the established profile of micro enterprises can be determined utilizing a clear framework.	• Only 47% of the micro enterprises utilized the Retail Smart Business Service application in 30 days prior to the study • Only 26% utilized it as expected which was immediately after every sale in the same period.
	The specific reason for the low levels of adoption of the specific ICT artefact	• The low level of use of the Retail Smart Business Service application could be attributed to six challenge

	among that profile of micro enterprises can be determined.	categories. Namely; Network Access, Data Access, Faulty Application, Lack of Follow Up/Reminders, Faulty Device and Power Access.
Deliberate steps can be taken to identify and address these challenges	Deliberate actions can be taken to address those specific challenges to adoption utilizing a clear framework.	• A combination of action research and Information Technology Therapy (ITT) was successfully deployed
Intervention will lead to greater ICT use and micro enterprise development	The impact of the intervention on the adoption of the ICT artefact can be determined utilizing clearly defined frameworks.	• Post intervention, 100% of the micro enterprises in the intervention group utilized the Retail Smart Business Service application in 30 days prior to the study compared to 69% for the micro enterprises in the control group. • 92% of the micro enterprises in the intervention group utilized the application as expected which was immediately after every sale compared to only 21% in the control group. • Data from the Retail Smart Business Service application Management Information System showed that the micro enterprises in the intervention group logged in more frequently and stayed logged in for longer during the intervention period compared to the period before the intervention.

	The impact of the intervention on the development of the micro enterprises utilizing the ICT artefact can also be determined.	• Increased use of the Retail Smart Business Service application lead to the development of the twenty five micro enterprises in the core intervention group. This development was along 6 dimensions; Greater Access to Information, Greater Administrative Efficiency, Increased learning and Productivity, Positive Contribution to Poverty Reduction, Increased customer affinity based on positive perception, and Increased peer affinity based on positive perception.

The next section discusses my observations from reflecting on the insider action research process.

4.3. Results from the Reflective Insider Action Research

4.3.1. Observations on the Practice of Insider Action Research

A number of observations emerged from reflecting on the insider action research process, as it relates to the practice of insider action research. The first of them was how deeply embedded action and reflection was, in executing the insider action research across multiple stakeholders not just me. Majority of the extant literature on action research, establish action and reflection as the domain of experts requiring carefully orchestrated intent and practice. Coghlan and Brannick (2014) for example outlines the various activities required to reflect effectively before, during and after action, and provide an account of what the expected outcomes should be. Similarly, Dick and Greenwood (2015) present a laundry list of considerations that underpin the way every action researcher's dual commitment to action and participation should be expressed. During the insider action research however, what I observed was that several participants in the project seemed to engage in iterative cycles of action and reflection as well, at least at one point or another.

In working with the Grooming Centre team for example, I constantly engaged in internal reflection on my own bias and agenda, and how it needed to be brought in tune with the bias and agenda of the Grooming team, to arrive at win- win scenarios that would advance the overall thesis project. These reflections led me to constantly modify my actions, to ensure the end goal was achieved. I recall for example the decision on what should be the size of the intervention group, where I had to agree to twenty five in recognition of the capacity of the Grooming Centre team to accommodate the intervention along with their regular day to day activities.

I observed that while I was aware and being very deliberate about my reflections, other actors who did not have the critical consciousness of being scholar practitioners also seemed to engage in cycles of reflection and action as well. For example, the Project Manager would often pause, process my recommendations, ask questions and then adapt the information in a way that would be acceptable to the other Grooming stakeholders with full appreciation of their bias and agendas. I also noticed that the way he articulated what was agreed upon seemed to differ depending on the stakeholder. It was clear that what I was observing was an interplay of action and reflection focused on progressing the project and the potential it held.

In probing deeper into what was being observed, I came to an understanding that the enactment of cycles of action and reflection played out differently between the 'initiated' and 'uninitiated'. For the initiated like myself, reflection was much more conscious and deliberate employing tools and aids such as note taking. For the uninitiated such as the Grooming Centre Project Manager, it seemed less deliberate and many times even unconscious. It was only revealed when I engaged in follow up conversations on why what was said was said, or why what was done was done. Ultimately I realized that across both the initiated and uninitiated, the practice of action and reflection had the same intent; to learn how best to navigate the complexity of implementing change successfully.

Another observation that emerge from my reflections on the insider action research process is what I will like to refer to as the 'controlled' way in which knowledge emerged during the inquiry. In the action research literature, Coghlan and Brannick (2014) argue that organizations are social constructions, artefacts created by human beings to serve their ends. Following this, they contend that organizations are a system of human actions in which means and ends are guided by values and intended outcomes. My experience during the insider action research while consistent with this argument, unearths additional insights seldom discussed in extant literature. One of these insights is the implications of shared purpose, values, means and intended outcomes on the nature of knowledge that is created in action.

From my experience with this thesis project, much of the knowledge created and accepted as legitimate and worthy of action was knowledge that aligned with the shared purpose, values, means and intended outcomes of the stakeholders. For example, the knowing and actions that emerged from the desktop research informed the problem framing. In the same vein, the knowing and actions that emerged from the problem framing including the critical literature review informed the research strategy development and so on. At the macro level, the same pattern persisted, with the knowing and actions that emerged throughout the insider action research. Like links in a chain with the stakeholder's frame of reference serving as an anchor, the knowing that was created was aligned with the shared values and objectives of myself and Grooming Centre to ensure the success of the project.

Where the knowing in action did not fit into the shared purpose, values, means and intended outcomes, it was simply re-engineered to align. A good example of this

observation is the decision to pursue the intervention. Rather than accept that only 26% of the micro enterprises in the program utilizing the RSBS application meant the solution was a failure, I opted to continue instead, viewing it as an opportunity for learning.

A third observation that emerged from the reflective action research cycle, was the constant level of change that underpinned the way the inquiry was delivered. Dick and Greenwood (2015) argue that action research needs to leverage a process of inquiry that is flexible enough to adjust to real life research situations as they emerge. My observations were consistent with this assertion. From selecting the number of participants in the intervention, to agreeing what intervention to implement and why. From agreeing how long the intervention would last, to deciding how best to measure its impact. The core insider action research process was drenched in continuous change.

As discussed in the research methods chapter, on my part, managing this continuous change required adhering to two important principles. The first of these principles was; emphasizing workability over theory, when it came to sampling, intervention design, as well as data gathering and analysis. The second, was functioning as a political entrepreneur when it came to managing the different stakeholders, and ensuring the planning and taking action stages of the engagement stayed true to task.

The fourth observation from the insider action research process was the blurring of boundaries between each step in the core insider action research. Authors such as Coghlan and Brannick (2014) and Dick and Greenwood (2015) discuss the steps in the core action research cycle as distinct, each with its own activities. While this was true to a large extent, what I observed was that in many instances there were significant overlap. For example part of the 'constructing' step involved taking action by way of conducting a survey to establish the challenges the micro enterprises were experiencing in adopting the RSBS application. Similarly, part of the 'taking action' step involved evaluating action, as the system generated data used in triangulation was collected monthly before the actual evaluation at the end of the study. For me, these experiences further emphasized the highly fluid approach that underlies insider action research.

The fifth observation that emerged for me from the reflective action research process was the way the advantages and disadvantages of being an insider action

researcher were enacted. Authors for example Saunders et al. (2009) argue that being an insider action researcher has its advantages and disadvantages. The core insider action research was testament to this. On the advantages, I experienced them in three key ways; pre-understanding, access and motivation. On pre-understanding, being part of the Mastercard micro enterprise development experiment since August 2014 gave me an unparalleled level of appreciation of what was happening. This made it relatively easy to discern events as they were happening and discern what they mean.

On access, the trust and credibility I had built over years of engagement both internally within Mastercard and externally with Grooming Centre was central to me receiving the go ahead to proceed from both Mastercard and Grooming Centre. It was also crucial in garnering both organization's support in terms of allocating resources such as their venue for the many stakeholder forums, I organized as part of the engagement. Finally on motivation, my dual role as both researcher and practitioner had a significant impact, as knowing the effort would ultimately translate to both personal and professional success gave me that extra passion to forge ahead. Authors such as Coghlan and Brannick (2014) offer arguments consistent with these observations.

On the disadvantages, this was enacted mainly through the existence of confirmation bias. Given my closeness to the project, there was always the risk of not assessing information objectively. After all, it could be to my benefit to construct a narrative that shows Information Technology Therapy (ITT) can indeed catalyse the development of micro enterprises even if this was not the case. Hence, I had to maintain a high-level of vigilance to ensure this was managed effectively. Part of this vigilance was the consistent request for alignment with other stakeholders. A more detailed discussion on the steps employed to ensure the credibility of the findings from this study is provided in the research methods chapter.

