THESIS

The role of demand-side factors in financial inclusion in Ghana

By

YAA AFI OSEI

14461049

Submitted in fulfilment of the requirements for the degree

of Doctor of Philosophy

at the Gordon Institute of Business Science

University of Pretoria

SUPERVISORS

Dr William Derban

Prof. Helena Barnard

August 24, 2021

Declaration Regarding Plagiarism

1. I understand what plagiarism entails and I am aware of the University's policy in this regard.
2. I declare that this thesis is my original work. Where someone else's work was used (whether from a printed source, the Internet, or any other source) due acknowledgement was given and reference was made according to departmental requirements.

____________________ ____________________

Signature Date

Acknowledgements

I am grateful to God for the opportunity to embark on this doctoral journey and thankful to the International Development Research Centre for funding me in this doctoral programme. I would also like to thank my supervisors, Prof. Helena Barnard and Dr William Derban, for their feedback and guidance throughout my studies culminating in the completion of my doctoral thesis. To the doctoral team and support staff at Gordon Institute of Business Science, thank you very much for all your assistance. I would like to extend my heartfelt appreciation to my research partner, the Non-Governmental Organisation, for providing participants, and allowing the use of its curriculum and officers for the research. To Dr Kuhn, Enoch Sakyi-Yeboah, Patterson, Maud, and all those who helped in diverse ways with my fieldwork, thank you.

Finally, thank you to all my family and friends for your unconditional love, encouragement, and support throughout this journey. I share this milestone with you all.

Ethics Statement

The author, whose name appears on the title page of this thesis, has obtained, for the research described in this work, the applicable research ethics approval. The author declares that she has observed the ethical standards required in terms of the University of Pretoria's Code of Ethics for researchers and the Policy guidelines for responsible research.

Abstract

To examine the barriers faced by the financially excluded, this research investigates financial inclusion as a sub-concept of social inclusion. The study assesses two demand-side barriers confronting the involuntarily financially excluded: financial literacy and self-efficacy. It thus goes beyond previous work that has sought to increase access to financial services by addressing supply-side barriers (specifically accessibility, affordability, availability and eligibility), mainly through various technological advances. Employing a pre-intervention/post-intervention field experiment to measure the financial behaviour of individuals, the study monitored the use over a six-month period of an appropriately developed banking offering. Banking was offered to participants from rural areas near four distinct towns in Ghana, following the provision of training on financial literacy and self-efficacy. The results showed that regardless of whether participants received training in both, either or neither, they did not use their bank accounts for their financial transactions or savings. Secondarily, the results indicated that although financial literacy training may improve the financial knowledge of individuals, it does not necessarily lead to increased confidence on the part of the individual with regard to using formal financial services. In contrast, although the self-efficacy training (both on its own and together with financial literacy) did not translate into financial inclusion, participants reported that it had provided them with skills to guide their financial decision-making. Moreover, limited qualitative results obtained from participants indicated that they find the cash economy in which they operate adequate to their needs as members of their communities.

As the main findings of this study suggest that developing the financial knowledge and attitude of the financially excluded, having addressed supply-side barriers of financial inclusion, still does not encourage the use of an appropriately developed banking offering, the explanation for the (non-)usage of banking products must lie elsewhere. The structure of an economy has to be seen as central to financial inclusion in that the influence of the cash economy and the informal economy mean that financial inclusion is not a precondition for social inclusion. This has serious implications for policy in sub-Saharan Africa. It may be that financial inclusion should be regarded as a result of an improving economic situation, rather than a contributory cause. Stakeholders should consider financial inclusion alongside and as part of policy initiatives designed to improve educational levels, digital skills, and a general understanding of the formal financial and, indeed, economic system.

Keywords: Financial in/exclusion, social in/exclusion, financial literacy, un/banked

Table of Contents

1 **Introduction** **11**
1.1 Previously documented barriers to financial inclusion 12
1.2 Extent of financial inclusion in developing economies 14
1.3 Problem statement 15
1.4 Purpose statement 16
1.5 Research objectives 16
1.6 Scope 17
1.7 Importance and benefits of the study 17
1.8 Conclusion 19
2 **Financial inclusion in Ghana** **21**
2.1 Introduction 21
2.2 The nature of financial inclusion in Ghana 21
2.3 Partners in financial inclusion 24
2.3.1 The banking system in Ghana 24
2.3.2 Non-governmental organisations 25
2.4 Conclusion 26
3 **Literature review** **27**
3.1 Introduction 27
3.2 The concept of financial inclusion 27
3.2.1 Definition of financial inclusion 28
3.3 The need for financial inclusion 30
3.4 Barriers to financial inclusion 32
3.5 Social exclusion 34
3.5.1 Definition and framework of social exclusion 34
3.5.2 Dimensions of Social Exclusion 35
3.6 Social in/exclusion and financial inclusion 36
3.7 The concept of social in/exclusion in developing countries 38
3.8 Financial literacy—a skill for financial inclusion 42
3.9 Self-efficacy as an attitudinal aspect of financial inclusion 44
3.10 Financial literacy and self-efficacy 47
3.11 Conclusion 47
4 **RESEARCH DESIGN AND METHODOLOGY** **49**
4.1 Introduction 49
4.2 Research perspective 49
4.3 Research Methodology 49
4.3.1 Quantitative Methodology 49
4.3.2 Research design 50

4.3.3 Research approach 53
4.4 Validity 56
4.4.1 Internal validity 56
4.4.2 External validity 58
4.5 Dependent variable 59
4.6 Independent and control variables 59
4.7 Data analysis and interpretation 59
4.7.1 Descriptive Statistics 60
4.7.2 Comparing pre- and post-intervention results 60
4.7.3 Predicting financial inclusion 61
4.8 Quality and ethics 61
4.9 Conclusion 62

5 Executing the research methodology 63
5.1 Introduction 63
5.2 Pre-intervention Phase 63
5.2.1 Communities for research 64
5.2.2 Recruitment of participants 66
5.2.3 Challenges associated with recruitment 67
5.2.4 Account opening and training 68
5.3 Post-intervention phase 69
5.3.1 Post-intervention survey of participants 70
5.3.2 Challenges associated with post-intervention phase 71
5.4 Challenges Associated with Research Methodology 72
5.4.1 Challenges associated with partnerships 72
5.4.2 Challenges associated with participants 72
5.4.3 Challenges of cost 73
5.5 Benefits of the research methodology 73
5.6 Lessons learnt from the research design execution 74
5.6.1 Multiparty stakeholders in research 74
5.6.2 Distances between researchers and participants in experimental research design ... 74
5.6.3 Role of qualitative research methodology in experimental designs 75
5.7 Conclusion 75

6 Results and analysis 76
6.1 Introduction 76
6.2 Final participants for research 77
6.3 Demographics 77
6.4 Descriptive statistics for individual items of perception of financial literacy training 80
6.5 Descriptive statistics for banking data 80
6.6 Construct validity and reliability 81
6.6.1 Internal consistency reliability 81
6.6.2 Construct validity for financial self-efficacy (before) 81
6.7 Descriptive statistics of individual items of the financial self-efficacy scale 83
6.8 Assessing normality of data distribution 86
6.9 The inclusion of control variables 86

6.10 Hypothesis testing—general linear model to test effect of financial self-efficacy 87
6.10.1 Test for homogeneity of variance using Levene's Test for Equity of Variance and Fmax .. 88
6.10.2 Test of homogeneity of intercorrelations using Box's M Statistic 89
6.10.3 Interpreting the results of mixed between-within subject analysis of variance 89
6.11 General linear model to test volume and value of transactions 92
6.12 Post-research banking questions 93
6.12.1 Testing for associations between different groups and account usage 94
6.12.2 Cross-tabulation of the study variables 94
6.13 Conclusion 97
7 Discussion 99
7.1 Introduction 99
7.2 Background 100
7.3 Mobile money and financial inclusion 102
7.4 The perceived value of financial inclusion for the individual 103
7.4.1 Financial transactions, social inclusion, and the value of financial inclusion in a cash-based economy 104
7.4.2 Financial inclusion and the value of savings 106
7.5 The perceived value of financial inclusion for the state 108
7.5.1 Financial inclusion and economic growth and development thus far 108
7.5.2 Financial inclusion within the informal economy 111
7.6 Concluding Comments 116
8 Conclusion 118
8.1 Introduction 118
8.2 Research design and methodology 119
8.3 Findings 120
8.4 Discussion 121
8.5 Contribution of the Research 122
8.5.1 Theoretical contribution 122
8.5.2 Methodological contribution 123
8.5.3 Practical contribution 123
8.6 Future Research 124
8.7 Limitations 125
8.8 Conclusion 126

List of Tables

Table 2.1 Changes in access to financial services between 2010 and 2015 (*driven mainly by mobile money [15%]) 21
Table 3.1 Different definitions of financial inclusion..... 29
Table 3.2 Variables of social exclusion in developing economies 39
TABLE 4.1 Study area: towns and surrounding communities of participants..... 51
Table 4.2 Objective measures for the dependent variables 59
Table 5.1 Population statistics of towns used for research as per 2010 National Population Census 65
Table 5.2 Number of participants recruited against number of potential participants..... 67
Table 5.3 Final number of participants recruited for research analysis..... 71
Table 6.1 Key for groupings and relevant interventions 76
Table 6.2 Selection of participants 77
Table 6.3 New Cronbach Alpha values— re-estimated internal consistency reliability analyses83
Table 6.4 Descriptive statistics of the individual items of the financial self-efficacy for the 'before' and 'after' situation 85
Table 6.5 Assessing normality of distribution 86
Table 6.6 Homogeneity of variance for financial self-efficacy 88
Table 6.7 Descriptive statistics for financial self-efficacy 'before' and 'after'..... 89
Table 6.8 Descriptive statistics 90
Table 6.9 Multivariate test for significance of differences..... 91
Table 6.10 Tests of between-subjects effects..... 91
Table 6.11 Summary of test of research hypotheses 93
Table 6.12 Reason for not using the bank account: descriptive statistics..... 94
Table 6.13 Grouping variable reason for not using the account: 96
Table 6.14 Chi-square test results 97
Table 6.15 Cramer V effect size 97

List of charts

Chart 1.1 Adults with accounts at formal financial institutions in developing countries in world regions 14
Chart 2.1 Trend of financial inclusion in Ghana since 2011 as reported in 2011, 2014 and 2017 Global Findex Surveys 22
Chart 2.2 Deposit structure of the banking system in Ghana 24

Maps

Map 5.1 Map of Ghana showing the respective communities used for the research 64

Figures

Figure 3.1 Framework of research hypotheses 41
Figure 6.1 Interaction plot for financial self-efficacy and group 92
Figure 7.1 Outcome of research on demand-side factors for financial inclusion 115

List of Abbreviations

ATM	Automated Teller Machine
CASE	Centre for the Analysis of Social Exclusion
CB	Commercial Bank
CGAP	Consultative Group to Assist the Poor
DMBs	Deposit Money Banks
GDP	Gross Domestic Product
KMO	Kaiser-Meyer-Olkin
KYC	Know Your Customer
MFI	Microfinance Institution
MSA	Measure of Sampling Accuracy
NBFI	Non-Bank Financial Institution
NFIDS	National Financial Inclusion and Development Strategy
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-Operation and Development
RCB	Rural and Community Bank
SDG	Sustainable Development Goal

1 Introduction

The Global Findex Survey, 2017 (Demirguc-Kunt, Klapper, Singer, Ansar & Hess, 2018) estimates that about 31% of the world's adult population, representing 1.7 billion people, do not have access to basic banking. The report indicates that while 94% of adults in developed countries have a bank account, the ratio in developing economies is 61%, with sub-Saharan Africa reporting an abysmal 43% account ownership (Demirguc-Kunt et al., 2018).

Bank account ownership is defined as having an individual or jointly owned account at a formal financial institution. People are financially included simply when they have access to banking products (Bihari, 2011b; Demirguc-Kunt & Klapper 2012). While that is important, people also need to be able to use financial services and be financially aware, literate, and confident in using them. In addition, it is expected that people who are financially included see some improvement in their lives because of their access to and understanding of how to use financial services (Chibba, 2009; Diniz, Birochi & Pozzebon, 2012).

Literature has identified financial inclusion as one of the key factors to empower people economically, which ultimately leads to economic growth. The belief is that financial inclusion can promote inclusive growth, stability, and more equitable distribution of income and wealth, as well as the empowerment of deprived people, which are all key components of economic development (Bruntha & Indirapriyadharshini, 2015; Morgan & Pontines, 2014).

Scholars and stakeholders have identified and discussed several barriers that contribute to the low rate of financial inclusion, a summary of which this thesis discusses. The literature is abundant on barriers that prevent access to financial services. As noted below, however, the main focus of scholars has been on supply-side barriers, which involve the processes and services of financial service providers such as banks and other stakeholders when they make it difficult and often impossible for some individuals to access financial services and products (Bihari, 2011a; Demirguc-Kunt, 2008; Kempson & Whyley, 1999).

1.1 Previously documented barriers to financial inclusion

Scholars have conducted several studies in the area of barriers to financial inclusion, but work has been skewed towards the supply-side of financial services. They are mainly what can be termed “technical” and are categorised into three main barriers in the discussion that follows.

The first is the barrier of eligibility, which is multi-dimensional. One of the dimensions is exclusion due to challenges associated with providing appropriate documentation to sign up for formal financial services. Also, exclusion may be due to restriction of access through the financial institution’s process of risk assessment. Another dimension is characterised by inappropriate conditions attached to products and services, as well as marketing strategies of financial institutions which also have the potential of excluding some individuals from formal financial services (Bihari, 2011b; Kempson & Whyley, 1999).

The second barrier is associated with affordability. Kempson and Whyley (1999) consider this as *price exclusion*—a situation whereby financial services are available at prices that individuals cannot afford. This is usually characterised by high cost of banking services, including but not limited to account maintenance fees, loan processing fees, remittance fees, interest rates, and minimum balance requirements (Bihari, 2011b; Demirguc-Kunt, 2008).

Thirdly, there is also the barrier associated with availability of and proximity to financial services (accessibility). This involves the lack of facilities and services such as physical branches, Automated Teller Machines (ATMs), inadequate road network, poor transport services and inadequate infrastructure (Bihari, 2011b; Demirguc-Kunt, 2008). This is especially important as a significant proportion of the excluded live within communities where provision of such infrastructure is limited.

Financial institutions and other stakeholders, in their attempt to reach out to the excluded in society, have promoted the development of products that seek to address these issues (Kempson & Whyley, 1999). For instance, agents are employed to increase accessibility and availability, while product features are designed to, among other considerations, promote ease of use and encourage affordability. Financial services regulators, by providing limited ‘Know Your Customer’ (KYC) requirements for segments of the

population who do not meet the standard requirements, increase the eligibility of such people to access formal financial products.

From the above, it is evident that there has been much work to address these more technical barriers to financial inclusion (Bihari, 2011b; Demirguc-Kunt, 2008; Diniz et al. 2012; Kempson & Whyley, 1999; Zins & Weill, 2016). These technical barriers are important and industry players have concentrated on reducing their impact, but efforts have been very much focused on product and service delivery. However, certain characteristics of individuals in their social setting also have an influence on financial inclusion (Bihari, 2011b; Kempson & Whyley, 1999). Yet there are limited studies by scholars on the influence of intrapersonal characteristics, as well as how to address them (Bruntha & Indirapriyadharshini 2015; Ranjani & Bapat 2015). This serves as the motivation for my research.

Where studies have been conducted on the financial behaviour of individuals, the conclusion often relates to improving on the technical barriers, without any mention of social requirements (Bruntha & Indirapriyadharshini 2015; Ranjani & Bapat 2015). As a result, investigation into the roles of the individual's capabilities, skills and attitudes is limited. The lack of appropriate skills and attitude cannot be blamed on the individual; rather, stakeholders need to focus attention on the social conditions of the prospective banking client if financial inclusion is to be sustainable. Thus, in this research, addressing financial in/exclusion as a dimension of social in/exclusion provides the lens through which the social, demand-side barriers to financial inclusion are identified and discussed.

The barriers of exclusion are extended to encompass the skills and attitudes required to enable the individual to move from exclusion to inclusion. The barriers this study focuses on are thus not directly related to the features of the products of formal financial services. They include, instead, dimensions related to the financial capability of individuals, notably financial literacy, as well as their self-efficacy. For instance, Diniz et al. (2012) suggest that it is important that all efforts of financial inclusion should be undertaken together with financial education processes.

In this research, therefore, I propose that the reduction of the technical barriers of availability, affordability, accessibility, and eligibility to financial inclusion are necessary but not sufficient conditions to encourage individuals to be financially included. There is also a need to focus on mitigating the social barriers, such as a lack of self-efficacy, that affect the individual's capability and confidence to take up financial services and

products. In other words, any activity to promote financial inclusion without addressing social barriers is unlikely to result in a sustainable engagement with the financial services and improvement of the lives of the financially excluded.

1.2 Extent of financial inclusion in developing economies

Various studies indicate that the rate of financial inclusion is low in developing economies. For context, a study of sub-Saharan Africa by Chaia, Dalal, Goland, Gonzalez, Morduch and Schiff (2009), defining financial inclusion as the use of both formal and semi-formal financial services, including microfinance institutions (MFIs) that are not subject to the same regulatory framework as traditional banks, noted that 80% of the adult population, representing 325 million people, remained financially excluded in sub-Saharan Africa. Although the more recent World Bank's Global Findex Database 2017 reported an improvement in this figure to 57% (Demirguc-Kunt et al., 2018), this is still high. Chart 1.1 presents data of adults with accounts at formal financial institutions.

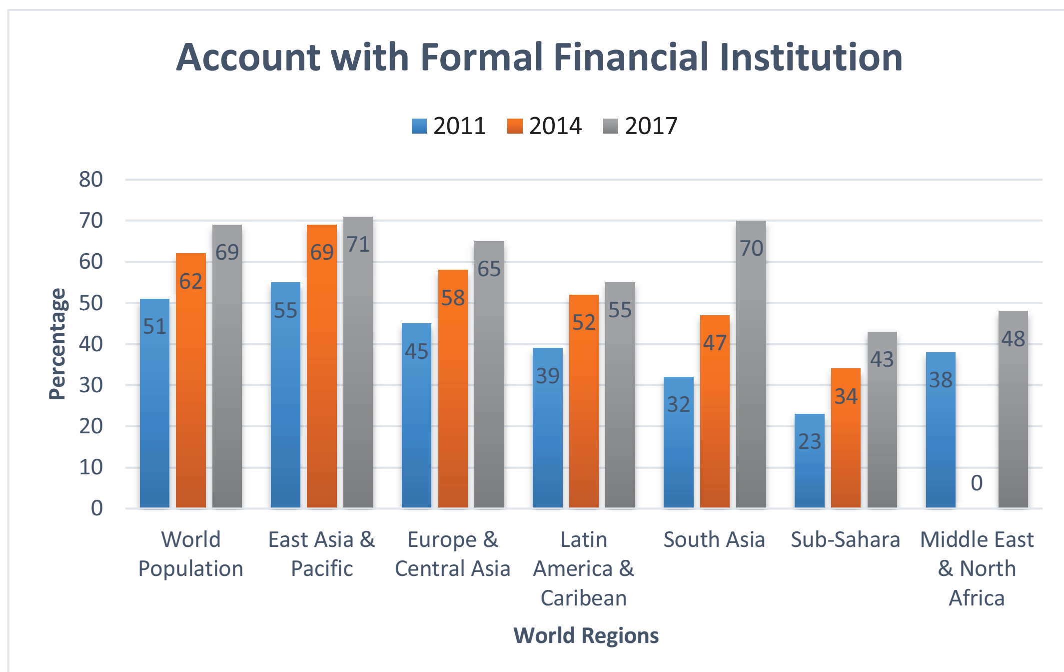


Chart 1.1 Adults with accounts at formal financial institutions in developing countries in world regions

SOURCE: GLOBAL FINDEX (2011, 2014 & 2017)

The chart above shows that the period between 2011 and 2017 witnessed some improvement in financial inclusion levels across the world. In sub-Saharan Africa, the increase in account ownership was primarily driven by the inclusion of mobile money accounts (Demirguc-Kunt et al., 2018).