The sixth observation that emerged from my reflections on the insider action research process, is the important role participation plays in affirming the credibility of the research, particularly among external stakeholders; in this case the leadership of both Mastercard and Grooming Centre. During the knowledge sharing session with the Grooming Centre leadership team post the intervention for example, I found that the frequent contributions by the relationship managers in providing further explanation

to what I was sharing, given their equal involvement, created a strong sense of co-ownership that the Grooming Centre leadership found very comforting. I also found that the executive director who attended the session, developed a deeper interest and sense of appreciation for the quality of the research when I explained that in addition to his relationship managers, the micro enterprises themselves fully participated in identifying the problem, developing the solution, implementing it, and evaluating its impact.

Authors such as MacDonald (2012), Coghlan and Brannick (2014), Dick and Greenwood (2015) speak to the importance of participation in action research as both a differentiator, and a tool for instigating change. It was refreshing to see in this research that in addition to these qualities, participation also helps drive credibility due to the shared sense of ownership of the knowledge created among stakeholders.

The seventh observation from my reflections on the insider action research process, is the extreme importance stakeholders placed on 'actionable knowledge'. During the insider action research, it was clear from conversations with Grooming Centre as well as Mastercard that rigor was taken for granted, and relevance was what was top of mind. This could be seen in feedback such as *we need to make this less academic,'* I received when I went into what was perceived by my manager and the Grooming team during the documentation review, as going into too much detail around the research methodology. This was particularly interesting for me, as I thought the stakeholders would appreciate the rigorous process to inquiry adopted. This emphasis on relevance could also be seen in questions such as; *'what does this mean for us?'* and, *'how can this help what we are trying to do '*I received from the leadership of both Grooming and Mastercard, during the post intervention engagements, and insight sharing.

Observations such as the above, are consistent with the arguments put forward by authors such as Vo et al. (2012) and Starkey et al. (2009). These authors note that, the expectation of business and management in today's highly competitive environment is that research create knowledge that goes beyond the classic notion of knowledge for its own sake. Indeed, what stakeholders seek, is knowledge that is not only relevant, but actionable. To paraphrase Greenwood and Levin (2007), knowledge that can help change their enterprises for the better.

The eighth and final observation from my reflections on the insider action research process, was how terrified I felt contemplating the reality that I was sharing my inner thoughts through reflection. Even though I had opted to keep my personal reflections out of the document shared with the Mastercard and Grooming Centre teams considering the objective of the post inquiry activities, I still found it interesting that I was genuinely terrified of the idea that at some point someone would read the complete thesis and discover them. One part of this terror I felt came from the uncertainty around how the readers would react; for example, if they would judge me or simply take it in good faith, particularly those that know me. Another part of the terror I felt, rose from simply being uncomfortable with engaging in open reflection as it was new to me. Typically, I would reflect internally. However, putting what was essentially my deepest thoughts on paper for others to scrutinize was certainly unfamiliar terrain.

Moore (2007) argues that this kind of discomfort described above is not strange to insider action research. This said, authors such as MacIntosh et al. (2017) encourage insider action researchers to not be deterred by this fact, but rather view it as an opportunity to engage in self-knowledge. They argue that this knowledge allows us to transcend our boundaries and limitations and in doing so, move beyond them. Similarly, Moore (2007) notes that despite the initial discomfort, the process of reflection is not only exhilarating, but spiritually uplifting. While I still feel vulnerable, I am encouraged by the words of the scholars cited above, and wholly embrace the self-knowledge that have undeniably emerged from the process. I also hope that others that encounter my reflections would see it for what it is; knowledge, and applaud the courage.

In summary, the reflective insider action research process provided a number of important learning on the practice of insider action research process. Table 4.3. below provides a synopsis of these learnings.

Table 4.5. Summary of key Learnings on the Practice of Insider Action Research

S/N	Theme	Learning
1	Reflection and action	The practice of action and reflection is not peculiar to insider action research; it is common place in practice albeit conducted less formally by other stakeholders. This said, the goals is the same; critical among them, learning to navigate the complexity of implementing change and succeeding.
2	Actionable knowledge	Knowledge from insider action research is controlled, with the shared purpose, values and intended outcomes of stakeholder governing the sense making and sense given processes that govern knowledge creation.
3	Managing change	Conducting insider action research means subscribing to a mindset that acknowledges constant change as a given. Achieving this mindset requires adopting important principles such as emphasizing workability over theory and functioning as a political entrepreneur.
4	Stage boundaries	The stages in the insider action research process do not represent ridged boundaries. Overlaps exist between stages.
5	Pros and cons of insider action research	Being an insider action researcher has both advantages and disadvantages. The advantages include preunderstanding, motivation and access. The disadvantage includes a higher risk of confirmation bias.
6	Participation and credibility	The value of participation in insider action research goes beyond differentiating it as a research paradigm or serving as a tool for instigating change. It is also critical to

		establishing the credibility of the finds of action research particularly among non-academic stakeholders.
7	Quality in insider action research	Relevance much more than rigor is the motivation of non-academic stakeholders involved in insider action research.
8	The action researcher's burden	The practice of insider action research can be a source of discomfort particularly for the action research. This conform can stem from multiple sources among them the fear of being misinterpreted.

Next I discuss the observations from successfully catalysing the development of the micro enterprises in the study leveraging ICT.

4.3.2. Observations from Catalysing Micro Enterprise Development Leveraging ICT

The first observation that emerged from my reflection on the process of catalysing the development of the micro enterprises in the study leveraging ICT, is the importance role clarity played in the engagement. From defining who the term 'micro enterprises' referred to within the context of the current study, to establishing what was meant by 'ICT artefact'. From defining the meaning of concepts such as 'adoption' and 'development' to establishing how these concepts would be measured.

Clarity was critical for a number of reasons. First, it helped rally all stakeholders towards the attainment of a set of Smart Measurable Actionable Relevant Timebound (SMART) objectives. Secondly it provided an empirical foundation for measuring outcome. Finally, clarity provided focus for the study and a way of ringfencing the actionable knowledge created in a way that aids transferability.

The second observation that emerged from my reflections, is the central role partnership and trust played, in the success of the engagement. While effectively diagnosing the issues and offering simple solutions that were easy to implement were important factors, none of that would be possible were it not for the partnership and trust that existed between Mastercard and Grooming Centre as well as between Grooming Centre and the micro enterprises in the program.

This partnership and trust not only allowed important information to permeate freely, it also paved the way for change to occur by reducing resistance. What was achieved during the 'constructing' step would not have been possible if no partnership and trust existed between myself and Grooming Centre. Similarly, nothing could have been achieved in the 'planning' step if there was no partnership and trust between Grooming Centre and the micro enterprises in the program. Same applies to the 'taking action' and evaluating action stages.

Smollan (2012) argues that trust is a multidimensional construct, that operates across cognitive, affective, and behavioural levels to mention a few. My observation during the insider action research was consistent with this view, as I believe a number of considerations drove the trust that emerged across stakeholders. These considerations I believe were predicated on the collective ability of Grooming Centre, Mastercard

and the micro enterprises in the study to answer questions such as; do I know these people and how do I feel about them (affective)? Are they able to do what they say (cognitive)? Have I seen them in action and are these actions consistent with what they say (behavioural)?

The third observation that emerged from successfully catalysing micro enterprise development leveraging ICT, was how important having a shared narrative all stakeholders could rally behind was, in driving and sustaining the motivation to act. For this project it was (1) 'Adoption of the RSBS application has been below expectation' (2) 'we can identify what went wrong and fix it to the benefit of all. In their discussions on sense making, authors such as Sonenshein (2010), Abolafia (2010) and Maitlis and Christianson (2014) elude to the existence of motivation of this nature in project settings. They argue that outcomes such as strategic change, learning or innovation are best accomplished when shared narratives exist between actors. They posit that the existence of these shared or collective narratives serve as powerful sources of motivation for action.

The fourth observation that emerged from reflecting on this enterprise, was the dynamics by which micro enterprise development proceeds. Authors such as Effiom and Edet (2018) Ajuwon et al. (2017) who represent the dominant 'increase' and 'productivity' perspective on development, position micro enterprise development as a destination with simplistic mantras such as; *'Provide micro enterprises with access to finance and they will develop'*. *'Provide them with ICT and they will develop'*. *'Provide them better regulatory environment and they will develop'* and so on being the order of the day.