Apart from developing countries within the East Asia and the Pacific Region, and South Asia, developing economies in all other regions are below the world average in all the years, with sub-Saharan Africa reporting the lowest figures. It is therefore not surprising that many studies have been conducted on how to improve financial inclusion globally, with an emphasis on developing economies (Queralt, Fu, & Romano 2017; Tita & Aziakpono, 2017; Yoshino & Morgan, 2016; Zins & Weill, 2016).

This is not to say that there are no systems for financial intermediation among the excluded in these regions. Indeed, informal channels are sometimes considered more flexible and convenient to provide financial services to the financially excluded than structured, formal financial services; however, they lack the reliability, security, affordability, and value associated with formal financial services (Chaia et al., 2009). It is therefore important to identify the barriers that prevent individuals from accessing formal financial services. This research was conducted in Ghana, a country in sub-Saharan Africa. The expectation is that the conclusions will contribute to the discourse on improving inclusion rates in the country and the sub-Saharan region.

1.3 Problem statement

Despite the increased focus on promoting financial inclusion, the rate of penetration across many developing countries, especially in sub-Saharan Africa, remains low. There persists the continuous existence of a significant number of the unbanked thus making the topic of financial inclusion still relevant and urgent (Demirguc-Kunt et al. 2018). Financial exclusion is costly. This may be reflected in the high cost of informal credit and the lack of safe savings opportunities, to mention but two disadvantages (Chakravarty & Pal, 2013). Moreover, it is usually the excluded poor, the vulnerable, and the rural inhabitants who have to pay these high costs (Solo, 2008; Zins & Weill, 2016). The introduction of financial inclusion to the unbanked is expected to mitigate these costs associated with being excluded. Owning a bank account, which is one of the services of financial inclusion, provides the opportunity for the individual to enter the formal banking space and through that, encourages savings and also provides a channel for access to credit (Demirguc-Kunt & Klapper, 2012).

The development of formal financial services with the aim of minimising or eliminating barriers to financial inclusion has been advocated by various stakeholders, including financial institutions, development agencies and governments (Datwani, 2017; Lahaye, Abell & Hoover, 2017; Shamika, 2019). However, what is limited in the literature is the consideration and discussion of other barriers that are not primarily institutionally related, but rather associated with the capabilities and confidence of the individuals who are excluded. One rare exception is the study by Mindra and Moya (2017), which focused on financial efficacy as a mediator in advancing financial inclusion.

I designed this study to identify the extent of the impact that addressing these intrapersonal barriers to financial inclusion has on the uptake and usage of a banking product. Individuals were introduced to a formal banking product of a commercial bank and offered various interventions that could help address these social barriers. Any impact identified in this way could therefore be analysed and remedies proposed.

1.4 Purpose statement

Although 31% of the global adult population were unbanked as at 2017 (Demirguc-Kunt et al., 2018), about 57% of the adult population of sub-Saharan Africa remain financially excluded (Demirguc-Kunt, et al., 2018). When it comes to Ghana, the proportion of financially excluded was 42% as at 2017 (Demirguc-Kunt et al., 2018). These statistics indicate that in both sub-Saharan Africa as a whole, and Ghana specifically, the percentage of the population that is financially excluded is well above the global average. Therefore, financial inclusion as a goal and policy initiative remains relevant and requires attention. The purpose of this research is to contribute to the demand-side studies in the field, with the aim of providing direction on initiatives aimed at achieving sustainable high levels of financial inclusion.

1.5 Research objectives

The original objective of this research was to identify whether financial literacy and self-efficacy help ensure that individuals who are signed up to a bank account for the first time (financially included) use the account for their financial transactions.

However, after the findings of the experimental design were obtained, the objective was revised to make sense of why individuals failed to use their bank accounts in spite of extensive practical and additional training and support.

1.6 Scope

This study is set in rural Ghana. Participants were selected from rural communities surrounding four towns in three regions of Ghana. The data was collected over a six-month period after participants had opened a bank account. The population for the research were all adults in the communities identified, the inclusion criteria being young adults, from 18 to 34 years, who did not have a formal bank account at the onset of the study. The sampling unit chosen was a participant in the community of interest.

In considering financial inclusion, the research focused on the provision of the general bank account of the bank concerned. This was guided by Allen, Demirguc-Kunt, Klapper, Soledad and Peria (2016), who also used a deposit account in their study on understanding financial inclusion because it provides mechanisms for both savings and payments, which are likely to be more universally demanded than credit. Secondly, the research was limited to potential income-earning individuals, irrespective of whether they were in the formal sector or not.

1.7 Importance and benefits of the study

This study examines the individual demand-side barriers to financial inclusion. In particular, it set out to understand what happens when individuals are provided support in the take-up of a banking product. It was therefore originally intended to contribute important new information that could directly benefit the effort to increase the unsatisfactory levels of financial inclusivity in Ghana, sub-Saharan Africa, and possibly other developing countries.

However, the study gained an unforeseen dimension of importance in its finding that an individual who is financially excluded may actually not be interested in becoming included (See results and discussions section, Chapters 6 and 7). This could have significant implications, suggesting a disconnect between individuals and the state, which considers the formalisation of financial transactions as one of the means of driving economic growth and development (Lenka & Sharma, 2017; Yang & Yi, 2008).

Notwithstanding the perceptions of those who are not interested in participating in the banking system, the costs of financial exclusion to the individual concerned are indeed very high (Leyshon, French & Signoretta, 2008; Solo, 2008; Zins & Weill, 2016). It also poses many risks to these individuals. Solo (2008) presents a list of costs, including: an increased risk of being mugged or affected by the activities of pick-pockets after receiving

cash payments; the difficulty and time associated with turning a paycheque into cash; and also, the risk of potential loss of earnings associated with informal savings. In addition, not being able to access a bank account for something as simple as saving has multiplier effects: because individuals cannot develop a track record with a bank, they are also not able to access credit when and to the extent needed.

Therefore, the question remains an important one: why does financial exclusion still remain so high? Are programmes to promote financial inclusion not resulting in significant enough improvement in the lives and livelihoods of beneficiaries to make them attractive? Is it also possible that some unique social interventions are required to be implemented concurrently with financial inclusion initiatives to provide the needed impact?

Extensive attention has been focused on technical barriers to financial inclusion with emphasis on availability, accessibility, affordability and eligibility. However, there has been limited emphasis on the individual who is about to use or must choose whether to use the service. The aim of this research was to examine and bring to light this gap in the current literature so that that the issue of demand-side resistance may be granted necessary recognition and focus in the financial inclusion discourse.

This research, in setting out to highlight the linkage between financial in/exclusion and the broader issue of social in/exclusion, identifies that within certain contexts, such as in an informal economy and a cash-based economy, being financially excluded does not place an individual in a disadvantaged situation. Both concepts have engaged researchers, but usually independent of each other. One objective of this study is therefore to contribute to the limited research (Aduda & Kalunda, 2012; Lown 2011; Mindra & Moya, 2017) that attempts to provide evidence that the two are complementary of each other. But the results from this research indicate that in some instances, being financially excluded has limited effect on being socially excluded.

Also, the results indicate that, especially for an individual in a cash-based economy, the use of a bank account may not be helpful in carrying out his or her day-to-day transactions. Rather, such a person may consider using the bank account purely as a means of savings when they perceive that they have surplus income. One main area of the importance of this study is therefore to be found in the context of policy direction following from the conclusions of the study. The significance of the findings therefore lies perhaps less in the fact that some people do not seem to want to be banked, and more

in the fact that nuanced effort based on sound research in the social arena is needed to address concerns about financial exclusion.

The evidence from this study suggests that the drive to increasing financial inclusion cannot be done in silos. Even where particular attention is paid not only to the design but also to the uptake and usage of the acquired formal financial service, the evidence obtained in this study suggests that there is the need to rethink and broaden the strategy of financial inclusion to include measures to promote economic empowerment and general education and digital skills of the excluded, while considering also the overall structure of the economy.

In contributing to existing knowledge, the results of the research provide evidence of the fact that there is, in fact, a perceived value of financial inclusion to the excluded individual as well as the state, and each of these need to be addressed in developing policies and strategies for financial inclusion.

1.8 Conclusion

In this chapter, the need to identify the impact of barriers that are not related to financial service provision, but rather to the individual, in the uptake and usage of formal financial services was argued. This is the pivot on which this study hangs. The focus on the individual is relatively novel, and the evidence from this research suggests that the process of financial inclusion is more complex than previously recognised. In particular, the usage of financial services by individuals who are newly signed on to formal financial services requires critical attention if financial inclusion is to achieve the desired results. Also, in this chapter, the problem statement, purpose statement, research objectives, scope and importance of the study have been presented.

The rest of this thesis is structured as follows:

Chapter Two provides the context, considering financial inclusion in Ghana, while Chapter Three focuses on the literature review. The literature review discusses the concept of financial inclusion with particular attention to its definition, importance, and barriers. It also evaluates social exclusion and its relationship with financial inclusion. The chapter concludes by suggesting financial literacy as a skill and self-efficacy as an attitude required to improve financial inclusion. Chapter Four presents the experimental methodology employed for the study and Chapter Five details the execution of the

methodology. Chapter Six concentrates on the results, and Chapter Seven discusses the unexpected findings of the study with particular attention on the perceived value of financial inclusion to the individual and the state. Finally, Chapter Eight concludes the thesis.

2 Financial inclusion in Ghana

2.1 Introduction

A significant proportion of the Ghanaian population remain unbanked. In this chapter, the focus is on financial inclusion in Ghana with the aim of shedding light on the hypotheses used and context in which this research was conducted. The following section of the chapter considers the nature of financial inclusion in Ghana, while section 2.3 discusses two main partners of financial inclusion. The conclusion is presented in section 2.4.

2.2 The nature of financial inclusion in Ghana

Ghana, a country in sub-Saharan Africa, has a population of 30.42 million (United Nations World Population Prospects, 2019). The Consultative Group to Assist the Poor (CGAP), in studying the financial landscape in Ghana between 2010 and 2015, identified that total exclusion (after considering both formal and informal financial services) had declined from 44% to 25% (Zetterli, 2015), driven mainly by an increase in the non-bank financial sector, which increased during the same period from 7% to 22% due to the 15% increase in mobile money patronage. However, for traditional banking, the report noted that those included had increased only marginally, from 34% to 36%, from 2010 to 2015 (Zetterli, 2015).

Table 2.1 Changes in access to financial services between 2010 and 2015 (*driven mainly by mobile money [15%])

DESCRIPTION	2010 (%)	2015 (%)
BANK	**34**	**36**
NON-BANK FORMAL*	7	22
INFORMAL ONLY	15	17
EXCLUDED	44	25

Source: Zetterli, 2015

As at 2017, Demirguc-Kunt et al. (2018) indicated that 58% of the population was financially included. Although this is an improvement on 2015, it still meant that over 40% of the Ghanaian population was unbanked (Demirguc-Kunt et al., 2018). According to Demirguc-Kunt et al. (2018), as at 2017 only 16% of Ghanaians saved at a formal financial institution while only 10% borrowed from a formal financial institution. These relatively low levels of formal financial service usage lend credence to the fact that

financial inclusion is still an area of importance in the development of the country. Chart 2.1 presents the trend of financial inclusion since 2011.

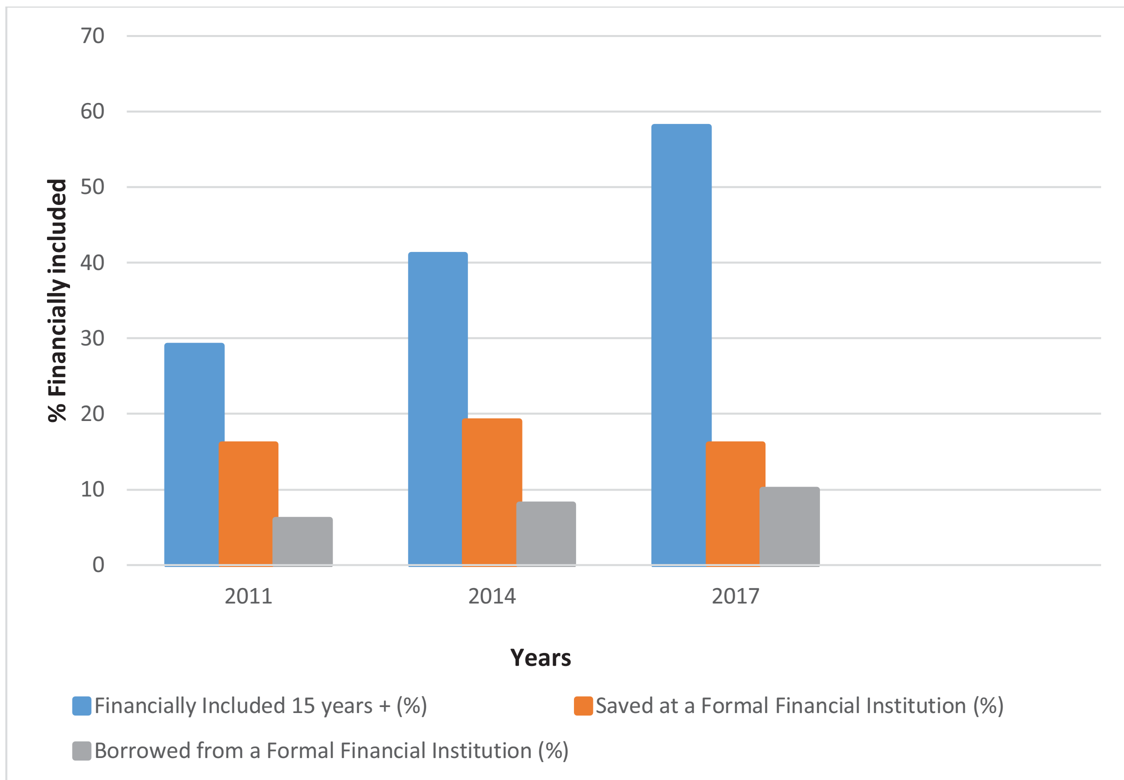


Chart 2.1 Trend of financial inclusion in Ghana since 2011 as reported in 2011, 2014 and 2017 Global Findex Surveys

Demirguc-Kunt et al. (2018)

Chart 2.1 shows that financial inclusion in Ghana has seen a gradual increase, which has been attributed largely to the influence of mobile money (Demirguc-Kunt et al., 2018; Zetterli, 2015). Its introduction has brought about significant changes in formal financial services, especially with respect to payment systems. In Zetterli's (2015) study, nearly half of mobile money account users in Ghana also had bank accounts. Following from that, as of 2017, 39% of the Ghanaian population 15 years and older had a mobile money account, up from 13% in 2014 (Demirguc-Kunt et al., 2018). Thus, mobile money has now become a critical technological innovation in the formal financial services landscape in Ghana. However, with respect to savings and borrowings from formal financial services, the levels are still low (Chart 2.1).

It has also been established that a large segment of the unbanked is within the informal sector. The informal sector in Ghana is large, contributing 80% of the work force in the country in 2009 (Osei-Assibey, 2009), and rapidly growing. With the last national census, conducted in 2010, the contribution of the informal sector to the workforce of the country

had increased to 86% (Ghana Statistical Service, 2012). The census identified agriculture, forestry and fishing to be the most dominant economic activities, accounting for 41% of the informal sector workforce.

The desire to promote financial inclusion in Ghana has long been a concern of the central bank. Indeed, as early as the 1970s, Rural and Community Banks were established to play a financial intermediary role by encouraging rural savings as well as meeting the financial needs of rural dwellers (Asiedu-Mante, 2011). The annual celebration of financial literacy week, a programme organised by the Ministry of Finance, is another initiative to deepen financial inclusion in the country.

In a further step taken towards encouraging financial inclusion, the Bank of Ghana, the regulator of financial institutions, issued agent guidelines effective 6 July 2015 for banking institutions intending to use agents in their operations. Among the objectives in line with these guidelines were the promotion of financial inclusion and extension of financial services beyond traditional branch channels. When employing agents, financial institutions are granted permission to apply minimum to medium KYC requirements in an attempt to minimise and eliminate the barriers to financial inclusion.

The central bank and policy-makers have played a big part in driving the growth in access to financial services. At the launch of the Ghana Digital Financial Services Programme, a five-year programme to improve financial inclusion in Ghana's population, the First Deputy Governor of the Bank of Ghana expressed the hope that the programme would provide the sustained efforts required to promote inclusive finance by identifying and removing constraints relating to policy, product design and implementation, as well as consumer resistance to digital finance, among other issues (Narh, 2017).

To emphasise the extent of the ongoing dialogue, the Vice President of the country, Dr Mahamudu Bawumia, at the launch of the annual Ghana Economic Outlook and Business Strategy Conference in March 2017 in Accra, noted that the government was working towards formalising the Ghanaian economy (Bawumia, 2017). To this effect, Dr Bawumia identified three pillars of a formal economy. The first was *financial inclusion,* with the other two being *national identification* and a *property-addressing system*. Thus, the formalisation of the economy has financial inclusion at the core.

The drive to promote financial inclusion in Ghana has seen the development of the National Financial Inclusion and Development Strategy 2018-2023 (NFIDS). This is

aimed at increasing access to formal financial services for the adult population. It has been developed to support Ghana's vision of increasing the availability of a broad range of affordable and quality financial services that meet the needs of all Ghanaians. The intention is to increase the accessing of financial services from 58% in 2018 to 85% of the adult population by 2023, with emphasis on the excluded groups. The expectation is that this will create economic opportunities and reduce poverty. The NFIDS reform agenda is structured around five pillars:

i) Financial stability

ii) Access, quality, and usage of financial services

iii) Financial infrastructure

iv) Financial consumer protection, and

v) Financial capacity.

The objectives of my research can be aligned to pillar two, which includes usage of financial services. As such this research is timely and has the potential of influencing policy and strategy direction and initiatives.

2.3 Partners in financial inclusion

2.3.1 The banking system in Ghana

The banking industry in Ghana is made up of Commercial Banks (CBs) and Specialised Deposit-Taking Institutions, comprising Non-Bank Financial Institutions (NBFIs), Rural and Community Banks (RCBs) and Microfinance Institutions (MFIs). The deposit structure of these institutions as of 31 December 2019 (Bank of Ghana Annual Report, 2019) is presented in Chart 2.2.