From this experience however, I observed that this may not be the case. From this inquiry, it would seem adopting a view of development as the attainment of short term objectives means viewing micro enterprise development as a journey and not a destination. With each step of the journey comes a different set of challenges which need to be identified and addressed. For example at the onset of the SBI; access, capabilities and attitude seemed to be the challenge. Hence the program sought to address this by providing the micro enterprises with the RSBS at no cost in addition to training the micro enterprises on the value of the ICT artefact and how to use it. Having addressed these challenges, the current study revealed that with time came new challenges. This time in the form of; network access, data access, faulty devices and

so on. Hence the metaphor of micro enterprise development as a journey as opposed to a destination.

From this project, it would also seem, two factors are critical in this journey; the first is that there needs to be clarity regarding who is being targeted (the profile of the micro enterprises) and how development is being measured (the perspective of development being followed). The second is that Information and Communication Technology (ICT) based interventions for development need to be followed through. It's not enough to provide access, this needs to be followed up with a process, where utilization is monitored and bottle necks are identified and addressed, on an ongoing basis.

The fifth and final observation that emerged from this enterprise, was how important having an individual who was a political entrepreneur in the driver's seat was to success. As discussed earlier, political entrepreneurship refers to the ability to act in a way that combines a variety of skills which facilitate key activities such as pushing particular agendas, intervening in political processes, influencing decision makers, dealing with criticism and challenge, promoting credibility and coping with resistance in order to achieve pre-determined goals or objectives.

In my view, being a political entrepreneur was perhaps the most important success factor in catalysing micro enterprise development leveraging ICT. From engaging the leadership at Grooming Centre to inform them of my intent, to carrying along my manager at Mastercard in the right way. From convincing the micro enterprises to participate in the study, to working with the Grooming Centre relationship managers to implement the interventions. Applying political entrepreneurship skills was central to everything I did during the engagement. It is noteworthy to mention that the way these skills were applied differed greatly in the course of the engagement. In some instances it was pronounced, for example in ensuring the Grooming Centre team felt part of the intervention design so they could co-own its execution. In other instances being a political entrepreneur was more subtle for example, in 'selling' as opposed to 'telling' the micro enterprises about the need for participation.

For me being a political entrepreneur came naturally given my close to two decades of driving technology interventions across various sectors. This said, being a political entrepreneur within the context of this study was not without its challenges. Key among them was attempting to always find a win-win position across such a wide

range of stakeholder groups, with each group including Mastercard having its own agenda. In addressing this challenge, I made sure I was always seen to act in the best interest of the micro enterprises. By doing this, I was always able to win over Grooming Centre and the micro enterprises themselves. Some of the key skills I had to horn to achieve this include communication, negotiation, selling, problem solving and relationship building.

In summary, reflecting on successfully catalysing the development of the twenty five micro enterprises that formed the core intervention group in this study leveraging the RSBS application, provided a number of important learning. Table 4.4. below provides a synopsis of these learnings.

Table 4.6. Summary of key Learnings on Catalysing Micro Enterprise development leveraging ICT

S/N	Theme	Learning
1	Clarity	Clarity brings focus which drives not only what micro enterprise development leveraging ICT is but also how it can be measured and the contextual factors that need to be considered.
2	Partnership and Trust	Having a partner that has intimate knowledge of the micro enterprises in focus and has gained their trust cannot only aid problem identification, solution design and implementation but also eliminate any resistance to change.
3	A simple shared narrative.	Having a simple shared narrative among stakeholders helps create and sustain the motivation to act.
4	Micro enterprise development process	Development as achieving a set of short term goals means adopting a view of micro enterprise development as a journey as opposed to a destination.
5	Political Entrepreneurship as a required skill set	Success requires the ability to push agendas, intervene in political processes, influence decision makers, deal with criticism and challenge, promote credibility and cope with resistance.

The next section brings the chapter to a close.

4.4. Conclusion

This chapter, sought to present the findings of the insider action research, and the learnings that occurred as a result of the process. In achieving this goal, it reiterated the research agenda and the modalities employed. From there, it presented the results of both the core and reflective action research process and the learnings garnered.

In concluding, a number of points are worth reiterating. The first is that, the insider action research was designed to address a number of important questions that were central to the thesis project. The second point worth reiterating is that, in answering these questions, both the core and reflective insider action research sought to achieve a set of clear objectives. The third point worth reiterating is that both the core and reflective insider action research were executed utilizing a number of interrelated ideas as guide. These ideas formed the theoretical framework of the inquiry. The fourth and final point worth reiterating is that having successfully catalysed the development of the twenty five micro enterprises that formed the core intervention group, the effort unearths ample learning.

The implication of the above for the thesis project is twofold. First, a clear logic has been established between how the inquiry was conducted, why, and what was achieved not just in terms of the insights from the data analysis but also what these insights mean in terms of the learnings that took place. Second, the foundation now exist upon which the learnings garnered can be reconciled with the research questions and the envisaged outcomes of the thesis project. The next chapter addresses this latter point.

CHAPTER FIVE

DISCUSSIONS ON IMPLICATIONS OF RESEARCH FINDINGS

5.0. Introduction

Having successfully catalysed the development of the twenty five micro enterprises that formed the core intervention group in the study leveraging the Retail Smart Business Service application, this chapter seeks to establish the implications of the learnings garnered from the experience for the research questions and the thesis project. In achieving this, it is divided into two sections. The first, presents the implications of the learnings for the research questions. The second section does the same for the envisaged outcomes of the thesis project. The chapter concludes by highlighting some of the key points made.

The next section discusses the implications of the learnings for the research questions.

5.1. Implication of Insider Action Research Learnings for the Research Questions

As noted in the previous chapter, the insider action research sought to answer two important questions; the first was 'why did the Mastercard Grooming Centre Smart Business Initiative (SBI) deliver such poor adoption levels for the RSBS application, despite the obvious benefits of the application to the micro enterprises in the program?', the second was 'could anything have been done to improve the adoption levels, if so what?

In addressing the first question, the insider action research empirically demonstrates that the SBI program delivered poor levels of RSBS adoption, because providing the application for free and conducting 'one off' training on its benefit and usage to the micro enterprises was not sufficient. With the passage of time, more was required. In answering the second question, the research demonstrates that yes, with time, more could have been done. In establishing 'what'; this research demonstrates that by achieving contextual clarity regarding key concepts associated with the effort, and employing a structured approach to the engagement, Mastercard could have over time not only improved the RSBS adoption and utilization levels, but also its developmental impact on the micro enterprises in the program.

Table 5.1., 5.2., 5.3., 5.4. and 5.5. below provides important data points from the insider action research that supports the above argument.

Table 5.1. Smart Business Initiative RSBS Application Adoption Level 'As Is'

Variable	Smart Business Initiative 'As Is'
Level of adoption (use within 30 days of study)	47%
Level of utilization (use as intended; after every sale)	26%

Table 5.2: Challenges to Adoption of the RSBS Application and Intervention

S/N	Challenge identified	Intervention
1	Network Access	• Identify best network in terms of data availability • Purchase and deploy for respondents at zero cost
2	Data Access	• Identify best network in terms of data cost • Purchase and deploy for respondents at zero cost
3	Faulty Application	• Implement the following improvements to the app. • Faster sign in • Faster data capture/entry • Stable reporting • Re-train enterprises on importance and how to use
4	Lack of follow up/reminder	• Implement in app reminder to prompt customer daily • Get call centre representative to call the micro enterprises twice a day to remind them to capture data.
5	Faulty Device	• Fix all faulty devices at no cost • Review existing policy on insurance and communicate • Implement faster TAT for replacement • Create and communicate hardware support desk.
6	Power	• Provide power banks at no cost

Table 5.3: Impact of Intervention on RSBS Application Adoption

Variable	Smart Business Initiative 'As Is' based on control group data	Smart Business Initiative with Information Technology Therapy based on intervention group data
Level of adoption (use within 30 days of study)	47%	100%
Level of utilization (use as intended; after every sale)	26%	92%

Table 5.4: RSBS Application Usage patterns of the Core intervention Group Pre and Post intervention

Metric	Average time spent per log in (minutes)	Average log in per day
Pre intervention (2018-Feb 2019)	0	0
Post intervention (May 2019)	6	11

Table 5.5: Impact of Intervention on the Development of the Micro Enterprises in the Intervention Group.

S/N	Main Impact Dimension
1	Greater access to information
2	Greater administrative efficiency
3	Increased learning and productivity
4	Positive contribution to poverty reduction
5	Increased customer affinity based on positive perception
6	Increased peer affinity based on positive perception

The next section discusses the implications of the learnings from the insider action research for the envisaged outcomes of the thesis project.

5.2. Implication of the Insider Action Research Learnings for the Envisaged Outcomes of the Thesis Project

As discussed in the introduction chapter, this thesis project sought to achieve two outcomes. The first was to address Mastercard's business need for more information on (a) The considerations critical to catalysing micro enterprise development in Nigeria leveraging ICT (b) what these considerations means for proliferating digital payment adoption among micro enterprises in the country. The second outcome this project sought to achieve, was contribute to the existing business and management literature on micro enterprise development leveraging ICT. The section that follows discusses the implications of the learning garnered from the insider action research as they relate to addressing Mastercard's business need for more information.

5.2.1. Implications for Mastercard's Business needs

With regard to Mastercard's business need for more information on the considerations critical to catalysing micro enterprise development in Nigeria leveraging ICT, the learning garnered from both the core and reflective insider action research point to two considerations. The first, has to do with achieving contextual clarity with regards to the key concepts that underlie the effort. Figure 5.1. highlights the various elements of this consideration.

Figure 5.1: Elements Associated with Achieving Contextual Clarity
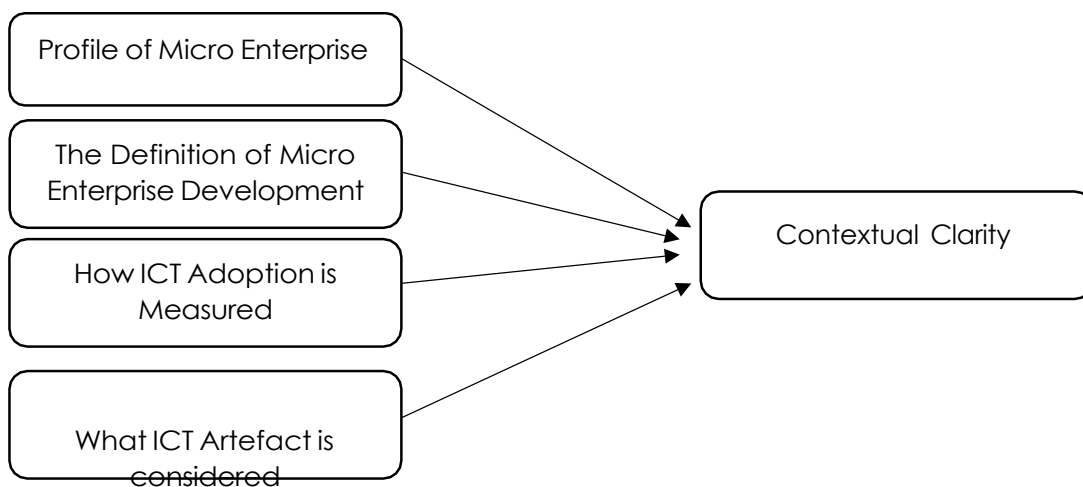
From the learning, four elements are central to achieving this contextual clarity required. The first, has to do with defining what we mean by the term 'micro enterprise'. This study leveraged a combination of generic parameters such as number of employees and assets (excluding land and property), as well as additional parameters such as entrepreneur attributes, for example gender, age, level of education and motivation, and venture attributes such as, nature of business, type of ownership and years of establishment, to create a detailed profile of the micro enterprises that participated in the study. Developing this profile was important because it brought greater focus to the effort, particularly because we know from extant literature that micro enterprises can differ significantly, not just from other small businesses, but also from each other.

The second element that this study established as being central to the critical consideration of achieving contextual clarity, has to do with articulating what we mean by 'micro enterprise development' and, how that 'development' is measured. This study defined micro enterprise development as the attainment of short term goals. In doing so, it leveraged parameters such as greater access to information, greater administrative efficiency, increased learning and so on, as key measures for development. Doing this, introduced consistency to the way the concept of micro enterprise development was approached. This consistency was important because we know from extant literature, that the term 'micro enterprise development' is often defined in various ways; for example as an indicator of growth or as a measure of productivity, making it extremely difficult to address the concept in any meaningful way.

The third element that this study established as being central to the critical consideration of achieving contextual clarity, was how ICT adoption was measured. This study employed two measures for ICT adoption. The first was a generic definition utilizing access within a 30 day period. The second was a more specific stakeholder, based definition which was 'immediately after every sale'. Doing this brought not only consistency but relevance to the effort. This was important because while there may be consistency in literature regarding what an active adopter is, understanding what this means from the vantage point of stakeholders vested in the micro enterprise development effort, is equally important. This is because this information serves as the yardstick utilized in measuring success or failure.

The fourth and final element that this study established as central to the critical consideration of achieving contextual clarity, was the ICT artefact being considered. This study utilized a smart phone based, inventory management application called the Retail Smart Business Service (RSBS), as its 'term of reference' for ICT artefacts. Doing this brought a level of granularity to the effort. This granularity was important because we know from extant literature, that the term ICT can be used to describe a wide range of artefacts. We also know from literature that the dynamics of adoption is believed to differ from artefact to artefact with none universally accepted. Hence specificity is critical to any meaningful engagement on micro enterprise development in Nigeria leveraging ICT.

In addition to achieving contextual clarity, another consideration established during the insider action research as critical to catalysing micro enterprise development in Nigeria leveraging ICT, is adopting a structured approach to the engagement. Figure 5.2. highlights the various elements of this consideration.

Figure 5.2: Elements Associated with Adopting a Structured Approach to the Engagement.
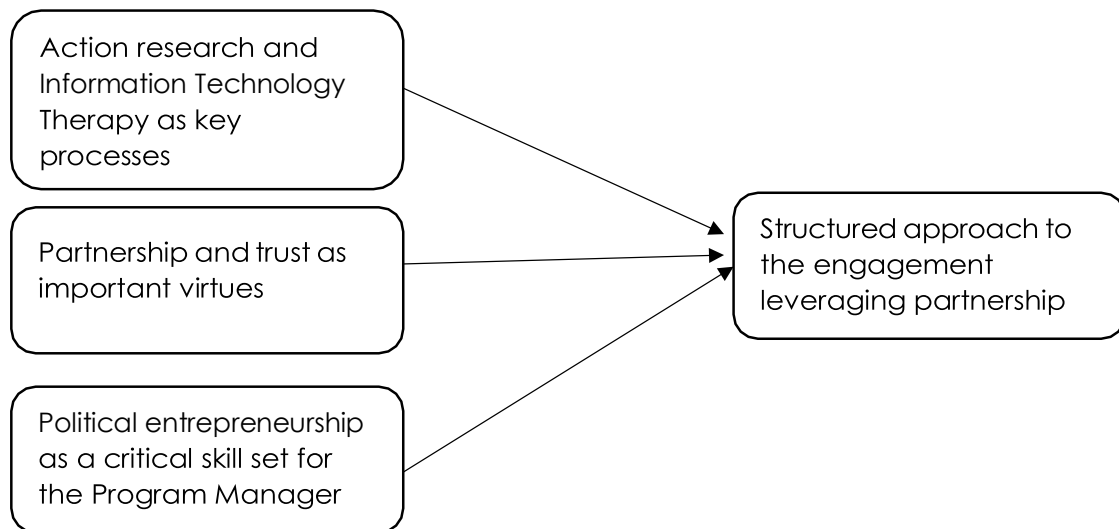
From the learnings garnered from both the core and reflective insider action research, three elements are central to this second critical consideration. The first, has to do with important processes adopted during the engagement. This study employed a combination of insider action research and Information Technology Therapy (ITT) in

catalysing the development of the twenty five micro enterprises in the study, leveraging the RSBS application.

In delivering on the former, it employed a series of tools for data gathering and analysis, as well as a four step process involving; constructing, planning action, acting and evaluating action. These steps were preceded by a context setting stage as well as an ongoing reflective process. In performing the latter, it employed a series of ideation sessions focused on identifying which customized interventions were possible, which were feasible and how feasible interventions would be implemented, and their impact measured.

Adopting both action research and Information Technology Therapy (ITT) was important for a number of reasons. First, it aided in dealing with the complexity involved in the engagement, by reducing activities to a series of manageable steps. Second, it provided a means for ensuring consistency, linking intentions with effort, and effort to outcomes. This value of being able to manage the complexity involved in catalysing micro enterprise development leveraging ICT in a consistent manner, creates the replicability required to execute such efforts at scale, and on an ongoing basis.