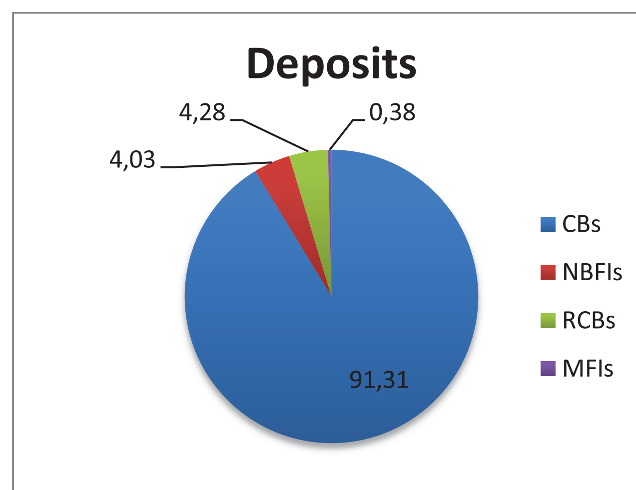


Chart 2.2 Deposit structure of the banking system in Ghana

Source: Bank of Ghana Annual Report (2019)

CBs have an overwhelming dominance in deposit mobilisation, accounting for 91.31% of all deposits mobilised. This may not come as surprising as they have the infrastructure and technology to support it.

The majority of CBs have developed products targeted at individuals who would otherwise have been excluded in terms of the barriers relating to availability, affordability, accessibility, and eligibility. For instance, whereas some banks require as much as GHc100 as minimum balance, others require as little as GHc5 or nothing at all for an individual to open a bank account.

My research required bank accounts to be provided for the participants. A commercial bank was used for this purpose. I was very particular in choosing an appropriate bank account. The factors that influenced my decision were: low minimum opening requirements, possibility of agency services, very minimum or zero account maintenance charges and ease of operation. The bank account chosen was one that had been designed and developed as part of the bank's financial inclusion drive and its features aligned the factors outlined above.

The features of the account were thoroughly explained to the participants during the recruitment stage. Demonstrations on its functionalities were also conducted with opportunity for questions from the participants. To add to this, the various community representatives of the NGO concerned were trained by the bank to handle questions and/or operational difficulties that might arise when the participants signed on to the account.

2.3.2 Non-governmental organisations

Several NGOs in Ghana provide interventions to support financial inclusion in various sectors of the country, as they consider access to formal finance as one of the key elements to improving individual welfare. For assistance in recruiting participants for my study, I partnered with an NGO with a financial inclusion agenda. This decision was further informed by Cole, Sampson and Zia (2011), who in assessing the impact of financial literacy and the uptake of a bank account, partnered with an NGO that provided customised training designed for unbanked individuals with the goal of teaching households about banks.

2.4 Conclusion

Ghana is taking great strides towards financial inclusion. Since 2011, there has been improvement in the levels of financial inclusion although levels are still relatively low, from the basic to the more sophisticated services offered by formal financial institutions. Government, together with other stakeholders, including financial institutions and NGOs, has also been working towards the promotion of financial inclusion. In the 2019 World Bank Economic Update of Ghana, five specific recommendations were given to enhance financial inclusion:

i) Digitisation of government and utility payment
ii) Linking of informal channels with formal financial services
iii) Promoting agency banking
iv) Improving financial capability, and
v) Leveraging of data to improve access to finance (World Bank 2019).

This indicates that financial inclusion remains a current area of concern in the country. It is therefore relevant to engage the individuals who are excluded to identify whether the strategies and policies in place are in fact moving them towards being actively involved in the usage of formal financial services. It is within this context that my research is situated. In the next chapter, the literature review from which the hypotheses of the research are derived is presented.

3 Literature review

3.1 Introduction

In Chapter One I presented the focus of the research, with Chapter Two providing a brief background on financial inclusion in Ghana, the context in which my research is situated. This literature review chapter establishes the basis of the research, considering what has already been documented, especially in the area of barriers to financial inclusion and how they have been addressed. The continued existence of financial exclusion, especially in sub-Saharan Africa, suggests that these barriers, which are often discussed, may not be the only ones that need addressing and that there is the need to consider others. This chapter therefore extends the consideration of barriers to financial inclusion within the social in/exclusion dialogue.

The literature review begins in section 3.2 below with a discussion of the concept of financial inclusion, with emphasis on its definition. The third section highlights the need for financial inclusion while section 3.4 discusses the barriers to achieving it. The fifth section presents the notion of social exclusion, leading into section 3.6, which examines the relationship between social in/exclusion and financial inclusion. In sections 3.7 to 3.10, I discuss financial literacy and self-efficacy as a skill and an attitude respectively that might help individuals to overcome the proposed social barriers considered in this study. Section 3.11 provides the conclusion to the literature review.

3.2 The concept of financial inclusion

Financial inclusion as a term has evolved over a period of time. Terminologies such as financial development and financial deepening have been suggested as linked to the promotion of financial services (Abosedra, Shahbaz & Nawaz, 2016; Aduda & Kalunda, 2012; Swamy, 2014). Financial inclusion revolves around the provision of formal financial services such as deposits, loans, payment services, insurance and remittances at an affordable cost (Demirguc-Kunt & Klapper, 2012; Lalrinmawia & Gupta, 2015).

One of the many challenges of research in financial inclusion is that a variety of scholars from different disciplines have been involved, reflecting different perspectives. This is evidenced by the wide array of scholarly works in fields including information technology (Diniz et al. 2012), marketing (Bruntha & Indirapriyadharshini 2015; Murendo & Mutsonziwa, 2016), management (Bihari, 2011b; Phan & Ngu, 2016) and development

studies (Demirguc-Kunt & Klapper, 2012; Sarma & Pias, 2011), to mention some examples. The relatively common denominator in these discussions is the emphasis on the 'technical' approach in their conclusions about enhancing financial inclusion.

Deviating from this technical approach, my research sought to situate financial inclusion as a subset of social exclusion. The discussion considers the capabilities perspective by considering the attitudes and skills of individuals who are excluded. With the emphasis of my research on formal financial services, I did not make any distinction between voluntary and involuntary financial exclusion as the study is situated in sub-Saharan Africa, where few people use formal financial services, compared to developed countries. This position is shared by Honohan (2008), who posits that exclusion is normal for the bulk of the population in middle- and low-income countries.

3.2.1 Definition of financial inclusion

There are several dimensions to financial inclusion and various definitions capture some or all of these (see Table 3.1). The first is associated with location. It considers both geographical location and sector of attention (Aduda & Kalunda, 2012; Swamy, 2014). Secondly, there is the dimension that considers the particular population in need of financial inclusion, such as disadvantaged, vulnerable and poor people; all sectors of the society; or the low-income earners, who are also usually socially excluded (Aduda & Kalunda, 2012; Bihari, 2011b; Demirguc-Kunt & Klapper, 2012; Kumar, 2013; Swamy 2014; Rangarajan, 2008; Rastogi & Ragabiruntha, 2018). Thirdly, there is also the product focus, whereby the stress is on credit, savings, insurance, or the broad spectrum of financial services and their usage (Allen, Demirguc-Kunt, Klapper & Peria, 2012; Fungacova & Weill, 2015; Kabakova & Plaksenkov, 2018). Finally, there is also the dimension of impact, which covers an array of results. For example, while some may consider the impact as poverty reduction, others would view it as accelerated economic growth (Demirguc-Kunt & Klapper, 2012; Kabakova & Plaksenkov, 2018; Rangarajan, 2008; Swamy, 2014).

TABLE 3.1 Different definitions of financial inclusion

No.	Author	Definition
1	Kabakova & Plaksenkov (2018)	Recognises the following characteristics from literature: (1) uniform availability of financial services; (2) regular usage; (3) good quality of financial services; (4) potential for increased welfare.
2	Rastogi & Ragabiruntha (2018)	Financial inclusion can be explained as the access to and availability of the formal financial system to all sections of society.
3	Fungacova & Weill (2015)	Financial inclusion is defined as the use of formal financial services.
4	Swamy (2014)	Access to safe, easy and affordable credit and other financial services by the poor and vulnerable groups, disadvantaged areas and lagging sectors.
5	Aduda & Kaluda (2012)	Financial inclusion is an intervention strategy that seeks to overcome the market friction that hinders the market from operating in favour of the poor and underprivileged.
6	Demirguc-Kunt & Klapper (2012)	Financial inclusion is the use of formal financial services. Well-functioning financial systems serve a vital purpose, offering savings, payment, credit, and risk-management products to people with a wide range of needs.
7	Bihari (2011a)	Financial inclusion is the availability of banking services at an affordable cost to disadvantaged and low-income groups.
8	Rangarajan (2008)	Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost.

Sources: Aduda & Kaluda (2012); Bihari (2011a); Demirguc-Kunt & Klapper (2012); Fungacova & Weill (2015); Kabakova & Plaksenkov (2018); Rangarajan (2008); Rastogi & Ragabiruntha (2018); Swamy (2014).

The variety of impact expectations and the target beneficiaries of financial inclusion allows for it to be positioned within the concept of social in/exclusion as discussed in detail in section 3.5 below. For instance, Kabakova & Plaksenkov (2018) see financial inclusion as having the potential to increase an individual's welfare. Similarly, Aduda & Kaluda (2012) view financial inclusion as an intervention that seeks to overcome the market friction that hinders the market from operating in favour of the poor and underprivileged. Often times, the financially excluded as described (poor and vulnerable groups; lagging sectors; underprivileged, disadvantaged and low-income groups; and vulnerable groups) are also the same category who are socially excluded (Aduda & Kaluda, 2012; Rangarajan, 2008; Swamy, 2014).

In defining financial inclusion for my research, the four dimensions noted above of impact, product focus, specific target population and geographical consideration were considered and used to develop the definition below:

Financial inclusion is the process that allows for especially the underprivileged and low-income individuals, irrespective of geographical location, within a society to have access to adequate, timely, and affordable formal financial services with continuous usage aimed at improving their lives.

3.3 The need for financial inclusion

The positive relationship between financial inclusion and economic growth (Calderón & Liu, 2003; Sarma & Pias, 2011; Yang & Yi, 2008) is one of the main reasons that discussions on financial inclusion continue to be relevant. This positive relationship is underlined by Allen, et al. (2012) who identified that beyond a GDP per capita of US$15,000, account penetration is virtually universal, with few exceptions.

Scholars have advanced certain arguments with regard to this relationship. Bihari (2011a) indicated that a well-functioning financial system is one that is inclusive, promotes economic growth and development, and reduces poverty. Similarly, according to Cull, Ehrbeck and Holle (2014), evidence suggests that inclusive and efficient financial markets have the potential to improve the lives of citizens through measures such as reduction in transaction costs, improved delivery of other social benefits, and spurring of economic activities. In addition, Varghese and Viswanathan (2018) suggest that financial inclusion mitigates exploitation of the vulnerable by the informal system.

In the discourse on achieving the Sustainable Development Goals (SDGs), financial inclusion is considered as a policy initiative that creates the conditions to bring many of the SDGs within reach (Klapper, El-Zoghbi & Hess, 2016). Especially for SDG 8, promoting shared economic growth, the argument is that access to financial services and products leads to an increase in capital which translates into increased income, whereas the exclusion of poor people from formal financial services leads to weak foundations of economic growth (Klapper et al., 2016). Thus, Chakravarty and Pal (2013) advocate for the design of appropriate policy on financial inclusion as access to financial services can be regarded as a basic human need, impacting on health, housing, and income, while Swamy (2014) also suggests that access to safe, easy, and affordable credit and other financial services by the poor and vulnerable groups, and in disadvantaged areas and lagging sectors, is recognised as a precondition for accelerating growth and reducing income disparities and poverty.

Meanwhile, the level of growth at which financial inclusion happens “automatically” may be difficult to predict while the direction of causality has not been firmly established and has generated considerable debate in literature. According to Storchi, Hernandez and McGuiness (2020), for different groups of poor people, although various financial services such as savings, insurance and payments can have a positive effect on their well-being, how it happens is not clear. Similarly, El-Zoghbi, Holle and Soursourian (2019), reviewing literature on the impact of financial inclusion, suggest that the direction of causality, whether financial inclusion can spur economic growth or vice versa, is still a topic of debate, while Honohan (2008) concludes that the anti-poverty potential of financial access remains economically elusive.

Although there exist divergent views on the direction of causality between financial inclusion and economic growth, the incidence of low levels of financial inclusion, especially in low-income economies, makes it important and makes this research relevant. It is, therefore, important to identify the barriers to financial inclusion and ascertain how they may be addressed to improve it. This is because it has been noted that access to financial services without price or non-price barriers is likely to benefit the poor as well as other disadvantaged groups (Demirguc-Kunt & Klapper, 2012).

3.4 Barriers to financial inclusion

Finance is perceived as, perhaps the most important contributor to economic growth of any country (Bihari, 2011a). It is therefore vital that access to financial services is not a challenge for any group of people. This research classified the barriers to financial inclusion broadly into two categories. The first comprises the institutional challenges for which financial institutions together with financial regulators are largely responsible and on the basis of which they therefore manage—change—their influence. With regard to this set of barriers, activities to promote financial inclusion are usually concerned with financial institutions designing products and processes, and training staff to think about, plan and deliver tailor-made financial services and products (Aduda & Kalunda, 2012; Varghese & Viswanathan, 2018) that will meet the needs of the excluded individuals. Demirguc-Kunt and Klapper (2012) classify these as barriers of eligibility, affordability, and physical access.

The barriers of eligibility include the documentation needed by individuals to gain access to financial services, restriction of access through the process of customer risk assessment by financial institutions on their potential customers, less suitable products, condition exclusion where the conditions attached to financial products make them inappropriate for the needs of some people, and marketing exclusion whereby some are effectively excluded by target marketing and sales of financial services and products (Bihari, 2011b; Kempson & Whyley,1999; Varghese & Viswanathan, 2018). These eligibility barriers imply that certain individuals, even though they may have funds and desire to be part of the financial system, will be financially excluded due to their inability to measure up to some or all of the standards above.

In discussing the affordability of financial services, Kempson and Whyley (1999) point out price exclusion, meaning that some people can only gain access to financial products at prices they cannot afford. This is usually manifested through the high cost of banking services, including, but not limited to, account maintenance fees, loan processing fees, remittances fees, interest rates on loans and minimum balance requirements (Bihari, 2011b; Demirguc-Kunt, 2008; Kata & Walenia, 2015; Solo, 2008; Varghese & Viswanathan, 2018). As a result, the economic circumstances of some individuals prevent them from being financially included, thus leaving them to seek for financial services elsewhere when the need arises.

The proximity of formal financial services is also a factor to be considered in the discussion of barriers of financial inclusion. This includes the availability and proximity of financial services such as financial institution branches and ATMs, often inaccessible or inadequate infrastructure, including poor road network and transport services, and insufficient infrastructure such as electricity and communication networks (Bihari 2011b; Demirguc-Kunt 2008; Varghese & Viswanathan, 2018; Zins & Weill, 2016).

The barriers discussed above are focused mainly on delivering financial services to customers—that is, the supply-side. As a result, they concentrate more on the technical requirements associated with the provision of such services. However, there is the second segment of barriers that are not related to the technicalities of financial services provision but rather directly to the individual's characteristics. Such barriers include, language and other self-limiting barriers where individuals pre-empt their exclusion, and thus see no value in applying for a financial product (Bihari, 2011b; Kempson & Whyley, 1999).

Sachdeva and Gupta (2014) identify lack of awareness, low income, poverty, and illiteracy as some of the factors that result in low levels of financial inclusion. These factors are not the previously discussed typical technical barriers which concentrate mainly on product and service delivery, but rather direct attention to the individual. Allen et al. (2012) suggest that the effectiveness of financial inclusion policies varies depending on the characteristics of the excluded individual. I, for example, experienced a scenario when visiting a rural bank branch which was nicely presented in the form of a beautiful building and landscape. In a conversation with a rural farmer who desired to employ the services of the rural bank for his financial needs, he was overly conscious of his appearance as he considered that rural bank to be too luxurious for him. He recounted the questions going through his mind: Will they welcome someone like him? Should he take his shoes off before entering? Should he not enter at all and return once better dressed? Should he be bold enough and just enter?

This scenario suggests that there are barriers to financial inclusion for which solutions to the barriers already discussed may not be appropriate. It is therefore relevant to propose that addressing these other barriers of a more social type should also engage the attention of stakeholders. The individual may be excluded from financial services as a result of a broader exclusion phenomenon. This requires the consideration of general exclusion, which is in the domain of social exclusion.

3.5 Social exclusion

3.5.1 Definition and framework of social exclusion

The debate on social exclusion/inclusion has its origin in Europe. The initial conversation around poverty and inequality was extended to include the general concept of exclusion across several dimensions (Barry, 2001; Room, 1999). Barry (2001) highlights the fact that social exclusion may be voluntary or involuntary; however, after considering both possibilities, he based his argument on involuntary self-exclusion. Considerable research in this area has been within policy debates and hence a substantial portion of papers and scholarship is found in policy publications as well as collections of papers. This is reflected in the scope that its various definitions seek to cover. The definition of social exclusion has thus been very difficult to pinpoint and as Peace (2001) notes, there appears to be limited consensus on it. However, various stakeholders have made attempts to capture the concept.

For instance, in 2016 the United Nations defined social exclusion as a state in which individuals are unable to participate fully in economic, social, political, and cultural life as well as the process leading to and sustaining such a state (United Nations Economic and Social Affairs, 2016). The exclusion of individuals and groups from society's political, economic, and societal processes prevents their full participation in the society in which they live. Previously, in 2004, the European Commission had defined social exclusion as a process whereby certain individuals are pushed to the edge of society and prevented from participating fully by virtue of their poverty or lack of basic competencies and lifelong learning opportunities, or as a result of discrimination (European Commission Employment and Social Affairs, 2004). This distances them from job, income, education and training opportunities, as well as social and community networks and activities. Individuals who are socially excluded usually have little access to power and decision-making bodies, and thus feel powerless and unable to take control over the decisions that affect their day-to day lives. The definition of Levitas, Pantazis, Fahmy, Gordon, Lloyd and Patsios (2007, p.9) provides a succinct summary of the concept, and this is adopted for my study. They define it as follows:

"*Social exclusion is a complex and multi-dimensional process. It involves the lack of or denial of resources, rights, goods and services and the inability to participate in the normal relationships and activities available to the majority of people in a society,*

whether in economic, social, cultural or political arenas. It affects both the quality of life of individuals and the equity and cohesion of society as a whole."

3.5.2 Dimensions of Social Exclusion

Without doubt, given its multidimensional nature, any attempt to define social exclusion is difficult. Nevertheless, these definitions highlight some key elements of the phenomenon. The first is related to the fact that non-participation in society's benefits and services is not a result of the individual taking an action to exclude himself, but rather stems from a lack of resources and/or access to them. The second identifies the results of social exclusion as being a lack in a certain expected minimum quality of life. The final element captures the dimensions of social exclusion to be, especially, exclusion from economic, social, cultural, and political processes.