Another element associated with the second consideration, identified from this study as critical to catalysing micro enterprise development in Nigeria leveraging ICT, is partnership and trust. This study was executed in close collaboration with Grooming Centre and the micro enterprises themselves. This spirit of collaboration permeated everything from identifying the challenges to adoption, to developing solutions that address those challenges and implementing them. In addition to partnership, there was also a significant level of trust across the stakeholders within the partnership given that the Smart Business Initiative (SBI) had been in operations for a year, and the micro enterprises in the program had a relationship with Grooming Centre that had lasted even longer.

This notion of partnership and trust was important for several reasons. First it was key to ensuring the problems identified and solutions designed were relevant. Second it was important in addressing any resistance to change. In addition to the above, the notion of partnership and trust was also important because we know from extant literature that partnership and trust are critical aspects of driving change in a sustainable way.

The third and final element associated with having a structured approach to the engagement, was political entrepreneurship as a critical skill set for the Program Manager. As the program manager coordinating the entire effort, I believe being a political entrepreneur, by which I mean acting in a way that combines a variety of skills, which facilitate pushing particular agendas, intervening in political processes, influencing decision makers, dealing with criticism and challenge, promoting credibility and coping with resistance in order to achieve pre-determined goals or objectives, was central to success.

Being a political entrepreneur was important for several reasons. First it provided me with the tools for achieving success as a Program Manager. Second it gave me perspective regarding the true nature of the engagement, in the sense that I know from extant literature that organizations are not the stably ordered, predictable, rule-based systems we have come to expect. They are an amalgam of people and agendas.

In addition to insights on the critical considerations for catalysing the development of micro enterprises in Nigeria leveraging ICT, this study sought to provide Mastercard with information on what these considerations means for proliferating digital payment adoption among micro enterprises in the country. The GSMA notes that globally, mobile phone adoption has sky rocketed, from about a billion users in 2000, to over six billion in 2015 with a significant portion of this growth coming from developing countries like Nigeria (GSMA, 2015). Extending this idea of mobile phone proliferation, scholars such as Aggarwal and Klapper (2012), Omwansa and Sullivan (2013) as well as Asongu and Asongu, (2017) argue that this proliferation of mobile phones has revolutionized the way micro enterprises conduct business by introducing new forms of payment amongst other variables.

The Bill and Melinda Gates Foundation and the McKinsey Global Institute both define digital payment as the transfer of value, leveraging mainly mobile phones (BMGF, 2014; MGI, 2016). To highlight its efficacy in today's world, Nesse et al. (2015) establishes key transaction types associated with digital payments utilizing the nature of the originator and receiver as a heuristic device. According to the authors they include; Person-to-Person (P2P), Government-to-Person (G2P), Person-to-Business (P2B) and Business-to-Business (B2B).

Building on the definition provided by the Bill and Melinda Gates Foundation and the McKinsey Global Institute, Patil et al. (2017) argue that digital payments can be viewed as an Information and Communication Technology (ICT) artefact. In extending the two critical considerations identified from this study to proliferating digital payment adoption among micro enterprises in Nigeria, a number of insights emerge.

The first of these insights, is that given the fact that digital payment solutions are also ICT artefacts, contextual clarity is just as important for driving their adoption among micro enterprises in Nigeria, as it was for the RSBS application. This means, Mastercard needs to pay special attention to the profile of the micro enterprises it plans to target with such solutions. This is because the profile of the micro enterprises under consideration will no doubt be a factor, as micro enterprises differ considerably depending on the attributes of the entrepreneur and the venture created. In addition to the profile of the micro enterprises, Mastercard also needs to pay attention to how it plans to define and measure adoption, both in generic terms, as well as terms specific to its expectations for the digital payment solution.

The second insight the considerations identified in this study has for Mastercard in terms of proliferating digital payment adoption among micro enterprises in Nigeria, is that, as with the RSBS application, Mastercard needs to employ a structured approach to the engagement. This means, having an action research and Information Technology Therapy (ITT) based process in place, that can be employed on an ongoing basis to; track adoption levels, identify the unique challenges to adoption, develop customized interventions to address the challenges, and implement them.

A number of researchers for example, Onwuka (2009), Ifinedo (2011), Uzor (2011), Odumeru, (2013), Ayo and Ukpere (2010) and Akintola et al. (2011) already identify some of the challenges associated with the adoption of digital payments in Nigeria. They include; poor physical infrastructure including; power and telecommunications, low levels of literacy, low levels of awareness on the benefits of adopting digital payment channels, and lack of trust. In the same vein, research such as those conducted by CGAP (2016) and World Bank (2013) have identified, leveraging different features of technology to match the requirements of micro enterprises, re-evaluating business models to better suit the cost appetite of target enterprises,

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addressing current gaps in the digital payment value chain through partnerships and more proactive policy stance on the part of regulators and governments, as some of the steps that can be taken to address these challenges. As demonstrated during this study, Mastercard can drill deeper into the detail of the challenges and possible solutions associated with proliferating specific digital payment solutions leveraging action research and Information Technology Therapy (ITT).

In addition to having an action research and ITT process in place, adopting a structured approach to proliferating digital payment among micro enterprises in Nigeria, also means having trusted partners in the effort, which include the micro enterprises themselves. Finally adopting a structured approach to the engagement when it comes to proliferating digital payment solutions among micro enterprises in Nigeria, means ensuring whoever is in charge of coordinating the effort is a skilled political entrepreneur.

The next section discusses how the learning garnered from the insider action research contribute to the existing business and management literature on micro enterprise development leveraging ICT.

5.2.1. Implications for Business and Management Literature on Micro Enterprise Development Leveraging ICT

As noted during the literature review, two important gaps currently exist in the literature on micro enterprise development leveraging ICT. The first, is a lack of focus and granularity. As an example, several studies including Tambunan (2019), EFInA (2018) and GEM (2019) highlight the fact that micro enterprises differ from other enterprises as well as from each other. However, no study identified discusses what these differences mean for micro enterprise development leveraging ICT.

In the same vein, existing literature for example; Lawder (2001), Kemp et al. (2002), Qureshi (2005) and Zheng et al. (2018) establish that micro enterprise development can be defined and measured in multiple ways. However, there is no attempt to reconcile these definitions and measures in actual research settings particularly as it relates to specific profiles of micro enterprises. Finally research, for example; Wolcott et al. (2008) elude to the fact that ICT adoption among micro enterprises is challenged by a plethora of factors. Yet no study has explored what these challenges are, and how they can be addressed within the context of specific ICT artefacts. This is

particularly important, given the fact that the term ICT can be used to describe a wide range of effects; from mobile phones to applications such as spreadsheets, internet and personal computers.

This study addresses this lack of focus and granularity by empirically validating the four interrelated ideas that form the theoretical framework of this study. This four ideas are; (1) Micro enterprises are not an homogenous group. They differ from other enterprises as well as from each other. (2) Despite its benefits, micro enterprises experience low levels of ICT adoption which is due to multiple challenges (3) deliberate steps can be taken to identify and address these challenges (4) Taking these deliberate steps will lead to greater ICT adoption, and the development of these enterprises.

In achieving this; first, it establishes the profile of the micro enterprises in the study, clarifying exactly what the study means by the term. Second it defines micro enterprise development as the 'attainment of short term goals' and measures that development, using clear parameters. In doing this, it eliminates the inconsistency often associated with the term in the literature. Finally the investigation focuses on a specific ICT artefact; an inventory management application called the Retail Smart Business Service. In doing this, the research is able to move from the generic to the specific, articulating insights that are much more pragmatic.

The second gap that currently exist in extant literature on micro enterprise development leveraging ICT, is a lack of research from a practitioner's perspective. In addressing this gap, the study unearths a number of learnings for both the process of catalysing micro enterprise development leveraging ICT, and the practice of insider action research. On the former, the study draws attention to the importance of having contextual clarity as well as the critical role partnership and trust plays in the success of the engagement. It also highlights the importance of being a political entrepreneur, having a simple shared narrative across all stakeholders, as well as taking a view of micro enterprise development as a journey as opposed to a destination.

In terms of the latter, the study draws attention to how critical aspects of the insider action research was experienced in the study. These aspects include; the dynamics of action and reflection, the nature of the knowledge created in action, the principles required to successfully manage the constant change associated with the effort, and the character of the insider action research stage boundaries. In addition, the study also highlights how the pro and cons of being an insider action researcher was

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experienced, how the relationship between participation and the credibility of the research findings was perpetuated, how stakeholders other than academics gauged the quality of the research findings, and the discomfort associated with the practice of being an insider action researcher.

The next section brings the chapter to a close by recounting some of the important points made.

5.3. Conclusion

This chapter sought to establish the implications of the learnings garnered from the insider action research effort, first for the research questions and second for the envisaged outcomes of the broader thesis project. In achieving this, it began by discussing the implications of the learnings for the research questions. From there it moved to discuss the implications of the learning for each of the envisaged outcomes of the thesis project.

In concluding, a number of points are worth re-iterating. First, the learning garnered from the insider action research empirically addressed both the research questions and the envisaged outcomes of the thesis project. Second, in doing this the research creates ample value for Mastercard as well as extant business and management literature. The implication of the above is that haven't satisfied its intent, the stage is now set to bring the engagement to a close.

The next chapter presents the conclusion of the thesis project.

CHAPTER SIX

CONCLUSION

6.0. Introduction

This chapter seeks to bring the thesis project to a close. In doing so, it is divided into three sections. The first, articulates the actionable knowledge created. Building on this, the second section discusses the limitations of the current study, and the opportunities these limitations create for future research. The third and final section discusses the impact of the thesis project on my journey as a scholar practitioner. The chapter concludes by recounting some of the key points made.

Next, I discuss the actionable knowledge created from the thesis project.

6.1. Actionable Knowledge Created

Antonacopoulou (2006) argues that the term 'actionable knowledge' denotes learning that emerges from pragmatic engagement within the context of organizing. She adds that this learning enables individuals and organizations associate heterogeneous elements (social, political, economic, technological) in a way that creates understanding. In concluding, she asserts that this understanding not only has the capacity to extend existing ways of knowing, but also to inform future action. The experience garnered from this thesis project is consistent with this argument.

In line with this, the paragraphs that follow present the actionable knowledge that was created from this thesis project. In doing so, it pays specific attention to how the actionable knowledge created relate to two specific stakeholder groups; Mastercard and other parties vested in catalysing micro enterprise development in Nigeria, as well as scholars of business and management.

With regards to Mastercard, the actionable knowledge created is three pronged. The first is; when it comes to catalysing micro enterprise development leveraging Information and Communication Technology (ICT) in Nigeria, it is critical to have contextual clarity with regards to the key elements that underlie the effort. These elements include; the profile of the micro enterprises in question, the way adoption is defined, how development is measured, and the specific ICT artefact under consideration.

The second actionable knowledge that emerged from this thesis project is that in addition to having contextual clarity, it is important to approach such efforts in a structured way. This means employing action research and Information Technology Therapy (ITT) for problem identification and resolution, imbibing partnership and trust as important virtues and ensuring the coordinator of such efforts have the skill sets of a political entrepreneur. The third and final actionable knowledge created from this thesis project for Mastercard is that, given the fact that digital payment solutions are also ICT artefacts, the considerations established through this study such as achieving contextual clarity and employing a structured approach to efforts geared towards catalysing ICT adoption, also apply to proliferating digital payment among micro enterprises in Nigeria.

The actionable knowledge presented above apply not just to Mastercard. It also holds value for other stakeholders vested in catalysing micro enterprise development in Nigeria. These stakeholders include private organizations such as Grooming Centre, government agencies such as the Small and Medium Enterprise Development Agency of Nigeria (SMEDAN) and developmental agencies such as Enhancing Financial Innovation and Access (EFInA).

For business and management scholars, the actionable knowledge created apply to two distinct fields. The first is scholarship on micro enterprise development leveraging ICT. With regard to this field, the actionable knowledge created asserts that, it is possible to create research on micro enterprise development leveraging ICT that is focused and granular in nature in response to the gap in extant literature. In addition to the assertion that it is possible to conduct research on micro enterprise development leveraging ICT that is focused and granular, this study also creates actionable knowledge that speaks to the dynamics associated with catalysing micro enterprise development leveraging ICT from a practitioners perspective.

In line with this, the study argues that; (1) It is important to have contextual clarity when pursuing efforts to catalyse micro enterprise development leveraging ICT (2) partnership and trust are two important virtues to inculcate into execution (3) political entrepreneurship skills is a must have for the coordinator of such efforts (4) having a simple shared narrative across all stakeholders is critical to success and (5) when implementing such efforts, it is important to view micro enterprise development as a journey as opposed to a destination.

The second distinct field within business and management scholarship that the actionable knowledge created by this study relates, is the practice of insider action research. Here the study asserts that; (1)the practice of action and reflection is not peculiar to insider action research, it is common place in practice albeit conducted less formally by other stakeholders. This said, in both scholarship and practice an important goal remains to navigate the complexity of implementing change (2) knowledge created in action is controlled, with the shared purpose, values and intended outcomes of stakeholders acting as an anchor (3) Conducting insider action research means subscribing to a mindset that acknowledges constant change as a given. Achieving this mindset requires adopting important principles such as emphasizing workability over theory and functioning as a political entrepreneur.

In addition to the above, this study also argues that; (4) The stages in the insider action research process do not represent ridged boundaries. Overlaps exist between stages (5) Being an insider action researcher has both advantages and disadvantages. The advantages include preunderstanding, motivation and access. The disadvantage include a higher risk of confirmation bias (6) The value of participation in insider action research goes beyond differentiating it as a research paradigm or serving as a tool for instigating change. It is also critical to establishing the credibility of the findings of action research, particularly among non-academic stakeholders (7) Relevance, much more than rigor, is the motivation of non-academic stakeholders involved in insider action research (8) The practice of insider action research can be a source of discomfort particularly for the action research. This conform can stem from multiple sources among them the fear of being misinterpreted.

The next section discusses the limitations of the current study and the opportunities this create for future research.

6.2. Limitations of Study and Opportunities for Future Research

This study was limited to 100 micro enterprises located in Lagos Nigeria, which represented 10% of the 1000 enterprises that participated in the Mastercard Grooming Centre Smart Business Initiative. In addition, the intervention performed as part of the study was limited to 25 micro enterprises selected from the initial sample of 100. In addition to its limited sample size, this study was also limited by its scope, focusing on a specific profile of micro enterprises, a specific type of ICT artefact, a specific measure of micro enterprise development and specific measures of adoption.

The implications of these limitations for the study is that while there is increased focus and granularity, the insights garnered are incredibly specific. Hence significant opportunities exist for future research both in terms of the size of micro enterprises participating in the study, as well as the scope of the research. In terms of size for example, there is opportunity to expand the number of participants beyond the Smart Business Initiative (SBI) to include more micro enterprises. This is particularly relevant because according to EFInA (2018), there are more than 40 million micro enterprises in Nigeria.

In addition to sample size, there is also an opportunity to explore varying research scope. For example future research may choose to explore a different profile of micro enterprises along the parameters identified in this study. Namely; gender, age, level of education, motivation, nature of business, type of ownership, years of establishment, and identify how these parameters impact efforts to catalyse micro enterprise development leveraging ICT. In the same vein, future research may also choose to explore a separate ICT artefact and unearth how the difference in ICT artefact impacts the insights garnered. A similar approach can also be taken in terms of adopting a deferent definition of development, for example those that view development as being akin to growth or productivity. These possible areas of future research can do much for deepening the existing understanding of catalysing micro enterprise development in Nigeria leveraging ICT.

Beyond Nigeria, these difference in sample size and research scope can be applied to unearthing insights for catalysing micro enterprise development leveraging ICT in other jurisdiction. For example research could be conducted in countries in the global north as well as those in the global south and comparisons could be drawn to unearth insights that exist at a more macro level.

The next section discusses the impact the experience of completing the thesis project has had, on my development as a scholar practitioner.

6.3. Impact of the Thesis Project on My Development as a Scholar Practitioner

Today, I see union where others see separation, and convergence where others see divergence. This thesis project has served as an important vehicle for me to mature as a person, a professional, and as a scholar. It has done this in a number of ways.

First, it has aided me in developing an understanding that, the true purpose of a scholar practitioner is to progress business and management knowledge by producing insights that are not only rigorous, but also relevant. In achieving this, the thesis project helped me see theory and practice, not as polar opposites but rather as part of the same interwoven continuum. While the taught component of the Doctor of Business Administration program helped kick start this understanding by exposing me to the concept of rigor versus relevance, this thesis project helped bring it to life. It achieved this by demonstrating to me that even though concepts like Information Technology Therapy and action research were theories articulated by scholars, these theories could be applied to address real business challenges and the insights gained from the process could be applied again in deepening my understanding of these theories.