Several frameworks have been developed to capture the multidimensional nature of social exclusion. For instance, within the European debate, social exclusion has focused on four main pillars on which policy actions are developed. These are reduction in monetary poverty, improvement in living conditions, greater access to labour markets and, finally, better education (Giambona & Vassallo, 2013). In the United Kingdom, the Centre for the Analysis of Social Exclusion (CASE) was set up to encourage exploration of this concept. Through their research, Burchardt et al. (2001) identified four dimensions of social exclusion: Consumption Exclusion (the capacity to purchase goods and services), Production Exclusion (participation in economically or socially valuable activities), Political Exclusion (inadequate involvement in local and national decision-making) and Social Interaction Exclusion (limited integration with family, friends and community).

This is consistent with the notion that social exclusion goes beyond poverty (Room, 1999) and embraces generally the lack of access to or participation in key activities as identified by the society. Peace (2001) summarises the concept of social exclusion by suggesting that the social inclusion agenda should enrich and enhance individual and group capacity in at least three areas, namely: opportunity, reciprocity, and participation.

However, the social norms within a community cannot be overlooked as they also have a bearing on the social in/exclusion of its individuals. Cialdini, Kallgren and Reno (1991) classified social norms into two types, namely, descriptive norms, which are those that characterise the perception of what most people do, and injunctive norms, meaning the

perception of what most people approve or disapprove. Notwithstanding this classification, the concept of social norms has received a complex mix of focus in the literature. In this regard, Markel, Gettliffe, Jones, Miller and Kim (2016) have identified the unifying themes of the various definitions as follows: 1) Social norms are learned early in life but can be dynamic and change over time; 2) People are not always aware their behaviour is governed by a social norm; 3) Social norms are accompanied by surveillance and sanctioning practices to ensure compliance; 4) Social norms and their sanctioning are aligned to inequality; and 5) social norms are different from personal beliefs, attitudes and interests. These themes associated with social norms lend some understanding to how they can impact social in/exclusion. Thus, according to Burjorjee, El-Zoghbi, Meyers and Heilman (2017), social norms are the rules and accompanying behaviours that govern social behaviour, perceptions and conduct, shaping how people behave and how they expect others to behave.

Therefore, the social norms of a group of individuals cannot be overlooked in considering decisions that have an effect on them irrespective of the intended positive consequences. However, Cialdini et al. (1991), in recognising that social norms have a strong and regular impact on behaviour, also acknowledge that the force and form of that impact can only be soundly established through theoretical refinements that as yet have not been rigorously applied. Also, within the discussions on social norms, there is the understanding that gendered social norms exist, where norms have different implications along gender boundaries. These permeate actions, perceptions and expectations at the individual, household and community levels (Burjorjee et al., 2017), therefore introducing another area of focus in the social in/exclusion debate.

The above discussion indicates that the study of social exclusion embraces many approaches and even disciplines. Furthermore, the social norms of the excluded cannot be overlooked as they are embedded in how they make choices. The concept of financial inclusion involves what can be done to reverse the situation of an individual being excluded from formal financial services, a key financial activity within a society. The following section continues this literature review by addressing the relationship between social in/exclusion and financial inclusion.

3.6 Social in/exclusion and financial inclusion

Being financially excluded is regarded as both an important cause and consequence of the broader problem affecting social exclusion (Boitan & Costica, 2015; Sarma & Pias,

2011). In some instances, access to financial services is considered part of a basic ingredient of an individual's well-being, alongside other attributes such as health, income, and housing (Chaia et al., 2009). Also, some scholars have identified financial inclusion as having the potential to increase welfare (Kabakova and Plaksenkov, 2018), an intervention strategy to help the vulnerable operate in the financial market space (Aduda & Kalunda, 2012) and provide banking services for the poor at affordable prices (Bihari, 2011a). Therefore, financial inclusion and social inclusion do have a commonality between them.

In addition, the definitions of financial inclusion are usually situated within the confines of social exclusion, because they usually discuss the excluded in terms of disadvantaged social groups, certain segments of society, and people at the margins of society (Lalrinmawia & Gupta, 2015; Leyshon & Thrift, 1995; Mohan, 2006; Sarma & Pias, 2011). Researchers also posit that in addition to employment status and income, social differences such as age, gender, and education influence financial inclusion, suggesting that social development is a core condition for financial inclusion due to the fact that an increase socio-demographic level supports financial inclusion (Johnson & Nino-Zarazua, 2011; Kabakova & Plaksenkov, 2018).

Boitan and Costica (2015) attempted to provide an explanation for this phenomenon. According to them, socially excluded people are faced with financial exclusion due to their inability to prove themselves creditworthy or to provide acceptable collateral. On the other hand, being financially excluded reinforces the risk of an individual being socially excluded due to their inability to understand financial services and products or the lack of accessibility to such products and services. Another area of consideration in the link between financial inclusion and social in/exclusion is the influence of social norms within communities. As mentioned in the previous section, for instance, gendered social norms exist. Burjorjee et al. (2017) in recognising this relationship, advocate that stakeholders of financial inclusion that particularly focus on women make the effort to understand the social norms that limit women from participating in formal financial services.

Financial inclusion may be considered as a catalyst that may limit the challenge of social exclusion, since financial exclusion, according to Wilson (2012), is a societal problem which leaves people vulnerable to financial and social pressures. Thus, access to basic financial services may be considered as a condition for active participation in the economic and social life in current society. In a study conducted to estimate to what

extent financial inclusion affects income inequality, using cross-sectional analysis for 40 countries in the Organisation for Economic Co-operation and Development (OECD), the European Union, and the Eurozone, the conclusion drawn was that financial inclusion helps to reduce income inequality in low-income and high-fragility countries (Kim, 2016). The above analysis is summarised by Sarma and Pias (2011) who argue that financial exclusion is indeed a reflection of social exclusion, as those excluded are often in countries with higher levels of income inequality, and poor physical and communication infrastructure, coupled with low literacy rates.

Therefore, discussing financial inclusion within the social exclusion space is relevant, corroborating the advocacy that financial inclusion should not be discussed in isolation but rather in line with other socio-economic, cultural, and geographic aspects of the situation (Aduda & Kalunda, 2012). Financial inclusion has the potential to contribute to social inclusion.

3.7 The concept of social in/exclusion in developing countries

The concept of social exclusion has been developed mainly in developed economies, predominantly in the European region. Extending the concept to include developing countries has encountered some challenges, as the context or areas of exclusion in most developing countries do not match those of the developed economies. For instance, in the European economies the excluded as per their definition are usually the minority. However, when the same definition is applied to the developing economies, the majority would often be considered socially excluded, for instance, in the context of financial inclusion.

In an attempt to discuss social exclusion in developing countries, Saith (2001) identifies that the differences in political histories, magnitudes of insecurity, administrative resources, and budget constraints in developing economies largely account for the differences between them and developed economies. Thus, whereas in the developed economies social exclusion is related to the welfare state and formal employment, it is related to basic capabilities, risk aversion, vulnerability, and sustainable livelihoods in developing economies (Saith 2001). This is evidenced in Carr and Chen’s (2004) framework, in which they propose analysing social exclusion in developing economies in terms of the following elements: identifying aspects of exclusion, the mode of exclusion, and drivers responsible for exclusion, as shown in Table 3.2.

Table 3.2 Variables of social exclusion in developing economies

From What	How	By Whom
Land	Market transactions	Dominant Players
Housing	Policies and laws	State
Other Productive Assets	Social Norms	Private Sector
Credit/Savings	'Rules of the Game'	Civil Society
Secured jobs/ Productive Work		Community
Income		Household
Worker rights / Benefits		Dominant Institutions

Source: Carr and Chen (2004)

Yet the work of both Saith (2001) and Carr and Chen (2004) suggests that exclusion in developing economies may still be categorised by the established dimensions in the developed economies. They are the dimensions of economic (other productive assets, credit/savings, income, land), labour (secured jobs/productive work) and political (worker rights/benefits) exclusion (Burchardt et al., 2001; Giambona & Vassallo, 2013). Therefore, irrespective of geographical location, the flexibility of the concept of social exclusion allows policy-makers to address various themes (Marron, 2013; Saunders, 2008).

Exclusion from credit and savings (Carr & Chen, 2004) falls within the dimension of economic exclusion as already noted above. This allows for the concept of financial inclusion to be discussed within the broader concept of economic in/exclusion, which is a dimension of the wider social in/exclusion concept. Conditions such as the lack of awareness of financial services, low income, poverty and illiteracy (Gattoo & Akhtar, 2015; Sachdeva & Gupta, 2014) have been argued as being some of the factors that result in low levels of financial inclusion and high levels of social exclusion. Although this relationship can be mapped from the literature as has been done, there is limited literature on actual studies conducted in this arena, especially in developing economies, and specifically sub-Saharan Africa.

Pradhan, Mukhopadhyah, Gunasheikar, Samedhan and Pandey (2013), in studying the Asian region, concluded that social and financial development can influence each other

to achieve economic growth. In this relationship, the scholars propose a long-term policy where there is a well-developed financial system and efficient social development system (specifically, with regard to education and health) that can bring about an evolution of the financial sector. Various studies show the links between financial inclusion and social inclusion (including a positive impact on poverty), as well as active participation in economic and social life, and as reduction of income inequality in low-income countries (Kim 2016; Mosley & Steel, 2004).

In this research, financial inclusion is discussed in the context of social in/exclusion. Marron (2013) identifies financial exclusion as one of the subsidiary problems of social exclusion, with its solutions involving promotion of new kinds of access and transformations of individual decision-making with regard to financial products and money (financial literacy). The argument is that excluded individuals need to be equipped with changes that influence their behaviours and attitudes to enable them to be incorporated into the wider society (Marron, 2013).

The extension of the concept of social in/exclusion to developing countries (Carr & Chen 2004) provides the leverage required to discuss financial inclusion within the debate on social exclusion in Ghana. This also means that the skills and attitudes that have been promoted to address social exclusion can be equally used to promote financial inclusion. Sparks & Glennerster (2001) identified education as one skill required to address social exclusion. In line with this, my research considers financial literacy as provided by relevant education as one skill that can be used to address financial inclusion, as supported by Fraçzek, Hintosová, Bacová, & Sivicek (2017). In considering what attitude should best be examined, I chose self-efficacy as it has the potential of creating the confidence in the financially excluded to embrace financial inclusion.

The financial inclusion discourse as examined in this study is presented in Figure 3.1. However, the focus of this research is on the right-hand side of the figure, which is the demand-side barriers. As a result, this research examined the impact of financial literacy (representing a key skill) and self-efficacy (representing a key attitude) as two variables associated with social, economic, and indeed, financial in/exclusion.

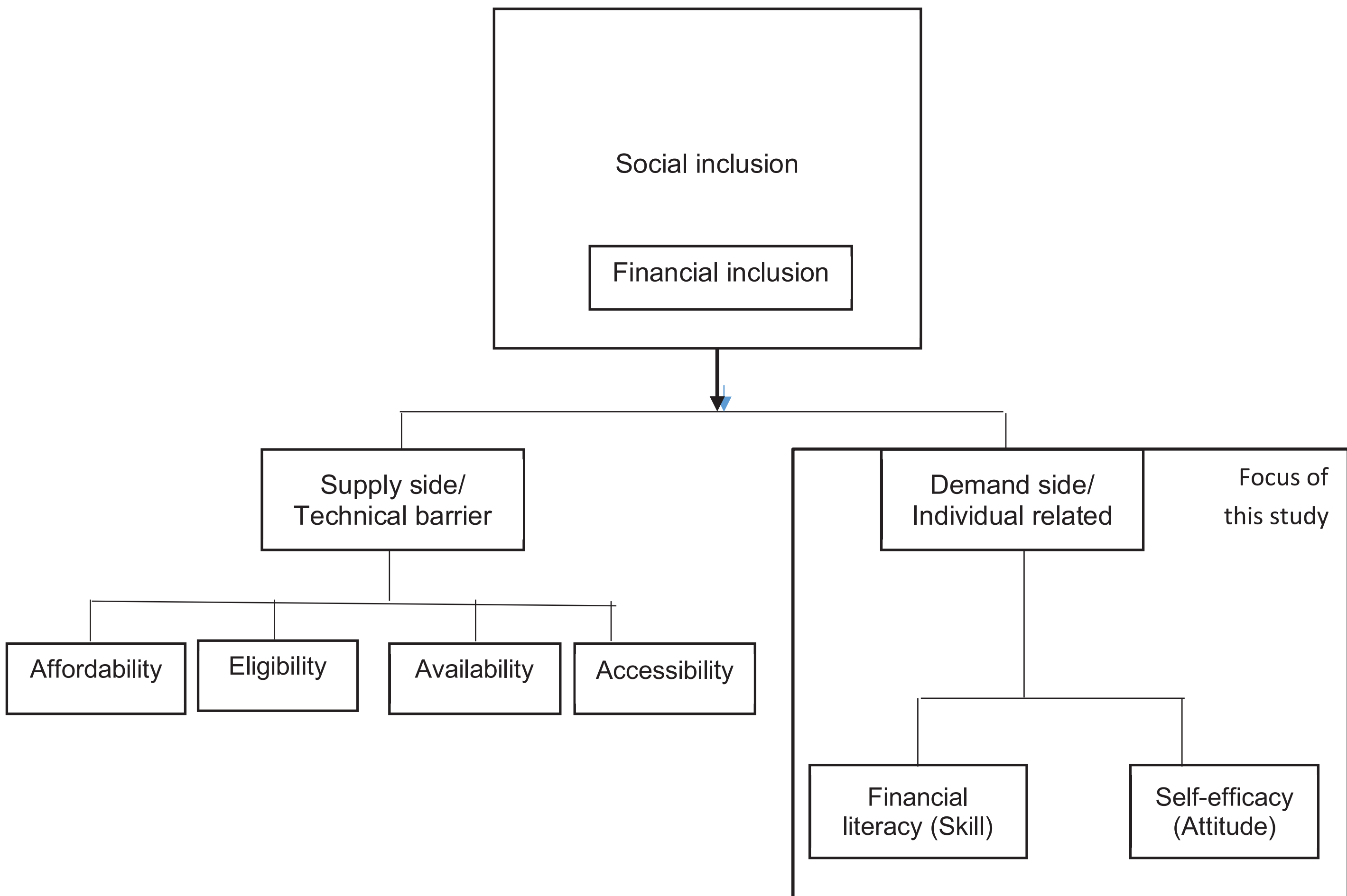


Figure 3.1 Framework of research hypotheses

3.8 Financial literacy—a skill for financial inclusion

Education has been noted as a variable that has a strong influence on access to financial inclusion against the backdrop of the consideration that financial literacy is one of the important predictors of demand for financial services (Cole et al., 2011; Diniz et al., 2012; Johnson & Nino-Zarazua, 2011; Lalrinmawia & Gupta, 2015; Rastogi & Ragabiruntha, 2018). Cole et al. (2011) considers the lack of financial literacy as an important barrier to financial inclusion since individuals may not feel competent to use formal financial services. As a result, this section discusses financial literacy as a skill that can be developed in addressing financial inclusion.

Birochi & Pozzebon (2014) argue that the lack of financial education fosters increased indebtedness because of inappropriate use of resources, and that aggravates social exclusion. There is the notion that parallel to the growth of access to financial services, educational activities are among the most important components in the convergence between emergent new technologies and practices of financial inclusion (Diniz et al., 2012). Thus, whereas financial literacy considers the level of financial knowledge, skills and awareness, financial inclusion considers experience in financial markets, e.g., banks (Fraçzek et al. 2017). It therefore suggests that excluded individuals need to understand the basic financial principles and fundamentals (financial literacy) to enable them participate in the formal financial environment (financial inclusion).

Although increased access and better choices do not automatically lead to effective financial inclusion, one of the important functions of financial literacy, financial education, and financial capability has been identified as helping the individual to use financial products (Astuti & Trinugroho, 2016; Cohen & Nelson, 2011; Murendo & Mutsonziwa, 2016). Financial literacy therefore serves as the channel through which knowledge, skills, and a grasp of the complexities required to make such decisions are acquired by individuals with the potential of improving household financial decision-making and welfare (Cole et al., 2011).

Three definitions of financial literacy are considered for the purposes of this study. Atkinson and Messy (2012) define financial literacy as 'a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being'. Hung, Parker & Yoong (2009) define it as "knowledge of basic economic and financial concepts as well as the ability to use that knowledge and other financial skills to manage financial resources effectively for a lifetime of financial well-being" (p. 12). In the same vein, Bongomin, Ntayi, Murere and Nabeta (2015) define it simply as the ability to make informed judgments and decisions regarding the use and management of money.

Remund (2010) argues that the definitions of financial literacy fall into two categories, conceptual and operational. Conceptual definition explains the abstract concepts in concrete terms (aptitude in managing money, knowledge of financial concepts, ability to communicate about financial concepts, skill in making appropriate financial decisions and confidence to plan), and operational definition converts the concrete terms into measurable criteria (budgeting, saving, borrowing and investing). Thus, the operational definition provides the platform on which the conceptual definition is carried out. This allows for a simplified execution of financial literacy programmes.

The various definitions of financial literacy identify certain key elements. The first hinges on the acquisition of knowledge and comprehension of financial matters. The second relates to the ability to use it in decision-making, while the third is its impact on an individual's well-being. Its acquisition, therefore, has direct influence on the economic inclusion of individuals. As such, Remund (2010) advocates that by converting the four operational definitions of budgeting, saving, borrowing, and investing into measurable questions, the financial literacy of an individual may be assessed. For any effective financial inclusion agenda, financial literacy should be regarded as an integral aspect.

Financial literacy can be developed through financial education. Fraçzek et al. (2017) explain this to include aspects of knowledge and awareness of available financial products. Birochi and Pozzebon (2014) categorise financial education into two major streams, both aiming at enabling the social inclusion of financially disadvantaged individuals:

i. **Instrumental** – Financial education is used to improve the overall efficiency of the financial system. It is based on knowledge acquisition for improved performance, efficiency, and effectiveness. Thus, it targets skills development and training rather than education.

ii. **Transformative/Critical** – In this approach, the aim of financial education is for the individual to achieve financial freedom. Hence, the emphasis is on transforming individuals, as well as the dominant system, by empowering and potentially emancipating them.

Financial literacy has without doubt been identified as one of the drivers of financial inclusion with the ultimate goal of leading to economic development (Cole et al., 2011; Rastogi and Rababiruntha, 2018). Nevertheless, although various scholars argue that financial literacy is necessary in the discussion of financial inclusion, there remains the need for detailed research in identifying the extent of its influence. This is because where attempts have been made, they considered only the existing financial knowledge of the sample selected (Astuti

& Trinugroho, 2016; Johnson & Nino-Zarazua, 2011; Lalrinmawia & Gupta, 2015; Osei-Assibey, 2009).

Thus, what needs to be better understood is what happens when financial literacy is developed through an intervention. The question to be answered is whether financial inclusion can be improved by developing financial literacy. Using Birochi and Pozzeban's (2014) instrumental form of financial education, the intention of the training is to provide financial literacy skills. Given extant evidence linking financial literacy to financial inclusion (Astuti & Trinugroho, 2016; Birochi & Pozzebon, 2014; Cole et al., 2011), hypotheses were derived as follows:

$H1_a$: Individuals who are given bank accounts and a financial literacy intervention will have an **increased knowledge to enable them to engage** with formal financial institutions.