Aside from helping me understand the purpose of a scholar practitioner, the thesis project has also helped me understand that scholarly practice is as much about personal development as it is about organizational development. Although, the thesis project yielded actionable knowledge for Mastercard, other stakeholders and scholarship, it also provided me with deep insights on myself, my assumptions and biases, what motivates me, what scares me and so on. With this insights has come a higher level of consciousness, and with it a concerted effort to capitalize on my strengths, and address my weaknesses. In addition to the above, the thesis project has also helped me horn a number of skills and competencies. Key among them, expert level knowledge on the key concepts that underpin the study, analytical techniques such as conducting directed content analysis, change management leveraging the concept of being a political entrepreneur, and engaging in critical literature review, and reflection.

Another impact the thesis project has had on my journey as a scholar practitioner, is the recognition that scholarly practice is as much about understanding the various perspectives to a subject, as it is about locating my own voice in the discourse. With this appreciation I have found the freedom to express my own ideas without any fear of rejection. I have also learned to listen more to the ideas of others, and treat these ideas with respect irrespective of whether I agree with them or not. I believe this is relevant for me not just as a scholar or practitioner, but also as an individual.

6.4. Conclusion

This chapter sought to bring the thesis project to a close. In doing so, it recounted the actionable knowledge created, the limitations of the study and what they mean for opportunities to conduct future research, and the impact the entire experience has had on my development as an individual, a scholar, and a practitioner.

In concluding, a number of points are worth reiterating. The first, is that this thesis project was conducted in response to gaps identified in my employer, Mastercard's business practices, as well as extant literature. The second point worth reiterating, is that in addressing these gaps, the thesis project employed insider action research following the identification of my pragmatic philosophical stance, anchored on a multi-paradigm view on incommensurability. The third point worth reiterating, is that true to form, the experience has delivered significant value not just to Mastercard, Grooming Centre and the micro enterprises in the SBI program, but also to me as an individual and as a professional. In addition, the experience has also delivered value to business and management scholarship both in terms of the existing discourse on micro enterprise development, but also on the practice of insider action research.

As I look forward to engaging in even more action research, I am reminded of the argument put forward by German American psychologist Kurt Lewin, that nothing is more practical than a good theory. This is because, I believe the ability to create actionable knowledge from theory and theory from actionable knowledge lies the true value of action research and the doctor of business administration program. Hence, I look forward to continue to play my part in the program's advancement.

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APPENDIX

Appendix A: Participant Information Sheet

Information Technology Therapy (I.T.T) as a Catalyst for Micro Enterprise Development and its Implications for Digital Payment Adoption: Evidence from Lagos Nigeria

Participant Information Sheet

Date: 30th July 2018

Version Number: 2.0

Invitation to Participate

You are invited to participate in the above research study. Before you decide to get involved, it is important for you to know why this study is being conducted and what it will entail. Kindly take time to read the following information closely and feel free to let us know if you will require additional details or if there is anything that require further clarification.

We would like to emphasize that you are under no obligation to accept this invitation. Only accept to take part if you are inclined to do so.

About the Researcher

My name is Uwa Uzebu and I am currently a Director within the Acceptance Development business of Mastercard. Mastercard is a global technology company focused on digital payments. There firm has been in operations in Nigeria since 2011. As part of my responsibilities in the organization, I seek out and work with partners such as Grooming Centre on projects such as the Smart Business Initiative which seek to promote greater adoption of digital payments by micro enterprises i.e. enterprises with less than 10 employees. In addition to the above, I am currently enrolled in the Doctor of Business Administration (DBA) Program at the University of Liverpool, United Kingdom. This study is part of the requirements for earning my degree. Its goal is to addresses a critical business problem for my organization Mastercard while making an original contribution to the body of knowledge on Management.

About the Study

Information Technology Therapy (I.T.T) refers to a process where deliberate effort is made to remove the barriers micro enterprises i.e. enterprises with less than 10 employees have to utilizing Information Technology (I.T.). Underlying I.T.T. is the premise that by removing these 'barriers', the enterprises become free to enjoy the benefits of Information Technology which include better access to 'know-how', improved competitiveness and greater operational efficiency amongst other things. At Mastercard we believe, achieving the above will translate to greater development for the enterprises and by extension an increase in their wiliness to accept electronic payments.

This study seeks to explore the above argument by answering the question 'How can I.T.T catalyse the development of micro retail enterprises and what implications will this have on their adoption of digital payments?' To answer this question, the study will employ an action research strategy which will focus on engaging participants drawn from Grooming Centre's existing micro retail customers who are enrolled for the Smart Business Initiative. Under this initiative, these enterprises received a Smart Device embedded with two solutions; an Inventory Management (I.M) application and a Digital Payment Acceptance (D.P.A) service.

Participants in the study will be divided into two groups. The first group (Group A) will form the core group and consist of enterprises currently under utilizing the solutions made available through the Smart Business Initiative while the second group (Group B) will form the control group and will consist of enterprises currently utilizing the solutions optimally. The action research process will involve working with participants in Group A on an ongoing basis over a 3 month period to identify the issues they currently face in utilizing the technology, develop and implement plans to address these issues and evaluate the outcome of the interventions as it relates to its impact on the development of the enterprises and their adoption of digital payments. Each month, 1 week will be spent on diagnose and plan phases of the action research process, 2 weeks will be spent on implementing the interventions, while 1 week will be spent evaluating the impact of the interventions. For Group B only data tracking their level of development and adoption of digital payments as they continue to utilize the services will be collected as there will be no intervention.

Data gathering for the study will be in the form of participants completing questionnaires and providing answers to pre-defined questions which will be administered monthly over the 3 month period of the study. Collected data will be analysed utilizing both quantitative and qualitative methods. At the end of the study, we will leverage the insights gained from this analysis in answering the research question posed.

Why You Have Been Chosen

You have been chosen because you are a micro enterprise, involved in retail trade. As one of the Grooming Centre customers profiled for the Smart Business Initiative, you have received a Smart Device embedded with both an I.M. and D.P.A solution. Whether you are utilizing the solution optimally or not at all, we believe you are the ideal candidate for one of the two groups of micro enterprises we will like to study.

Do You Need to Take Part in the Study?

Please be informed that despite being a recipient of the Smart Device as part of the Smart Business Initiative, participation in this study is entirely voluntary. Also note that even if you agree to participate, you are free to withdraw from the study at any time without explanation. There will be no impact on your relationship with Grooming Centre or your participation in the Smart Business Initiative should you decide to do so.

What Will Happen if You Take Part?

You will receive an email and a follow up call from the researcher asking you to formally confirm your willingness to participate in the study within 7 days by completing and returning a Participant Consent Form (PCF). Once consent is received, the researcher will assign participants to a group and set up a meeting with each participant to inform them of their group, gather background information on the enterprises and establish the level at which the enterprises utilize the I.M and D.P.A solution. For participants in Group A additional information on the barriers to the

effective utilization of the solution will be collected. The above information will be collected by participants completing a simple questionnaire and providing answers to a number of pre-defined questions. It is estimated that this process will take approximately 30 minutes to complete. Prior to each meeting the questionnaire and list of pre-defined questions will be shared with participants.

For Group A participants, a 30 minutes meeting will be organized the week after the initial engagement. The purpose of this meeting will be for the researcher to share possible ways of addressing the barriers identified with each participant and to agree on an action plan. At the end of every month a follow up meeting will be held with each participant for 30 minutes to track progress on interventions agreed, access the impact of these interventions and agree on areas of further improvement. As with the initial meeting, data will be collected by participants completing a simple questionnaire and providing answers to a number of pre-defined questions. This 30 minutes monthly meeting and data gathering session will continue every month for 3 months at the end of which analysis of collected data will begin. As highlighted earlier for Group B participants, only data on utilization of the services and their impact on the development of the participants and their adoption of digital payments will be collected monthly as there will be no intervention. Data will also be collected by participants completing a simple questionnaire and providing answers to a number of pre-defined questions. This will be done via email with follow up calls only were necessary.

The request from the researcher to participant is threefold. The first is to make themselves available for meetings as scheduled. The second is to commit to implementing interventions as agreed and the third is to provide open and honest feedback to questions posed by the researcher. Verbal conversations will not be recorded by the researcher without the express permission of the participant.

Expenses and/or Payments

There will be no payment for participation in the study. This said where participants incur any cost for example in making telephone calls, or transporting to meeting venues outside the participants area of residence, the researcher will reimburse the participant in full for the cost of such expenses.

Are There Any Risks in Participating in the Study?

The researcher can foresee no risks to the participant as a result of participating in this study.