$H1_b$: Individuals who are given bank accounts and a financial literacy intervention will have a significant increase in the **volume of transactions** at the end of six months.

$H1_c$: Individuals who are given bank accounts and a financial literacy intervention will have a significant increase in the **value of transactions** at the end of six months.

Recognising that financial literacy alone may not be enough to address financial inclusion, the next section deals with self-efficacy as an additional requirement to influence the attitude of the individual towards becoming financially included.

3.9 Self-efficacy as an attitudinal aspect of financial inclusion

In addressing social in/exclusion, attitudes are as relevant as knowledge and skills. Marron (2013) proposes that changing behaviours and attitudes of the excluded is an important means to solve the issue of social exclusion. Knowledge, transformational operations, and component skills are necessary but insufficient for accomplished performances (Bandura, 1982). Instead, some human characteristics may make it more likely that positive performances are generated. Self-efficacy is a well-recognised concept from prior literature and has been used in various ways to capture the idea that attitudes matter in affecting outcome, as it is described as a potent variable that serves to enhance performance-based outcomes (Combs & Luthans, 2007; Lown, 2011; Phan & Ngu, 2016).

An efficacy expectation is the conviction that an individual can successfully execute the behaviour required to produce the outcomes as they assess their effectiveness, competence, and causal agency (Bandura, 1977; Gecas, 1989). This reflects an individual's belief that he

or she can actually carry out the actions required to produce an outcome, as it facilitates goal setting, persistence in the face of barriers, recovery from setbacks and effort investment (Lown, 2011). In assessing a classroom intervention for developing self-efficacy, Nelson, Poms and Wolf (2012) concluded that providing knowledge is not enough; in addition, people must possess the belief that they are capable of managing issues.

Self-efficacy affects the individual's choice of activities and how much effort people will expend on taking up challenges, as well as the duration involved in the challenge. It is not a fixed act or simply knowing what to do. Individuals with a perceived strong self-efficacy tend to persist even in the face of challenges, whereas those who cease expending effort prematurely are more likely to persist in lower perceived self-efficacy (Bandura 1977; 1982). People process, weigh and integrate diverse sources of information concerning their capability, and they regulate their choice, behaviour, and effort expenditure accordingly (Bandura, 1977). Importantly, self-efficacy is not a stable state and so can be enhanced (Dannon, Buchs & Desbar, 2012).

Many studies have found a positive correlation between self-efficacy and the successful performance of tasks. For example, in the area of diversity self-efficacy, Combs & Luthans (2007) identified a significant difference between pre- and post- measures between the treatment group and the control group that were given diversity training designed to incorporate sources of self-efficacy. Similarly, Staykovic (1998) also found self-efficacy to be positively and strongly related to work-related performance. Gecas (1989) also highlighted the role of self-efficacy in promoting performance. As part of his conclusions, Gecas (1989) suggested that self-efficacy leads to favourable or beneficial consequences for the individual and society, including better physical and psychological health, cognitive flexibility, better problem solving and coping skills, and higher self-esteem. The strength of an individual's belief in his or her own effectiveness in a particular task therefore has the potential to influence whether or not that person may try to cope with given situations, as self-efficacy for various tasks may be different (Bandura 1977; Nelson et al., 2012).

This is reflected in its various task definitions. For instance, Combs and Luthans (2007), define diversity self-efficacy as the perception and belief (confidence) that one can marshal the necessary motivation and cognition, and successfully attain desired diversity goals and initiatives in the workplace. In another setting, MacPhee, Farro and Canetto (2013), define academic self-efficacy as confidence in one's ability to accomplish academic tasks as well as affect educational and occupational interest and expectations.

In the area of financial self-efficacy, Mindra and Moya (2017) define it as the confidence that individual financial consumers require to use formal financial services available to them to make their lives better. Lown (2011) developed the financial self-efficacy scale, the purpose of which was to develop a measure of self-efficacy specific to financial behaviour, under the argument that self-efficacy measurements need to be domain specific. However, all these definitions, irrespective of the area of interest, have in common one attribute—confidence. This then translates into confidence in the individual to perform a particular task. Bandura (1977) identified four major strategies through which individuals develop self-efficacy. The premier source is enactive/performance accomplishment, which is followed by vicarious experience. The third is verbal persuasion, and the final source is emotional arousal. MacPhee et al. (2013) also suggest that learning from vicarious experiences in a social context, together with verbal persuasion from powerful others, also enables individuals to develop competence in various domains. In recognising these sources of developing self-efficacy, any attempt to develop it in relation to financial inclusion needs to ensure that resources are directed in the right proportions to generate competencies at the various levels.

The relationship between self-efficacy and financial inclusion has recently been studied and by Mindra and Moya (2017) using Lown’s scale as one of their tools. In their study, they identified financial self-efficacy as having a significant mediating effect between financial literacy and financial inclusion. In addition, Mindra and Moya (2017) also inferred that financial self-efficacy mediates the relationship between financial attitude and financial inclusion. Thus, they justify from their study in Uganda that financial literacy, stimulated by the level of confidence an individual has in deciding on their integration into the formal financial system, contributes towards achieving financial inclusion, leading to a positive change. However, their study, as indicated in their limitations, considered a point-in-time data collection as well as a mixture of actual and potential financial service users. Although a more robust engagement with this concept is necessary, the evidence suggests that financial self-efficacy can be considered in deliberating on the demand-side factors associated with promoting financial inclusion. I therefore, propose the following hypotheses in my research:

$H2_a$: Individuals who are given bank accounts and a self-efficacy treatment will have **an increased knowledge and confidence to enable them to engage** with formal financial institutions.

$H2_b$: Individuals who are given bank accounts and a self-efficacy treatment will have a significant increase in the **volume of transactions** at the end of six months.

$H2_c$: Individuals who are given bank accounts and a self-efficacy treatment will have a significant increase in the **value of transactions** at the end of six months.

3.10 Financial literacy and self-efficacy

In developing his self-efficacy theory, Bandura (1977) recognised that expectations alone may not produce the required performance if the component of capabilities is lacking. Studies over time have also treated self-efficacy as a complement to an individual's knowledge, skills, and capabilities (Combs & Luthans, 2007; Komarraju & Nadler, 2013; Staykovic, 1998). Nelson et al. (2012) suggests that individuals with higher self-efficacy pursue activities related to the knowledge and skills they have developed. This agrees with Bandura (1977), who notes that, given appropriate skills and adequate incentives, efficacy expectation is a major determinant of people's choice of activities and the effort put into those activities, as well as the sustainability of those activities where necessary. Scholars also advocate that it is important to develop self-efficacy for every particular skill set, such that we have academic self-efficacy (Macphee et al., 2013), efficacy beliefs related to ethics and diversity (Nelson et al. 2012), and self-efficacy relating to particular job descriptions (Staykovic, 1998). Following from the above, this study suggests that financial inclusion is more likely to result when an attitude of self-efficacy provides an individual with confidence to apply the skills obtained from financial literacy. Thus, the final hypotheses of this research propose that financial literacy and self-efficacy will positively interact:

$H3_a$: Individuals who are given bank accounts and both financial literacy and self-efficacy training will see an interaction effect between the two types of interventions so that they will have **an increased knowledge and confidence to enable them to engage** with formal financial institutions.

$H3_b$: Individuals who are given bank accounts and both financial literacy and self-efficacy training will see an interaction effect between the two types of interventions so that they will have a significant increase in the **volume of transactions** at the end of six months.

$H3_c$: Individuals who are given bank accounts and both financial literacy and self-efficacy training will see an interaction effect between the two types of interventions so that they will have a significant increase in the **value of transactions** at the end of six months.

3.11 Conclusion

The literature review considered existing literature with respect to financial in/exclusion and social in/exclusion. The two concepts were reviewed independently and the linkages between them discussed, leading to the identification of financial literacy as a skill and self-efficacy as an attitude that would enhance the likelihood that an excluded individual would engage and use formal financial services and products. The hypotheses were then drawn out from the various discussions. Figure 3.1 presents a

diagrammatic representation of this review. The next section outlines the methodology that was used to test the various hypotheses.

4 RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

I required an appropriate methodology to test the hypotheses identified against the background of the literature review in Chapter Three. In this chapter, the research design and methodology are presented. The chapter is organised into several sections. The section below discusses the research perspective, and it is followed by a section discussing the methodology. Sections 4.4 to 4.7 discuss the population and sample validity, variables for the study, data collection, and its analysis. The chapter considers the quality and ethics of the research in section 4.8, with the conclusion in section 4.9.

4.2 Research perspective

This research proceeded from a positivist perspective and employed a quasi-experimental design to determine the impact of financial literacy and self-efficacy on financial inclusion. It embraced both a subjective and an objective dimension in the enquiry. Holden and Lynch (2004) define the major goal of objective research as the identification of the causal explanations and fundamental laws that explain regularities in human social behaviour. In addressing the objective dimension of the research, I employed quantitative methods, specifically a quasi-experimental design to enable the identification of the causal relationships as hypothesised. The goal of subjective research is to identify the meaning of a social phenomenon rather than its measurement (Holden & Lynch, 2004). The research gathered data from two sources. First, the actual usage of the bank account was obtained from the bank. Second, I adopted a pre-intervention/post-intervention survey format. This was chosen to provide a comparison of participants' view of their financial self-efficacy prior to the various training interventions and after. Also, information was sought on the effectiveness of some aspects of the training and reasons accounting for non-usage of the bank accounts, to identify the behaviour and perceptions of the participants.

4.3 Research Methodology

4.3.1 Quantitative Methodology

My research proceeded on the argument that there is a causal relationship between the independent variables and the dependent variable. This allowed the research to focus on the nature of the relationship between key variables as well as considering whether

or not the causal factors had been properly identified (Durand & Vaara, 2009). The hypotheses of the research were that the independent variables of financial literacy and self-efficacy have a significant influence on financial inclusion. Thus, the study investigated the cause-and-effect relationships between these variables. To test these hypotheses, the study adopted a causal design, which represented an inferred cause-and-effect relationship to enable the effect of the treatment to be identified as well as allow a test of its significance (Imai, Tingley & Yamamoto, 2013). This allowed for the manipulation of the independent variables to be able to test for causality.

Several conditions need to be met when making use of a causal research design. The first condition of concomitant variation refers to the relationship between the independent variable and the dependent variable as predicted by the hypotheses. To address this condition in the research, the hypotheses were formulated to state the relationships being studied explicitly as this was essential to provide a clear focus (Rubin, 2005). Thus, the relationship was to identify the impact of financial literacy and self-efficacy interventions on financial inclusion. The second condition is associated with the time order of occurrence of variables, where the requirement is that the intervention occurs either before the event being observed or during the event, but not after. In my research, the treatment was planned to occur during the timeframe of the study. It was designed in such a way that the training sessions on financial literacy and self-efficacy occurred at intervals within the six months when participants were being observed. The final condition is the elimination of other possible causal events such that extraneous variables are identified and mitigated, and the independent variable remains the only possible causal explanation.

4.3.2 Research design

The study area, study period, sources of data, method of data collection, population and sample for this research are discussed below.

Study Area – The research was conducted within rural communities surrounding four towns spread across three regions in Ghana. This was to reflect the demographics that the majority of the unbanked in Ghana are in the rural communities. I selected communities that were mostly far apart to avoid contamination, while ensuring that they shared similar characteristics, including economic activity, income levels and age. Table 4.1 shows the various communities surrounding each of the towns.

TABLE 4.1 Study area: towns and surrounding communities of participants

Sefwi Wiaso	New Edubiase	Assin Fosu	Sefwi Asawinso
1. Nsuonsua	1. Dotom	1. Assin Dompim	1. Aboagye Kurom No.2
2. Asanteman	2. Tweapease	2. Homaho	2. Kama
3. Kramokrom	3. Subriso	3. Amoakrom	3. Adjei Kurom
	4. Siana	4. Asuoankomaso	
	5. Tankwase No. 2	5. Doriyem	
	6. Camp No. 1	6. Atwereboana	

Study Period – The study period was over six months. The questionnaire was administered prior to the various interventions and then within six months, when the study was over. As explained in greater detail later, there was a misunderstanding with the control group, and the data gathering from the survey group was delayed. This allowed me to get objective data from the bank for about a year.

Source of data – The quantitative methodology involved analysing data from both primary and secondary sources over a total of six months. One source of data was from a survey to provide a reflective view from the participants. This was conducted on all participants before and after the interventions. With the survey, the intention was to measure whether participants reported an improvement in their financial self-efficacy following the various interventions with respect to their new knowledge on financial literacy, as well as their developed self-efficacy.

The second source of data was secondary data collected directly from the bank accounts of the research participants. The dependent variable of financial inclusion was measured by the actual usage of the bank accounts of individuals once they had received them. This was done by considering the value and volume of transactions (further discussed in section 4.5). The independent variables were the two constructs of financial literacy and self-efficacy (see section 4.6). This two-source quantitative data collection and analysis is not new to research in financial inclusion (Astuti & Trinugroho, 2016; Prina, 2015;).

Method of data collection – This research relied on both primary and secondary data. The primary data collection was through a survey consisting of six questions, with each question having five possible responses using the Likert-type scale (Appendix I)

developed by Lown (2011) from the General Self-Efficacy Survey to measure self-efficacy specific to financial behaviours. The scale was tested by Lown (2011), and it demonstrated internal consistency by recording a Cronbach alpha of 0.76. Although the original scale is scored from 1 “Exactly True” to 4 “Not at all True”, in this research, a score of five, from 5 “Strongly Agree” to 1 “Strongly Disagree”, with 3 representing a neutral response, was used, as odd-numbered Likert scales provide an option for neutrality or indecision (Croasmun & Ostrom, 2011). Lown (2011) proposed the use of this scale in a pre-intervention/post-intervention scenario where treatment is provided to assess whether financial self-efficacy has improved. In their study to examine the individual financial consumer’s financial self-efficacy in Uganda, Mindra and Moya (2017) also adopted this scale. In addition to the completion of this survey at the post-intervention stage, further questions were asked on the impact of the intervention on financial literacy and also the usage of the bank accounts.

The surveys were conducted in person as well as using telephone interviews. During the process, conversations were also conducted with the participants, and their comments noted. Although the qualitative data gathering in this process did not meet the robustness criteria for qualitative research, the comments of participants were nonetheless useful in making sense of the data.

For the secondary source of data, each participant was provided with a bank account upon giving consent to participate in the research. The bank account product that I chose had been developed by the bank with the intention of promoting financial inclusion. The account had minimum account-opening requirements and was already being used by the bank for their financial inclusion programmes in banking people in rural areas in the North and West of Ghana. Among the features of the bank account product were that: (1) it required very minimal KYC requirements (a national identification card was the only document required for account opening); (2) it was easy to open, as bank officials open the accounts in the field without customers needing to visit a bank branch; (3) the bank had agents located within communities where customers could undertake the basic transactions of depositing money and savings; (4) the bank account had a mobile money feature that allowed customers to carry out transactions within their bank accounts; and (5) it had relatively affordable bank charges at GH¢5 ($0.01).

The purpose of choosing this product for my research was to ensure that the research reflected real-life scenarios to a large extent. With the consent of the participants, data

were collected from the bank accounts, including the number and dates of transactions and their value as represented in the Ghanaian currency (Ghana Cedi [GH¢]). The information from this secondary data was collected over a period of six months and analysed to identify the extent of financial inclusion as measured by the usage of the bank accounts that had taken place as a result of the interventions.

Population – The population of this research comprised individuals living within the communities identified. The inclusion criteria were young people, 18 to 34 years old, who did not have a formal bank account at the onset of the study. This was very representative of the population structure of the Ghanaian economy where 33.60% of the population are between the ages of 15 and 34 years (Ghana Statistical Service, 2019). These were all individuals willing and able to work, living within the rural communities. They were selected for the research and had been engaged by an NGO to receive agricultural training with emphasis on the cultivation of cocoa. They engaged mainly in cocoa farming, although some were also engaged in other economic activities. The output of their various economic activities was typically sold to merchants who paid them in cash. Therefore, each of these participants received an income. This research was premised on the assumption that as these individuals had an income, they had the potential to use formal financial services to enable them to better manage their financial resources. The exclusion criteria were individuals less than 18 years and more than 34 years old, and those between 18 and 34 years who already had a bank account.

Sampling – There was no formal list available for this group of individuals that could be used as a sampling frame. However, the NGO had a list of farmers they were engaging with in rural communities around four different towns. To ensure experimental conditions, I sought comparable settlements that would have no contact with each other. Thus, each town represented a distinct group in this research. The intention was to recruit a minimum of 320 participants without bank accounts, with each group having a minimum of 80. The measurement of the objective dependent variable, after having obtained consent from the individuals in the sample, was obtained from their bank accounts. I chose the sampling unit of a participant in the community of interest.

4.3.3 Research approach

Experimentation allows for the manipulation of the various independent variables. Various studies in multiple fields have employed experimental designs, especially in causal-related studies (Cole et al., 2011; Combs & Luthans, 2007; Prina, 2015). However, instead of a true experimental design, this research used a pre-

intervention/post-intervention quasi-experimental design with a control group. I chose this because it was difficult to control all the variables. I did, however, attempt to control most of them to ensure that the research displays the characteristics of a true experiment as far as possible (Chawla & Sondhi, 2011; Ellis & Levy, 2009).

This quasi-experimental research was a field experiment rather than a laboratory experiment in that all the individuals in a community received the same interventions, but interventions differed between communities. Four geographically distant different communities were selected for the four groups in the sample receiving different treatments. However, each group involved individuals living within the same community. As a result, there was a high probability that respondents would actively interact among themselves, thus making it difficult to prevent contamination as would be required under a true experimental design. The study therefore compromised on randomisation.

The field experimental methodology allowed for the creation of interventions and exogenous variation to identify causal relationships in a natural setting (Chatterji, Findley, Jensen, Meier & Nielson, 2016). It was conducted in the natural setting of the community without isolating the individuals from their day-to-day activities. Although this could have resulted in high levels of realism leading to a possible lack of control of the independent variables and problems with internal validity, it enhanced external validity (Hair, Bush & Ortinau, 2009). Therefore, measures were taken to ensure internal validity as discussed in section 4.4.1.

The participants in the research were classified into four groups, representing three treatment groups and one control group. At time T1, which represented the commencement of the study, all group members were provided with a bank account. In addition, the survey was administered to all participants in the study for a self-assessment on financial self-efficacy.

A month after this (T2), the value of transactions, which was measured as the value of deposits in Ghana Cedi, was recorded. The volume of transactions, which represented the number of times individuals accessed their accounts, was also measured. At this point also (T2), the respective treatments in the form of training in financial literacy and self-efficacy were provided. These involved classroom sessions on financial literacy and self-efficacy development, and were administered by facilitators with the needed expertise. The interventions consisted of discussions, lecturing sessions, illustrations,

question and answer sessions, and practical sessions. The language of instruction was the local language. The training sessions were provided as indicated in the pattern below.