Benefits in Taking Part in the Study

The effective utilization of Information Technology such as the I.M and D.P.A. solutions available under the Smart Business Initiative has been shown to have positive effects on micro enterprises including but not limited to; improved access to know how, increased competitiveness and greater operational efficiency. By being part of this study, participants, particularly those in Group A, have the opportunity to enjoy the above benefits.

If you are Unhappy with the Study or there is a Problem

If you are unhappy, or if there is a problem, please feel free to let us know by contacting the Uwa Uzebu on +2349037807323 and we will try to help. If you remain unhappy or have a complaint which you feel you cannot come to us with, then you should contact the Research Governance Officer at ethics@liv.ac.uk . When contacting the Research Governance Officer, please provide details of the name or description of the study (so that it can be identified), the researcher(s) involved, and the details of the complaint you wish to make.

Confidentiality of Participant Information

All participant information and data collected as part of this study will be treated with the highest level of confidentiality. Participant information will be codified to preserve the anonymity of collected data. All data will be stored in secure folders in the researcher's laptop and backup drive. Folders will be password-protected to prevent unauthorized access. Where access is requested by law, for example, in the case of criminal activity, participants will be duly informed before information is shared with the relevant authorities.

What will happen to the results of the study?

The results of this study will be utilized by Mastercard, Grooming Centre and other stakeholders including governments and developmental agencies interested in developing sustainable strategies for supporting the development of micro retail enterprises in Nigeria and beyond. The researcher also plans to publish the study in revenant journals both locally and internationally. As a participant in the study you will be able to access the research report by emailing the researcher and requesting for a copy at uwagbaeuzebu@gmail.com. Please note that participants will not be identifiable from the results of the study except express permission is given by the participant.

What will happen if I want to stop taking part?

As noted earlier, participants can pull out of the study at any time, without explanation. This said, results up to the time of exit may still be utilized with the consent of the participant. Where consent is not given, collected information will be destroyed upon exit of the participant. The above said, please note that only information that has not been anonymised may be removed from the study.

Who can I contact if I have further questions?

Should you have any further questions, please contact the researcher Mr. Uwagbae Uzebu, Director Business Development, Acceptance 1 Muritala Mohammed Drive Ikoyi on +2349037807323.

Participant name: Signature: Date:

Appendix B: Participant Consent Form

UNIVERSITY OF LIVERPOOL

Committee on Research Ethics

PARTICIPANT CONSENT FORM

Title of Research Project: Information Technology Therapy (I.T.T) as a Catalyst for Micro Enterprise Development and its Implications for Digital Payment Adoption: Evidence from Lagos Nigeria.

Researcher(s): Uwagbae Uzebu

Please initial box

I confirm that I have read and have understood the information sheet dated 30th July 2018 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my rights being affected. In addition, should I not wish to answer any particular question or questions, I am free to decline.

I understand that, under the Data Protection Act, I can at any time ask for access to the information I provide and I can also request the destruction of that information if I wish.

I agree to take part in the above study.

Participant Name	Date	Signature

Name of Person taking consent	Date	Signature

Researcher	Date	Signature

Principal Investigator:
Name
Work Address
Work Telephone
Work Email

Student Researcher:
Name: Uwagbae Uzebu
Work Address: Mastercard, 1 Muritala Mohammed Drive Ikoyi, Lagos Nigeria
Work Telephone: +2349037807323
Work Email: uwagbaeuzebu@gmail.com

Additional Statements

- The information you have submitted will be published as a report; please indicate whether you would like to receive a copy.

  [ ]

- I understand that confidentiality and anonymity will be maintained and it will not be possible to identify me in any publications

  [ ]

- I agree for the data collected from me to be used in future research and understand that any such use of identifiable data would be reviewed and approved by a research ethics committee.

  [ ]

- I agree for the data collected from me to be used in relevant future research.

  [ ]

- I understand that my responses will be kept strictly confidential. I give permission for members of the research team to have access to my anonymised responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research.

  [ ]

- I understand and agree that once I submit my data it will become anonymised and I will therefore no longer be able to withdraw my data.

  [ ]

Appendix C: Gate Keeper Later

Grooming People for Better Livelihood Centre
No.3, Tina Chris Street, Beside Ejigbo Mini-Stadium
Ejigbo, Lagos. Nigeria

August 8, 2018

Uwagbae Uzebu
Director Business Development, Acceptance
Mastercard,
1 Murtala Mohammed Drive, Ikoyi, Lagos
Nigeria.

Dear Uwagbae,

RE: REQUEST FOR PERMISSION TO ENGAGE GROOMING CENTRE SMART BUSINESS INITIATIVE CUSTOMERS TO PARTICIPATE IN A PROPOSED STUDY TITLED: INFORMATION TECHNOLOGY THERAPY AS A CATALYST FOR MICRO ENTERPRISE DEVELOPMENT AND ITS IMPLICATIONS FOR DIGITAL PAYMENT ADOPTION: EVIDENCE FROM LAGOS NIGERIA

Thank you for your interest in engaging with Grooming Centre's Smart Business Initiative customers in the course of your study referenced above, stated in your letter dated August 2, 2018.

We have reviewed your request and are pleased to communicate that the Management of the Centre has granted permission for you to engage our Smart Business Initiative customers as proposed, pursuant to the following conditions:

1.   Grooming Centre will be duly acknowledged in the proposed study;
2.   Signed consent forms are to be obtained from our customers as a demonstration of their voluntary willingness to participate in the study;
3.   A copy of the final study should be presented to the Management of Grooming Centre.

Grooming Centre is a learning institution and a leader in knowledge management at the bottom of the pyramid. The Centre is committed to continuously contributing to knowledge and innovation in enterprise development as part of its social objectives. In furtherance of this commitment, please contact us for any further information required or possible areas of collaboration in the course of your study.

Yours Sincerely,

Alexander Enyinnah
Programme Director

Appendix D: Micro Enterprise Questionnaire

Questionnaire

Company Name:

Address:

Telephone Number:

Email

Name of Participant:

1. **What is your gender?** *(Please select one answer)*

   Male   ☐

   Female   ☐

2. **What age group do you belong?** *(Please select one answer)*

   20-35   ☐

   35-45   ☐

   45-55   ☐

   >55   ☐

3. **What is your level of education? (Please select one answer)**

   None   ☐

   Primary school   ☐

   Secondary school   ☐

   Technical College   ☐

   BSc   ☐

   Other

   Please   specify…………………………...…………………………………………..

   I don't know   ☐

4. **What was your motivation for going into this business?(Please select one answer)**

   It's my passion   ☐

   I saw an opportunity   ☐

         ☐

It's in the family

I didn't get a job   ☐

Other   ☐

Please   specify………………………...

I don't know   ☐

5. **What type of business do you run?** *(Please select one answer)*

   Grocery   ☐

   Other Retail   ☐

   Clothing and Textile   ☐

   Bar and Lounge   ☐

   Hair Saloon   ☐

   Others   ☐

   Please specify……………………………………………………………………

   I don't know   ☐

6. **What is the nature of the ownership of the business? (Please select one answer)**

   One man (sole proprietorship)   ☐

   Family business   ☐

   Partnership   ☐

   Limited Liability   ☐

   Other   ☐

   Please   specify………………………...

   I don't know   ☐

7. **How long have you been in this business? (Please select one answer)**

   Between 2 and 5 years   ☐

   Less than 2 years   ☐

   More than 5 years   ☐

   More than 10 years   ☐

   I don't know   ☐

8. How many people does your business employ? (Please select one answer)

0   ☐

1   ☐

2   ☐

3   ☐

Between 3 & 5   ☐

More than 5 but less than 10   ☐

More than 10   ☐

Other   ☐

Please   specify……………………...

I don't know   ☐

9. What is the average monthly income of your business? (Please select one answer)

Less than N100, 000   ☐

More than N100, 000   ☐

More than N250, 000   ☐

More than N500, 000   ☐

Other   ☐

Please   specify……………………...

I don't know   ☐

10. Have you used the RSBS application in the last 30 days? (Please select one answer)

Yes   ☐

No   ☐

I don't know   ☐

11. If yes how often have you used it in the last 30 days? (Please select one answer)

Once a day   ☐

Multiple times a day ☐

Once a week ☐

Multiple times a week ☐

Other ☐

Please specify……………………..

I don't know ☐

12. What are the challenges you have experienced in using the Retail Smart Business Service application?

Thank you for your time. Please feel free to reach me on
uwagbaeuzebu@gmail.com or +2349037807323 if you have any questions.