Those in the first group (Group A) were given treatment in the form of training only in financial literacy. Participants in the second group (Group B) were given treatment in the form of training only in self-efficacy. The third group (Group C) received treatment in the form of training in both financial literacy and self-efficacy. Finally, participants in the fourth group (Group D)—the control group—did not receive any treatment on financial literacy or self-efficacy. However, they had a training session on agricultural practices in the cocoa-growing industry.

After a period of five months after the treatment, during which participants went about their daily activities and it was expected that they would use their bank accounts, at time T6, the value and volume of transactions from T2 to T6 were measured. In addition, the survey administered at the commencement of the research was administered again, together with additional questions on financial literacy for those who had it as a treatment. Also, participants answered questions on their use or otherwise of their bank accounts. The research design is presented as follows:

GROUP	T_1	T_2	T_6
TREATMENT (A)	O_1	X_1	O_2
TREATMENT (B)	O_3	X_2	O_4
TREATMENT (C)	O_5	X_1X_2	O_6
CONTROL (D)	O_7		O_8

Where: O_1, O_3, O_5, O_7 represent the pre-intervention phase of the research where no group has been introduced to any training.

X_1 = Financial literacy training

X_2 = Self-efficacy training

O_2, O_4, O_6, O_8 represent the post-intervention phase of the research after the various stages of training have taken place.

4.4 Validity

Validity refers to the extent to which conclusions drawn from research reflect the truth and generalisation is possible (Roe & Just, 2009). Assessing the validity of this research was thus important in both the field experiment and the survey, as it determined whether or not the findings can be relied on and can be generalised. In the case of the survey, using SPSS, the Cronbach alpha coefficient was computed and reported to determine the internal consistency reliability (Croasmun & Ostrom, 2011). Values above 0.70 were considered as indicating a strong internal consistency. With respect to validity in the field experiment, the two main types, namely internal and external validity, were considered and addressed as discussed below.

4.4.1 Internal validity

Internal validity allows for the conclusion that observed correlations in research are related (Roe & Just, 2009). The use of field experiment rather than laboratory experiment exposed my research to challenges of internal validity. Therefore, the successful control of extraneous (confounding) variables (variables that naturally exist in the environment that may have some systematic effect on the dependent variable) was necessary in ensuring the internal validity of the research. As a result, the methodology was designed to enhance the internal validity by addressing its various aspects, including history, maturation, testing effects, and mortality, to allow for valid conclusions about the effects of the treatment on the dependent variables. The extraneous variables with an impact on the internal validity of this research were addressed as follows:

History – This refers to specific events external to this research but occurring at the same time as this experiment (Malhotra, 2010). In this instance, the fact that the sample was composed mainly of farmers, as well as the six-month duration of the data gathering phase, increased the possibility of events occurring that could affect the result. In the farming environment, this could include the effects of the year's harvests and other unpredictable environmental occurrences. The strategy to limit this effect was to select each group in the entire sample from similar communities. As a result, if there was any such external event, it was experienced by all.

This strategy did have some negative consequences in terms of sample size, when participants from two communities in Assin Fosu experienced the death of an important community member the day before the pre-scheduled post-intervention data gathering

event, thus negatively impacting the participation rate. However, because the effect was felt across the community, data integrity was maintained.

Maturation – This refers to changes in the individuals because of the passage of time (Malhotra, 2010). These might include boredom, tiredness, lack of interest, and aging. As the research was over the duration of six months, the risk of maturation was high. As an approach to limiting maturation, the research revolved around the day-to-day actual activities of the individuals, with the expectation that it would thus not be significantly disruptive of their daily lifestyle. Moreover, the bank account was intended as a resource with which participants could engage, but they were not in any way required to engage with it.

Testing Effects – This extraneous variable presents itself in two scenarios in research (Malhotra, 2010). The first is when a prior observation affects a latter observation, and the second is when a test unit's response affects its response to the independent variable (Malhotra, 2010). The pre-intervention phase of the research might have caused the individuals involved in this study to change their behaviour mainly because they knew they were being observed.

Secondly, especially with the groups to be granted the various trainings interventions, there was the tendency for them to change their behaviour simply because they are being monitored. The strategy adopted to mitigate this effect was as follows:

Following consent from the individuals of the sample, the collection of data was primarily from the activities on the bank account domiciled with the bank. As a result, after the pre-intervention survey, there was minimum interaction with the participants until after six months when the post-intervention survey was administered. This was to ensure that the participants did not have the researcher constantly present with them, so that the tendency to impress was minimised.

Mortality – This refers to the loss of the research participants (for any reason) over the duration of the study (Malhotra, 2010). To address this, it was envisaged that because the research participants are domiciled within the community of study and were engaged in the business of farming, they are relatively stable. It was anticipated that their ties to the community through their economic activities would minimise their departure from the community. However, there was attrition of participants as seen from the number of participants who were available when the second questionnaire administered. Because

the initial number of participants selected was quite high, statistical analysis could still be conducted on those who remained.

The other extraneous variables of instrumentation, statistical regression, and selection bias (Malhotra, 2010) were also considered. However, their influence was considered as minimal in this study. In the area of instrumentation, the same questionnaire was used for both the pre-intervention and post-intervention surveys, thus eliminating effects due to changes in the survey instrument. In the case of selection bias associated with improper assignments to the various interventions, the sample elements chosen shared similar characteristics.

4.4.2 External validity

External validity is the capacity to generalise research conclusions to a larger population with regard to such issues as the individuals involved, their settings, and the time of the research (Roe & Just, 2009). Several factors thus influence external validity. The population defined for the study may be different from the population for which the results are to be generalised. Further, the environment of the study may be different from the generalised environment. Finally, results obtained at a particular time may not be applicable at another time. For instance, results gathered in one season may not apply to another season.

In my research, the threat of external validity was mitigated using field experimentation. As Roe and Just (2009) noted, field experiments are conducted in situations independent of the researcher's intervention even though manipulations through treatments influence the ecology of the setting. Thus, unlike laboratory experiments, substantial context remains, which helps mitigate against these threats to external validity.

In conclusion, this use of a pre-intervention/post-intervention quasi field experiment methodology is one way of ensuring that a study has a balance between its internal and external validity due to the ability to use a well-designed manipulation in a naturally occurring context (Roe & Just, 2009). In addition, the fact that 33.60% of the Ghanaian population are within the age bracket used for this research enhanced its external validity (Ghana Statistical Service, 2019).

4.5 Dependent variable

The study had one main objective dependent variable (y); financial inclusion expressed as the usage of a bank account. The literature identifies regularity, length of time and frequency of use of the formal financial service as relevant dimensions when measuring usage in the context of financial inclusion (Demirguc-Kunt & Klapper, 2012). For the purposes of this research, the number of times an individual uses his/her bank account was used in conformity with the dimensions of usage. Also, Sarma (2008), in developing a measure for inclusiveness of the financial sector of a country used the volume of credit plus deposit relative to GDP to measure the usage of a formal service. For my research, this measure was adapted with the focus on the value of transactions channelled through the individual's bank account. The measurement of this dependent variable, with consent from the individuals in the sample, was obtained from their bank accounts' details. Table 4.2 provides the measurement of the dependent variable.

Table 4.2 Objective measures for the dependent variables

Description	**Unit of Analysis**	**Source of Information**
$\mathbf{Y_1}$ = Value of transactions as measured by total amount of deposits made by a participant	Ghana Cedi	Bank
$\mathbf{Y_2}$ = Volume of transactions per month carried out by a participant.	Number of deposits and withdrawals per month.	Bank

4.6 Independent and control variables

The conditions experienced by the various groups were manipulated by the provision of different types of training as per the hypotheses. In addition, several other variables had been considered where the measurements of financial inclusion were concerned, including gender, educational attainment, type of housing, household income, employment, and age (Devlin, 2009). These were statistically controlled for after including questions about these elements in the survey.

4.7 Data analysis and interpretation

The aim of the quantitative analysis was to test for the existence and strength of the causal relationship between the provision of different types of training to enhance

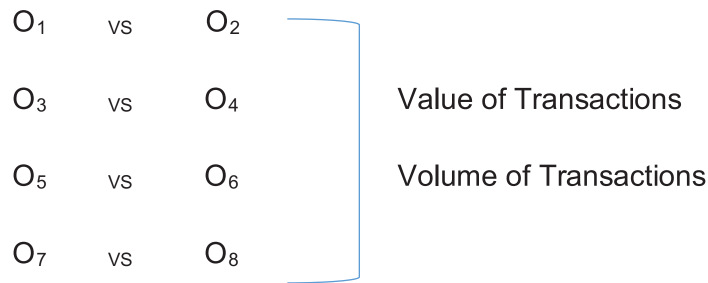
financial inclusion as represented by the dependent variable. Because of different start times of groups, I collected data for a period of over 12 months. The data analysis was, however, restricted to the first six months of account usage in line with the time frame of the methodology. The data from the measurements of the value and volume of transactions were then analysed using descriptive analysis, paired sample t-tests, one-way ANOVA, and hierarchical multiple regression as discussed below.

4.7.1 Descriptive Statistics

The initial analysis involved descriptive data gathered from the consent forms, the survey, participants, and the data collected from the bank. These included means, standard deviations, and frequencies, and allowed for the data sets to be summarised as well as any emerging patterns and trends to be identified. This was carried out on the variables of age, volume and value of transactions, educational attainment, and type of housing. In the case of the survey, Boone and Boone (2012) recommend that the mean is calculated for central tendency and standard deviation for variability where the series of questions, when combined, measure a particular trait.

4.7.2 Comparing pre- and post-intervention results

Comparison of the pre-intervention/post-intervention results was carried out on the survey. In testing the hypotheses of the experiment, a paired samples t-test was used to determine whether there were significant differences between the pre- and post-intervention results for each of the three dependent variables (measuring financial inclusion) with respect to each intervention undertaken. Furthermore, a one-way ANOVA test was performed to determine whether significant differences existed between the results for each of the three dependent variables (collectively constituting financial inclusion) between the groups exposed to the different treatments. These techniques allowed me to determine the effect of the interventions. The paired samples t-test was used to explore the differences between pre- and post-intervention results of the various groups against the value and volume of transactions as indicated below as per each hypothesis:



The one-way ANOVA was also used to test the difference between pre-interventions as well as post-interventions of the hypotheses as indicated below.

Pre-intervention O_1 vs O_3 vs O_5 vs O_7

Post-intervention O_2 vs O_4 vs O_6 vs O_8

4.7.3 Predicting financial inclusion

A hierarchical multiple regression analysis was used to determine whether the proposed predictors (X_1 and X_2) do, in fact, predict the outcome variables (constituting financial inclusion) as hypothesised while controlling for a number of other variables in the model. Thus, X_1 and X_2 were treated independently while in the case of the hierarchical multiple regression, $X_3 – X_7$ were controlled for as one model. This was replicated for volume of transactions per month.

4.8 Quality and ethics

It is important to put ethical procedures in place before the commencement of research. Richards and Schwartz (2002) recommend that the researcher obtain consent from participants while also ensuring confidentiality. Therefore, consent of the participants was obtained, after which they were recruited. Secondly, I required consent from participants to allow for their bank accounts to be monitored. Another aspect of ethical concern was the training programme. The design of the research implied that initially, some participants would not benefit from some aspects of the programme, i.e., financial literacy and self-efficacy training. However, since the training programme was part of the NGO's programme of activities, after the six-month cycle of the research, all participants were given the opportunity to participate in all training interventions. For instance, participants that received only self-efficacy training received financial literacy training, and vice versa.

Another area of ethical concern was the role of the partners in the research. I relied on an NGO to provide the training to the participants. As a result, there were concerns

relating to its quality and effectiveness. Discussions and consultations were held with the NGO on the content and modality of training. This provided assurance on the adequacy of the training being provided.

4.9 Conclusion

The methodology employed for this research was a pre-intervention/post-intervention quasi-experimental design. Descriptive analysis was carried out on the data set using means, standard deviations, and frequencies to identify patterns and trends. Paired sample t-tests and one-way ANOVA was used to analyse the pre-intervention and post-intervention results. The next chapter presents an account of the execution of the methodology.

5 Executing the research methodology

5.1 Introduction

The research design presented in Chapter 4 was implemented in phases. This chapter provides a detailed description of each phase. In the following section, 5.2, I describe the processes involved in the pre-intervention phase during which participants were recruited and the initial questionnaire administered. Section 5.3 presents the post-intervention phase, representing the period after the various trainings had been administered. This includes the period during which interviews were conducted. Section 5.4 discusses the challenges associated with implementing the research methodology, and section 5.5 discusses its benefits. Section 5.6 outlines the lessons learnt and the final section concludes the chapter.

5.2 Pre-intervention Phase

The first action taken during this phase involved meeting with officials of the NGO to determine the choice of the communities to be used for the research. Critical considerations were to ensure that the communities shared similar characteristics and that I could communicate in the local languages of these communities. Another consideration was to minimise any cross-contamination that might arise between the communities to influence the participants. I selected communities surrounding four towns spread across three regions in the country: Assin Fosu, New Edubiase, Sefwi Wiaso and Sefwi Asawinso. Their locations in relation to the research base are shown on Map 5.1.

Map 5.1 Map of Ghana showing the communities used for the research

5.2.1 Communities for research

Rural communities surrounding these four towns were selected for the research. All the towns were sited in districts with at least two-thirds of the population domiciled in rural areas. The communities are all involved in growing cocoa, and all the participants were part of an ongoing capacity-building programme for youth in agriculture. This uniformity implied that the participants shared some basic similarities. Table 5.1 shows the similarities of district and rural population numbers, based on the 2010 population census in Ghana.

Table 5.1 Population statistics of towns used for research as per 2010 National Population Census

No	Town	Region/District	Population per District	Rural Population per District
1	Assin Fosu	Central /Assin North	161,341	103,631
2	New Edubiase	Ashanti /Adansi South	115,378	96,412
3	Sefwi Wiaso	Western /Sefwi Wiaso	139,200	89,375
4	Sefwi Asawinso	Western /Sefwi Wiaso	139,200	89,375

Source: Ghana Statistical Service, 2012

Although Sefwi Wiaso and Sefwi Asawinso fall within the same district and appear to be relatively close, the communities surrounding the two towns are distinct and have a considerable distance between them.

Following the identification of the towns, each of the four community-resident programme coordinators of the NGO were informed of the choice of their communities as part of this research. Telephone meetings were conducted with each of them to discuss their roles in the mobilisation of participants. I then arranged and communicated the dates for visiting each town to recruit participants in consultation with the resident programme coordinators.

Dates were selected so as not to coincide with market days and key farming days, and also to ensure that prospective participants turned up for the recruitment exercise. After extensive discussions, the research team visited the chosen communities Assin Fosu and New Edubiase in March 2018, and Sefwi Wiaso and Sefwi Asawinso in April 2018. Since participants were from communities some distance away from these towns, travel arrangements were made to convey them to a central meeting point in each town.

The intention was to recruit at least 80 participants for each town, so a minimum of 100 people were contacted per area. All participants had to be at least 18 years old, as that is the minimum age to be considered for an individual bank account. As part of the recruitment process, the requirement was that each person provided a valid national identity card (driver's licence, voter's registration card, valid national health identification card or passport) and a mobile phone that allowed for Mobile Money Service. This was the basic requirement to allow for account opening.

5.2.2 Recruitment of participants

In each area, the team encouraged participants to arrive by 8 am to ensure an early start and prevent a late closure. It was anticipated that those closest to the town would arrive early and be attended to while ensuring that those who lived farther away would be attended to early enough when they arrived so that they would be able to arrive back in their communities before sunset. This was largely achieved, as for all towns there was a sizable number of participants present by 8 am on the day. The recruitment process for each town started as soon as a group of about 20 people had gathered. The participants were then informed that the purpose of the gathering was to recruit people to participate in a research project on the banking characteristics of individuals. This was explained in the local language for participants to understand the research and their role.

A detailed explanation of the research, the need for consent from the participants, the questions and the account-opening form and associated documentations were all provided in the local language. At this stage, participants were invited to ask questions to seek any clarification. Any participant who did not want to be a part of the research was given the opportunity to excuse themselves, although they could still open a bank account. This aspect of the recruitment process was repeated periodically during the day to ensure that each participant was adequately informed of the purpose of the gathering.

After this, the actual recruitment exercise commenced. The set-up was done such that each participant first visited the research table. At this point, they were once again taken through the consent form individually in the local language. When they confirmed that they understood their role in the research, they granted their consent either by signing or thumb-printing. After this, they were taken question by question through the questionnaire in the local language and their answers recorded. After this, participants moved to the desk of the bank to provide account-opening information and documentation to enable the bank to open an account for them. At this stage, they

provided their national ID card to the bank officials, who after confirming their validity, took the details required and took a photograph to complete the account opening form.

5.2.3 Challenges associated with recruitment

The exercise encountered general challenges in each of the towns. The first was the fact that although word had gone around that all participants should come along with a national ID, some turned up without an ID or showed up with an expired ID. The second was that some participants did not arrive with a mobile phone or did not have one at all. Accounts could not be opened for these two categories. In all communities the lack of a national ID and a mobile telephone led to a reduction in the number of participants that could be recruited, as indicated in Table 5.2. This is noteworthy, because it suggests the continued importance of the some of the technical barriers to financial inclusion where technology is needed. It is, therefore, considered that this research was conducted on a sub-set of the targeted population. Although the requirements may appear limited, they nonetheless presented real barriers.

Table 5.2 Number of participants recruited against number of potential participants

Town	Participants who Turned up	Participants Recruited
New Edubiase	104	61
Assin Fosu	96	70
Sefwi Wiaso	95	46
Sefwi Asawinso	89	62
TOTAL	**384**	**239**

Source: Field Survey (2020)

The third challenge faced was the long queues at the account-opening stage. Due to the low level of literacy among the participants, a lot of time was spent on each participant as the questions in the various fields on the account-opening forms were translated into the local language. Once again, this underlined how much assistance was needed for the apparently straightforward process of opening a (simplified) bank account.

5.2.4 Account opening and training

The methodology of the research required the participants to receive the various training interventions one month after the accounts had been opened. The interventions were planned as follows. Participants at Assin Fosu received training in both financial literacy and self-efficacy. Participants in New Edubiase received training in self-efficacy only, and those at Sefwi Wiaso, in financial literacy only. Participants at Sefwi Asawinso were the control group and as such they were given no training in financial literacy and self-efficacy. However, they were provided training in other areas associated with farming techniques in the cocoa growing industry. Following the recruitment of participants at New Edubiase and Assin Fosu, bank accounts were opened for successful participants by end of May 2018. The training on self-efficacy was conducted for participants at Assin Fosu and New Edubiase after their recruitment. This was based on the curriculum of the NGO.

The themes considered during the self-efficacy training sought to give participants some skills and tools to complement their existing skill set and provide them with additional self-assurance. The expectation was that this would enable them to engage in banking activity with some confidence as they would have enhanced their competencies. The intention was to allay any misconception that banking is for a particular type of person, and also provide them with the assurance that they are well qualified to engage in banking. Another objective was geared towards providing participants with the understanding that their economic activities, although primarily informal, were important and were to be considered as business activities. In achieving these objectives, the following themes were considered during the training: myself, my world; learning to live together, money and resources, and farming as a business, as well as foundation skills. These sessions were conducted interactively with participants, allowing for sharing of personal experiences.

In August 2018, officials from the bank organised the training in financial literacy for participants at Assin Fosu. The financial literacy training was focused on the basics of finance. Among the areas of learning participants were taken through was the concept of savings, with emphasis on developing the habit of saving, irrespective of the amount, aiming at specific time periods with set targets. Another area was investment, where participants discussed the concept of putting money in specific enterprises, and this was linked with the concept of savings. The keeping of financial records of businesses and its relevance in business, basic financial planning, and budgeting prudently for one's

activities were also discussed. The methods of training were mainly discussions and question-and-answer sessions.

There were delays in the opening of the bank accounts for the participants at Sefwi Wiaso and Sefwi Asawinso. They were not opened until July 2018. This resulted in a delay in providing the training in financial literacy at Sefwi Wiaso, as well as in monitoring the use of the bank account in the two towns. However, the training was conducted in October 2018 by representatives of the bank.

Although the bank accounts were opened for the participants at Sefwi Asawinso, the information was not communicated to their programme coordinator. Instead, the bank (as per normal procedure) sent text messages informing individuals of the fact that a bank account had been opened for them. Several of the participants confirmed having received the bank's communication. However, they did not consider it as an indication that they had bank accounts as their coordinator had not informed them. As a result, there was a delay in the research as they had to be given the same time to use the bank accounts as required in the methodology.

Following the successful recruitment and opening of bank accounts for the participants, and the conducting of the various training sessions, the post-intervention phase of the methodology began in January 2019.

5.3 Post-intervention phase

The post-intervention phase commenced in January 2019 so as to ensure that each participant had a period of at least six months after the account opening to use it. This phase involved a repeated administration of the initial questionnaire to identify whether the various training exercises and the access to the bank account had had any effects on the financial literacy, self-efficacy, and usage of the bank account of the participants. Secondly, for participants who had treatment on financial literacy, the impact of the training was measured with additional questions. A third set of questions was also administered to all participants with respect to their usage of the bank accounts. All the programme coordinators of the NGO at the various towns were contacted and the dates for the various visits were set. Due to the long distances to be covered, the post-intervention was scheduled to be conducted over a one-week period, covering all the communities.

5.3.1 Post-intervention survey of participants

With the necessary arrangements in place, the first town visited was Sefwi Wiaso. Of the 46 participants expected, 29 turned up on the day for the post-intervention survey. After the initial welcome, at which the purpose of the gathering was presented and linked to the earlier meeting for the recruitment, the participants were taken through the initial questionnaire as well as the additional questions on the financial literacy training as they had been provided with that. Participants also answered questions on their use or otherwise of the bank accounts provided. Considering the vast distance travelled to carry out the post-intervention research (over eight hours), arrangements were made to conduct one-on-one phone interviews for the 17 participants who were not present.

The next town visited was Sefwi Asawinso. As already mentioned, these participants were initially not aware they had a bank account since the project coordinator had not informed them. As a result, the bank was contacted, and the list of participants whose bank accounts had been opened was given to the programme coordinator who then informed the participants. This led to a delay in the research as these participants had to be observed for another six months.

The next town visited was New Edubiase where 61 participants were expected. Of these, 45 participants were present and were taken through the questionnaire. All the participants had been part of the self-efficacy treatment.

The last town visited was Assin Fosu where 70 participants were expected. Only 27 participants showed up, thus recording the lowest turn-out. Further investigations on the reasons for this revealed that two prominent families had suffered bereavement the day before the meeting. As a result, the participants went to mourn with the respective families and did not show up for the post-intervention exercise. Therefore, arrangements were made for telephone interviews with these individuals, organised through the NGO coordinators. The telephone interviews presented challenges but were successfully conducted.

To be considered for the final analysis, a participant had to fulfil various conditions. They should have gone through the pre-intervention survey and had a bank account opened for them, they must have participated in the relevant training session/s if applicable, they must have participated either through face-to-face or telephone interview in the post-

intervention survey. The final participants for whom pre- and post-data were available numbered 142. The breakdown by community is as shown in Table 5.3.

Table 5.3 Final number of participants recruited for research analysis

Town	Number Expected	Total Post-Interviewed
Assin Fosu	70	35
New Edubiase	61	44
Sefwi Wiaso	46	30
Sefwi Asawinso	62	33
TOTAL	**239**	**142**

Source: Field Survey (2020)

5.3.2 Challenges associated with post-intervention phase

The major challenge encountered was with the participants from Sefwi Asawinso who did not receive their bank accounts. Since their input was essential to the research methodology, the research was delayed for six months to give them an opportunity to operate their accounts.

The second main challenge was the unavailability of some participants during the visit. Considering the long distances involved in accessing these towns, it was decided that telephone interviews would be used to contact these participants. This turned out to be very difficult. Once the programme coordinators had arranged the telephone interviews, the timing of the calls had to be organised. On several occasions, participants did not respond to telephone calls. Therefore, the calls had to be made several times, over a longer period than anticipated. Also, some participants had lost the use of the telephone numbers they registered with. Hence it was either impossible to get them for the interview or it took longer to reach them as one had to contact them through the telephones of other participants. The final challenge had to do with connectivity. In some areas, telephone connectivity was not possible in the whole community, thus it was necessary to arrange for specific times to call them when they assembled at a place with good connectivity. As a result, whenever some of the participants were not available, another time had to be arranged. These challenges all have bearing beyond the focus of the

research. For example, the issues around connectivity necessitate a sober assessment of some of the limitations of mobile money.

5.4 Challenges Associated with Research Methodology

Some general challenges arose in the implementation of the research methodology, as discussed below.

5.4.1 Challenges associated with partnerships

The methodology involved a heavy reliance on the partners, although the challenges did not negatively impact the quality of the evidence—indeed, the fact that this study was done in partnership with the central role-players is a strength of the design. They also had huge influences on timelines of the research. The first challenge was that there were differences in the objectives of the various partners to the research, namely the researcher, the commercial bank, and the NGO. Also, I had to plan visits to the participants at such times that were convenient to both the bank and the NGO for the pre-intervention phase and then the NGO at the post-intervention phase. The implication was that the timelines set for the research were very dependent on the availability of partners. Another challenge was that the opening of bank accounts and training in financial literacy were dependent on the bank. Significant delays were experienced in the timelines as much of the data collection was dependent on the completion of these tasks.

5.4.2 Challenges associated with participants

The distances between the location of the participants and myself also provided challenges. The nearest of the towns chosen was three hours by road from my location, and the farthest, eight hours. The long-distance travelling involved in implementing the methodology made it difficult to be engaged in every activity, especially the training sessions. As a result, I visited the communities only during the pre-intervention and post-intervention phase. This meant that it was not possible to participate in and observe in the training sessions. Therefore, one could not witness the level of engagement between facilitators and participants, thus missing out on certain nuances that may have transpired. On the other hand, the distances between the communities were such that there was very little opportunity for contamination between them.

Another challenge, still within the context of participants, was related to their availability and presence during the various stages of the research—the pre-intervention interview,

training where applicable, and the post-intervention interview. For the data of a participant to qualify fully for the research, that participant had to be present at all stages of their engagement. In some instances, participants did not show up for the intervention session but did so for the post-intervention interview. Others showed up for the intervention session but could not be contacted for the post-intervention interview. Still others were not available after the pre-intervention phase. All such participants had to be excluded from the data analysis, consequently reducing the sample size.

5.4.3 Challenges of cost

The third challenge is related to the costs associated with implementing the research methodology. In this study, the costs are divided into two elements. The first relates to the mobilisation of logistics to the various towns for the purposes of carrying out the research. This includes transportation and accommodation costs. The second cost element is related to the mobilisation of participants. All participants had to travel from their respective communities to the common meeting place in the selected towns. The cost of their transportation had to be passed on to the research. The research demonstrated that there are significant costs associated with promoting financial inclusion and these should be critically addressed, especially with respect to who bears this cost.

5.5 Benefits of the research methodology

The research methodology had benefits, especially in relation to the output of the research. The first benefit was related to the interaction between myself and the participants. The long distances between us made it impossible for me to actively engage with the participants. As a result, there was no interaction between us during the training session or at any meetings to encourage the participants to use their bank accounts. Consequently, the participants were not contaminated by the objectives of the research. Therefore, although the distance travelled placed some limitations on the research as earlier discussed, it also made it possible to ensure that the research was free from contamination by me.

The second benefit was the authenticity of the data collected. From the methodology, the data required was from real life activities of the participants. As a result, key data were collected directly from source.

The third benefit of the methodology provided me the opportunity to test actual behaviour against intended behaviour. This proved to be significant as the questionnaire provided a perceptual measure of the intention of the participants to use the bank accounts, and it transpired that their actual banking behaviour was not in line with those intentions.

5.6 Lessons learnt from the research design execution

In executing this research methodology, I acquired some valuable lessons for designing future methodology, as presented below.

5.6.1 Multiparty stakeholders in research

The first lesson that the execution of this research brought to the fore was to do with the management of multiparty stakeholders in research. The methodology design was dependent on partnership with an NGO and the provision of banking products and services by a commercial bank. The success of the design required the use of participants, community programme coordinators, training sessions, and other logistics from the NGO, and account opening by the bank. In addition, the use of multiparty stakeholders also gave me the opportunity to model the research to reflect a certain level of reality. However, working to achieve harmony among all these stakeholders in line with the objectives of this research was complex, hence it became necessary to over-communicate what was essential to me, as the researcher. It is therefore important that, when considering the use of multiparty stakeholders in crafting a research design, the researcher should be aware of the need for extensive and ongoing follow-up.

5.6.2 Distances between researchers and participants in experimental research design

The second lesson learnt is with respect to challenges posed by the distances travelled to implement the design. It is essential to assess the impact of travel distances on research when including it as part of research design. For this research, coping with the long distances between the research base and the participants, as well as the long distances between participants, required more time to carry out the research as well as significant costs in accessing the areas.

Although the other side of the argument was that these distances limited contamination and research influence on the participants, the fact that visits were made only at the start and finish also meant that nuances that arose in activities in-between could not be

captured and reported on. For instance, in formulating follow-up questions on what had gone on during the training sessions, absence at the training sessions meant that one could not get an insight into what went on, especially with respect to questions from participants to training facilitators. Desired follow-up visits, especially to conduct a completion of the post-intervention survey, could also not be scheduled and were replaced with telephone interviews instead.

5.6.3 Role of qualitative research methodology in experimental designs

The third lesson learnt from this research design is the relevance of qualitative research methodology. This design was formulated to test hypotheses using a quasi-experimental design. As the results became apparent and the hypotheses did not stand, the question naturally arose of why? Various clues were provided during my conversations with the participants during the post-intervention stage, but no systematic qualitative data gathering plan had been conducted.

As best practice, I would recommend that in an under-researched area, some qualitative element should always be built into the research methodology. For this research, the logistical challenges meant that it was not possible to conduct an in-depth study on the reasons accounting for various outcomes. The use of a mixed methodology (albeit with an emphasis on quantitative data gathering) would have been ideal.

5.7 Conclusion

The design of the research methodology was complex and was heavily dependent on third parties including an NGO, a bank, and participants. In addition, mobilisation of resources was expensive and involved a lot of time. However, considering the objectives of this research, this methodology was appropriate to achieve the results. The next chapter presents the results and analysis of the thesis.

6 Results and analysis

6.1 Introduction

In the previous chapter, the execution of the research methodology was presented to provide insight into how the data were collected over the cycle of the research. This research sought to assess the influence of individual-related barriers to financial inclusion. To achieve this, it attempted to identify whether financial literacy and self-efficacy have a positive influence on financial inclusion, determined here by the usage of bank accounts. It also sought to ascertain whether there were other factors which influence the use of bank accounts. The research involved a group of young people who were part of a youth employment programme, mainly in the agricultural sector in rural communities. These participants were placed in four distinct groups. I had access to data for 18 months for Groups A, B and C and 11 months for Group D. However, in line with my initial methodology, the bank-account usage behaviour was studied for the first six months. Nevertheless, the pattern of usage of the bank account as a result of the various interventions did not change after the first six months of account ownership.

Group A had training in financial literacy, Group B had training in self-efficacy, Group C had training in both financial literacy and self-efficacy and Group D was the control group, with no training related to financial inclusion (Table 6.1).

Table 6.1 Key for groupings and relevant interventions

COMMUNITY CODES	GROUP	NAME OF COMMUNITY	TYPE OF TREATMEAT
SWGA	A	Sefwi Wiaso	Financial Literacy Only
NEGB	B	New Edubiase	Self-Efficacy Only
AFGC	C	Assin Fosu	Self-Efficacy & Financial Literacy
SAGD	D	Sefwi Asawinso	Control

Over the period, the participants completed several activities. In order of occurrence, these were: (i) an initial survey at time of recruitment (before anyone was actually recruited); (ii) opening a bank account, with assistance, when one was able to produce at least one valid national identification card; (iii) after a month of obtaining a bank account, undergoing training in either financial literacy or self-efficacy, no training at all in these fields, or both, depending on which group a participant was in; and (iv) participation in the post-intervention survey five months after training where a group was to be trained, and for the control group, six months after they had opened their bank

accounts. Over the six-month period, the expectation was that the participants would use the bank accounts once they had been opened for them. The collection of the banking data also fell within the major harvesting period of several agricultural crops in Ghana, including cocoa. Therefore, the period of observation covered the season of harvesting and selling produce.

The research observed that the training seemed to have had an impact on the participants' knowledge of banking. However, the benefits of the training did not translate into changed banking behaviour. This chapter presents the analysis of the results, beginning with the demographic information. This is then followed by the two counter-intuitive findings in turn.

6.2 Final participants for research

For a participant to be considered a part of this research, he or she had to go through all the phases applicable to the group they belonged to. Table 6.2 below shows the geographical location of groups, and the processes involved in arriving at the final total of 142 participants included in the research.

Table 6.2 Selection of participants

GROUP	TOWN	INITIAL PARTICIPANTS	BANK ACCOUNTS	TRAINING	FINAL PARTICIPANTS
A	Sefwi Wiaso	95	46	40	30
B	New Edubiase	104	61	61	44
C	Assin Fosu	96	70	62	35
D	Sefwi Asawinso	89	62	*N/A	33
TOTAL		**384**	**239**	**163**	**142**

(*Participants from Sefwi Asawinso were the control group and so had no training).

Source: Field Survey (2020)

6.3 Demographics

The data analysis section starts with demographic profiles of the participants (Table 6.3). This subsection aims to provide a snapshot of who the participants in the study were. To do this, the details considered started with how participants gave their consent to be part of the research (thumbprint or signature), and went on to their age, gender, profession, housing, educational background, and monthly income levels.

The results show that while the participants generally showed similar characteristics across groups, there were still some key findings worth noting. The demographics were not different from what one would typically expect in a rural community in Ghana. For example, despite the high level of basic education among the participants (82.2%), almost half (54%) of them still preferred to use their thumbprint instead of a written signature to give consent. A mean age of 23 years was found among the participants, with a range of 18 to 34 years, in line with the youth programme from which the sample was taken. Considering that a third of Ghana's population (33.60%) are within the age bracket of 15 to 34 years (Ghana Statistical Service, 2019), the sample chosen was reflective of this national demographic feature. The age of participants was grouped into two bands, of 18 to 23 years and 24 to 34 years. A slight majority of participants, representing 51.4% (n=73), were in the 24-to-34-year category.

The participants were 62% (n=88) female and 38% (n=44) male, with females being in the majority across all groups. Farmers predominated, at 64.8%, with a smaller percentage (15.5%) saying they engaged in trading and providing services in their communities. Participants engaged in service provision were mainly commercial drivers, mobile phone card vendors, and freelance workers available on request to carry out odd jobs. With respect to housing, 106 out of the 142 participants, representing 74.6%, claimed that they lived in family houses, a situation that is not unusual in rural Ghana. The study also recorded that 82.4% (n=117) of participants had only basic education with 16.2% (n=23) having secondary education, and 0.7% (representing 1 person) had tertiary education. One person had no form of education. Across the group, this was the general pattern. On income, 134 participants (94.4%) reported that they earned below GHc500 a month. The general conclusion from the demographics showed that the groups were largely similar in their characteristics. No single group stood out distinctly from the others. The various groups and the relevant intervention they were exposed to are presented in Table 6.3.

Table 6.3 Demographic profile of participants

Response categories	Overall sample		Group A (Financial literacy only)		Group B (Self-efficacy only)		Group C (Financial literacy and self-efficacy)		Group D (Control)	
	N	%	N	%	N	%	N	%	N	%
	142	100	30	21.1	44	31	35	24.6	33	23.3
Participant consent										
Thumb print	65	45.8	8	26.7	21	47.7	16	45.7	20	60.6
Signature	77	54.2	22	73.3	23	52.3	19	54.3	13	39.4
Age										
18-23 years	69	48.6	14	46.7	24	54.5	13	37.1	18	54.5
24-34 years	73	51.4	16	53.3	20	45.5	22	62.9	15	45.5
Gender										
Male	54	38	14	46.7	13	29.5	12	34.3	15	45.5
Female	88	62	16	53.3	31	70.5	23	65.7	18	54.5
Profession										
Farmer	92	64.8	17	56.7	27	61.4	24	68.6	24	72.7
Food vendor	2	1.4	0	0	2	4.5	0	0	3	9.1
Trader	22	15.5	6	20	6	13.6	4	11.4	6	18.2
Service provider	22	15.5	7	23.3	5	11.4	7	20	0	0
Unemployed	4	2.8	0	0	4	9.1	0	0	0	0
Housing										
Family	106	74.6	21	70	33	75	23	65.7	29	87.9
Rented	16	11.3	5	16.7	4	9.1	4	11.4	3	9.1
Self-owned	20	14.1	4	13.3	7	15.9	8	22.9	1	3
Education level										
Basic	117	82.4	19	63.3	42	95.5	30	85.7	26	78.8
Secondary	23	16.2	11	36.7	2	95.5	5	14.3	5	15.2
Tertiary	1	0.7	0	0	0	95.5	0	0	1	3
None	1	0.7	0	0	0	95.5	0	0	1	3
Monthly income										
up to GHc500	134	94.4	26	86.7	43	97.7	33	94.3	32	97
GHc500 to GHc1,000	7	4.9	3	10	1	2.3	2	5.7	1	3
Above GHc1,000	1	0.7	1	3.3	0	0	0	0	0	0

Source: Field Survey (2020)

6.4 Descriptive statistics for individual items of perception of financial literacy training

The participants in Groups A and C received training on financial literacy. The analysis below is based on descriptive statistics for individual items of perception of this training (Table 6.4). Overall, it seemed that the training was largely effective. Scoring a mean of 4 was an indication that a participant considered the training as good. Participants in Group A who had training in only financial literacy stood out for having higher means (4.22) than participants in Group C who had training in both financial literacy and self-efficacy (3.96). A further explanation to this is discussed in the section on the analysis of the financial self-efficacy scale.

Table 6.4 Descriptive statistics for individual items of perceptions of training

Constructs and items	Group A		Group C	
	Mean	Std. dev.	Mean	Std. dev.
Perceptions of training	4.22	0.381	3.96	0.478
I have learnt a lot from this training programme	4.07	0.521	3.91	0.507
I have understood banking from this training programme	4.1	0.712	4	0.594
I will use some of the knowledge from this training in my everyday life	4.5	0.509	3.86	0.733
I will recommend this training to at least one person	4.2	0.407	4.09	0.507

Source: Field Survey (2020)

6.5 Descriptive statistics for banking data

As regards banking data, in the first month there was no transaction by any of the participants. In months two and three, only Group D, the control group, recorded usage. This was by a particular participant who carried out one transaction in month two with a value of GH¢175.00, and four transactions in month three with a total value of GH¢325.00. For months four to six, banking activities were recorded for only Group C, whose participants had training in both financial literacy and self-efficacy. In this instance, one individual carried out one transaction of GH¢30.00 in month four and another GH¢1,468 in month five. In month six, another participant carried out only one transaction, of GH¢110. Across all groups, only three participants carried out banking

transactions over the entire six-month period of data collection, and there was no pattern to the usage of bank accounts for those who carried out any activity. On analysing the data for an extra 12 months for Groups A, B and C, and six months for Group D, I found that none of the participants used their bank accounts. Thus, it was clear at a glance that financial inclusion did not result from the training interventions. The following analysis seeks to understand better to what extent and in what ways groups differed.

6.6 Construct validity and reliability

Tests for validity and reliability were carried out to assess the psychometric properties of the measurement scales used in this research, specifically for the constructs financial self-efficacy ('before') and financial self-efficacy ('after').

6.6.1 Internal consistency reliability

Cronbach's Alpha Coefficient values were calculated to assess the internal consistency reliability of the measurement scales used. Cronbach's Alpha coefficient values that exceed 0.6 display enough evidence of internal consistency reliability. Hence, the scale used to measure the constructs is deemed as reliable. For the overall results, with respect to financial self-efficacy (before) the Cronbach's Alpha coefficient exceeded 0.6. The values for Groups A and B also exceeded 0.6. However, for Groups C and D, the values were low (Table 6.5). The values for the financial self-efficacy (after) could not be pooled since the participants were exposed to different types of training.

Table 6.5 Internal consistency reliability analysis

Construct	No. of items	Overall sample	Group A Sample	Group B sample	Group C Sample	Group D Sample
Financial self-efficacy (before)	6	0.7	0.7	0.7	0.4	0.5
Financial self-efficacy (after)	6	NA	NA	NA	NA	NA

Source: Field Survey (2020)

6.6.2 Construct validity for financial self-efficacy (before)

The study used principal axis factoring to assess the uni-dimensionality of the financial self-efficacy scale. No rotation was used since a preliminary analysis of the Eigen values revealed that only one factor could be extracted. Principal axis factoring was done for

the overall sample, since the constructs were measured before the interventions were introduced. In addition, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Barlette's test of Sphericity were examined to determine whether the data was suitable for principal axis factoring. The total variance explained was examined, as well as the factor matrix for the factor loadings.

The data was considered appropriate for factor analysis, as the Bartlett's test of sphericity yielded a significant result ($p < 0.0001$) and the KMO measure of sampling adequacy (MSA) for the overall measure was 0.753 (which is greater than the recommended cut-off value 0.5) (Pallant, 2016). The outcome of Table 6.6 showed that there were only two items that had a factor loading exceeding 0.5; "It is challenging to make progress toward my financial goals" and "When faced with a financial challenge, I have a hard time figuring out a solution". One factor was extracted which explained 40.48% of the total variance in the data. The table below shows the factor matrix obtained for the overall sample, where some factor loadings were below the recommended cut-off value of ≥0.5.

Table 6.6 Factor matrix for financial self-efficacy (before)

Items	Factor loadings
It is hard to stick to my spending plan when unexpected expenses arise	0.436
It is challenging to make progress toward my financial goals	**0.737**
When unexpected expenses occur, I usually have to use credit	0.454
When faced with a financial challenge, I have a hard time figuring out a solution	**0.813**
I lack confidence in my ability to manage my finances	0.421
I worry about having enough money	0.289

Source: Field Survey (2020)

From Table 6.6, it can be determined that some factor loadings were below the recommended cut-off value of ≥0.5. Items were removed systematically, and the exploratory factor analyses (EFA) was rerun. The following items were removed in the following sequence:

(i)*I worry about having enough money.*

(ii)I lack confidence in my ability to manage my finances.

(iii)It is hard to stick to my spending plan when unexpected expenses arise.

The data were considered appropriate for running the final factor analysis, as Bartlett's test of sphericity yielded a significant result ($p < 0.0001$) and the KMO MSA for the overall measure was 0.630 (which is greater than the recommended cut-off value 0.5) (Field, 2013; Pallant, 2016). One factor was extracted which explained 63.24% of the total variance in the data. Table 6.7 shows the factor loadings obtained for the overall sample.

Table 6.7 Re-estimated factor matrix for financial self-efficacy (before)

Statement	Factor loadings
It is challenging to make progress toward my financial goals	0.65
When faced with a financial challenge, I have a hard time figuring out a solution	0.869
When unexpected expenses occur, I usually have to use credit	0.507

Source: Field Survey (2020)

These three items were used to recalculate the composite mean scores for financial self-efficacy ('before' and 'after') and the new descriptive statistics are presented in Table 6.8.

Table 6.3 New Cronbach Alpha values— re-estimated internal consistency reliability analyses

Construct	**Nr. of items**	**Overall sample**	**Branch A Sample**	**Branch B Sample**	**Branch C Sample**	**Branch D Sample**
Financial self-efficacy (before)	3	0.704				
Financial self-efficacy (after)	3		0.644	0.619	0.259	0.563

SOURCE: FIELD SURVEY (2020)

6.7 Descriptive statistics of individual items of the financial self-efficacy scale

Table 6.9 presents the descriptive statistics of the individual items of the financial self-efficacy construct for the 'before' and 'after' situations. Adapting Lown's (2011) interpretation of the financial self-efficacy scale, individuals with high scores are perceived to have high financial self-efficacy. For this research, the change in mean scores 'before' and 'after' for the entire group was used to assess the direction of financial self-efficacy.

Analysing the results on a group basis, there were variances compared to the overall group pattern. For participants who undertook only financial literacy training (Group A), the results indicated that their financial self-efficacy declined after the training. These participants, however, indicated that the training in financial literacy was good. Thus, although the training was good, it did not influence their perception of their financial self-efficacy. This was evidenced by the results which showed their mean values for all the items were lower in the 'after' when compared to the 'before'. For Group B participants, who engaged in only self-efficacy training, the results showed that there was an improvement in their financial self-efficacy, as the mean in the 'after' stage for all the items were higher than the 'before' stage. For Group C, whose participants received training in both financial literacy and self-efficacy, the overall response for the participants indicated that their financial self-efficacy improved after the training, leading to an overall improvement. Finally, for the control group (Group 4), there was a general decline in the financial self-efficacy of the participants.

The lack of impact of the training in financial literacy may be attributed to the view that participants identified the many nuances associated with being financially literate and as such did not consider themselves to have attained such capabilities. On the other hand, self-efficacy training, either as a stand-alone or in addition to training in financial literacy, had the most significant effect on the financial self-efficacy of the participants.

Hence, the lack of confidence such as the training in self-efficacy provides may have led to participants feeling more vulnerable about using a bank account. This needs to be tested further. However, the effectiveness of mind-set-based training programmes has been confirmed by Campos, Frese, Goldstein, Iacovone, Johnson, McKenzie and Mensumann (2017) who, in comparing the impact of traditional training and psychological mind-set-based training on entrepreneurial capabilities, concluded that the latter could lead to improved entrepreneurial success.

Table 6.4 Descriptive statistics of the individual items of the financial self-efficacy for the 'before' and 'after' situation

ITEM	CONSTRUCTS AND ITEMS	OVERALL SAMPLE		GROUP A		GROUP B		GROUP C		GROUP D	
		Mean	**Std dev.**	**Mean**	**Std dev.**	**Mean**	**Std dev.**	**Mean**	**Std dev.**	**Mean**	**Std dev.**
	Financial self-efficacy (before)										
1	It is hard to stick to my spending plan when unexpected expenses arise	3.04	1.409	3.33	1.398	2.39	1.401	3.06	1.211	3.64	1.319
2	It is challenging to make progress toward my financial goals	3.14	1.356	3.73	1.048	2.2	1.357	3.29	1.25	3.7	1.045
3	When unexpected expenses occur, I usually have to use credit	3.08	1.407	3.6	1.133	2.48	1.438	3.34	1.434	3.15	1.326
4	When faced with a financial challenge, I have a hard time figuring out a solution	3.15	1.315	3.63	0.964	2.41	1.335	3.11	1.278	3.73	1.153
5	I lack confidence in my ability to manage my finances	3.04	1.409	2.5	1.137	1.98	1.023	1.94	0.873	1.97	0.883
6	I worry about having enough money	3.14	1.356	3.57	1.431	3.91	1.309	4.37	1.06	4.61	0.659
	Financial self-efficacy (after)										
1	It is hard to stick to my spending plan when unexpected expenses arise	3.18	1.1	3.07	1.112	3.2	1.212	3.26	1.067	3.15	1.004
2	It is challenging to make progress toward my financial goals	3.13	1.087	3	1.114	3.18	1.187	3.46	0.95	2.85	1.004
3	When unexpected expenses occur, I usually have to use credit	2.99	1.194	2.73	1.258	3.09	1.309	2.94	1.162	3.15	1.004
4	When faced with a financial challenge, I have a hard time figuring out a solution	3.49	1.03	3.3	1.119	3.41	1.187	3.86	0.733	3.39	0.933
5	I lack confidence in my ability to manage my finances	2.28	1.006	2.17	0.791	2.2	1.153	2.54	1.12	2.21	0.82
6	I worry about having enough money	4.04	0.985	3.57	1.278	4.07	1.021	4.17	0.822	4.27	0.626

Source: Field Survey (2020)

6.8 Assessing normality of data distribution

A normality test was carried out to determine whether parametric tests for hypotheses testing could be used. Data distribution is regarded as normal if the skewness of the distribution is less than +/- 2.00 and the kurtosis is less than +/-7.00 (Curran, West & Finch, 1996). The results in Table 6.10 show that for the constructs financial self-efficacy 'before' and 'after', the skewness of the distribution is 0.545 for Group A, 0.069 for Group B, and -0.477 for Group C, which are all less than +/-2.00. The kurtosis for Groups A, B and C are -0.228, -0.578 and -0.532 respectively—all less than +/-7.00—indicating that the data distribution is normal. For Group D, the skewness is -5.204, indicating a violation in the rule. However, since the kurtosis is -5.150, which is within the rule of +/-7.00, normality of the data distribution is assumed.

In the case of the banking data, normality of the distribution could not be assessed since 139 out of the 142 participants did not use the bank account irrespective of whether training was received or not.

Table 6.5 Assessing normality of distribution

Construct and banking data	Statistic	Group A	Group B	Group C	Group D
Financial self-efficacy (before)	Mean	3.394	2.561	3.1857	3.465
	Std. Dev.	0.556	0.861	0.69987	0.661
	Skewness	0.545	0.069	-0.477	-5.204
	Kurtosis	-0.228	-0.578	-0.532	-5.15
Financial self-efficacy (after)	Mean	2.972	3.193	3.372	3.171
	Std. Dev.	0.732	0.742	0.483	0.496
	Skewness	-0.635	-0.046	-0.265	-0.616
	Kurtosis	-0.103	-1.037	-0.184	-0.102

Source: Field Survey (2020)

6.9 The inclusion of control variables

Control variables are included as covariates in the model to control for possible confounding effects. Using one-way ANOVAs, MANOVAs and independent sample t-tests, the study assessed group differences between the constructs financial self-efficacy (before) and financial self-efficacy (after) and:

- Volume of income (T1-T6)
- Value of income (T1-T6)

For all the control variables, the ANOVA test was conducted to detect any significant differences. The ANOVA test was based on the following assumption:

$$H_0: \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6$$

$$H_1: \mu_i \neq 0 \text{ for at least one i where i } =1,2,3,4,5,6$$

Where: Reject H_0, when the means vary: or

Fail to reject H_0 when the means are the same.

The results showed no significant differences between the control variables (gender, educational level, type of housing, household income, employment status and age) and the dependent variables. Consequently, they were not included as covariates in the General Linear Model. There were no significant differences between the proposed demographics and financial self-efficacy (‘before’ and ‘after’ training), as well as volume and value of transactions. Therefore, demographics are not included as covariates in model estimation for hypothesis testing.

6.10 Hypothesis testing—general linear model to test effect of financial self-efficacy

To test for the hypothesis, the mixed between-within subject analysis of variance (ANOVA) was deemed appropriate to investigate whether the different training interventions in the different groups had an impact on participants’ perceptions of their financial self-efficacy. This was based on what was demonstrated in the usage of their bank accounts ‘before’ and ‘after’ the training interventions.

The following assumptions underlying the mixed between-within subject analysis of variance were tested on the various groups to allow for the use of ANOVA.

- Normality of distribution
- Homogeneity of variance using Levene’s Test for equity of variance and $F_{max.}$
- Homogeneity of intercorrelations using Box’s M statistic.

Section 6.8 above deals with the normality test conducted to determine whether parametric tests can be used. The results show that for the constructs financial self-efficacy ‘before’ and ‘after’, the skewness of the distribution was less than +/-2.00 and the kurtosis was also less than +/-7.00, indicating that the data distribution is normal. The results of the next two assumptions are discussed below.

6.10.1 Test for homogeneity of variance using Levene's Test for Equity of Variance and F_{max}

The purpose was to test the null hypothesis that the error variance of the dependent variable is equal across groups. From Table 6.11, the assumption is violated for financial self-efficacy both 'before' and 'after'. However, Stevens (2009) states that analysis of variance is reasonably robust to violations of homogeneity of variance assumptions, provided that the size of groups compared are reasonably similar (largest/smallest = 1.5). This is the case in this study, since the largest group (n=44) to smallest group (n=30) = 1.46.

Table 6.6 Homogeneity of variance for financial self-efficacy

Levene's Test of Equality of Error Variances		Levene Statistic	df1	df2	Sig.
Financial self-efficacy (before)	Based on Mean	3.384	3	138	0.02
Financial self-efficacy (after)	Based on Mean	3.271	3	138	0.002

Source: Field Survey (2020)

In addition to using the group size to assume the homogeneity of the variance, the F_{max} was also considered through the use of the standard deviation (Table 6.12). With this test, homogeneity of variance can be assumed if F_{max} is less than 10 (Allen, Bennett & Heritage, 2014). The F_{max} result for financial self-efficacy is 3.28, as shown below. As a result, homogeneity of variance can be assumed.

Table 6.7 Descriptive statistics for financial self-efficacy 'before' and 'after'

Constructs	Grouping variable	Mean	Std. Deviation	N
Mean score for Fin. literacy pre-intervention	Fin. lit. only	3.6556	0.66369	30
	Self-efficacy only	2.3636	1.10862	44
	Fin. and Self-efficacy	3.2476	0.97466	35
	Control group	3.5253	0.9015	33
	Total	3.1244	1.07746	142
Mean score for Fin. literacy post-intervention	Fin. lit. only	3.0111	0.89049	30
	Self-efficacy only	3.2273	0.92558	44
	Fin. and Self-efficacy	3.419	0.6122	35
	Control group	3.1313	0.71657	33
	Total	3.2066	0.8075	142

Source: Field Survey (2020)

$$Fmax = \frac{Largest\ sample\ variance}{Smallest\ sample\ variance}$$

$$Fmax = \frac{1.109^2}{0.612^2}$$

$$Fmax = 3.28$$

6.10.2 Test of homogeneity of intercorrelations using Box's M Statistic

Box's M-test of equality of covariance matrices assesses the pattern of intercorrelations among the levels of the within-subject variable. If it is significant at 0.001, the assumption has been violated. In this study, Box's M is 0.032. Therefore, the assumption of homogeneity of covariance of matrices was not violated.

In summary, the assumptions underlying a mixed between-within subject analysis of variance have all been met. With these conditions met, the next section presents the results of the mixed between-within subject analysis of the variance for the data.

6.10.3 Interpreting the results of mixed between-within subject analysis of variance

The descriptive statistics show that for Group A, the financial self-efficacy scores are lower after interventions have occurred, whereas scores are higher for Group B and Group C (Table 6.13). For Group D (control group), the financial self-efficacy scores are

lower after six months. I conducted further tests to identify whether the differences are significant (Table 6.14). The results show that the main effect of financial self-efficacy is not significant since the Wilks' Lambda value for financial self-efficacy is 1 at p = 0.993 (p> 0.05). However, the interaction effect (Efficacy*Group) is significant. The results show that financial self-efficacy scores are affected by the training received across different groups. Since the interaction effect is significant, but the main effect is not, there is evidence of cross-over interaction. Additionally, the partial Eta squared effect size is 0.236, suggesting that 23.6% of the variance in financial literacy scores is accounted for by the groups (different types of training).

Table 6.8 Descriptive statistics

Within subjects factor	Between subjects factor	Mean	Std. Deviation	N
Financial self-efficacy (before)	Group 1: Financial literacy only	3.6556	0.66369	30
	Group 2: Self-efficacy only	2.3636	1.10862	44
	Group 3: Self-efficacy & Financial literacy	3.2476	0.97466	35
	Group 4: Control	3.5253	0.9015	33
	Total	3.1244	1.07746	142
Financial self-efficacy (after)	Group 1: Financial literacy only	3.0111	0.89049	30
	Group 2: Self-efficacy only	3.2273	0.92558	44
	Group 3: Self-efficacy & Financial literacy	3.419	0.6122	35
	Group 4: Control	3.1313	0.71657	33
	Total	3.2066	0.8075	142

Source: Field Survey (2020)

Table 6.9 Multivariate test for significance of differences

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Efficacy	Pillai's Trace	0	.000[b]	1	138	0.993	0
	Wilks' Lambda	1	.000[b]	1	138	0.993	0
	Hotelling's Trace	0	.000[b]	1	138	0.993	0
	Roy's Largest Root	0	.000[b]	1	138	0.993	0
Efficacy Group	Pillai's Trace	0.236	14.231[b]	3	138	0	0.236
	Wilks' Lambda	0.764	14.231[b]	3	138	0	0.236
	Hotelling's Trace	0.309	14.231[b]	3	138	0	0.236
	Roy's Largest Root	0.309	14.231[b]	3	138	0	0.236

a. Design: Intercept + Group

Within-Subjects Design: Efficacy

b. Exact statistic

Source: Field Survey (2020

Table 6.10 Tests of between-subjects effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	2846.728	1	2846.728	2990.35	**0**	0.956
Group	17.461	3	5.82	6.114	**0.001**	0.117
Error	131.372	138	0.952			

Source: Field Survey (2020)

I conducted a test of between-subject effects to consider the main effect of the between-subject variable (namely group). Table 6.15 shows that the main effect of group is statistically significant (p=0.001). This means that there are statistically significant differences in financial self-efficacy scores depending on the type of training received. The partial eta squared effect size shows a moderate effect (0.117). This presented in Figure 6.1.

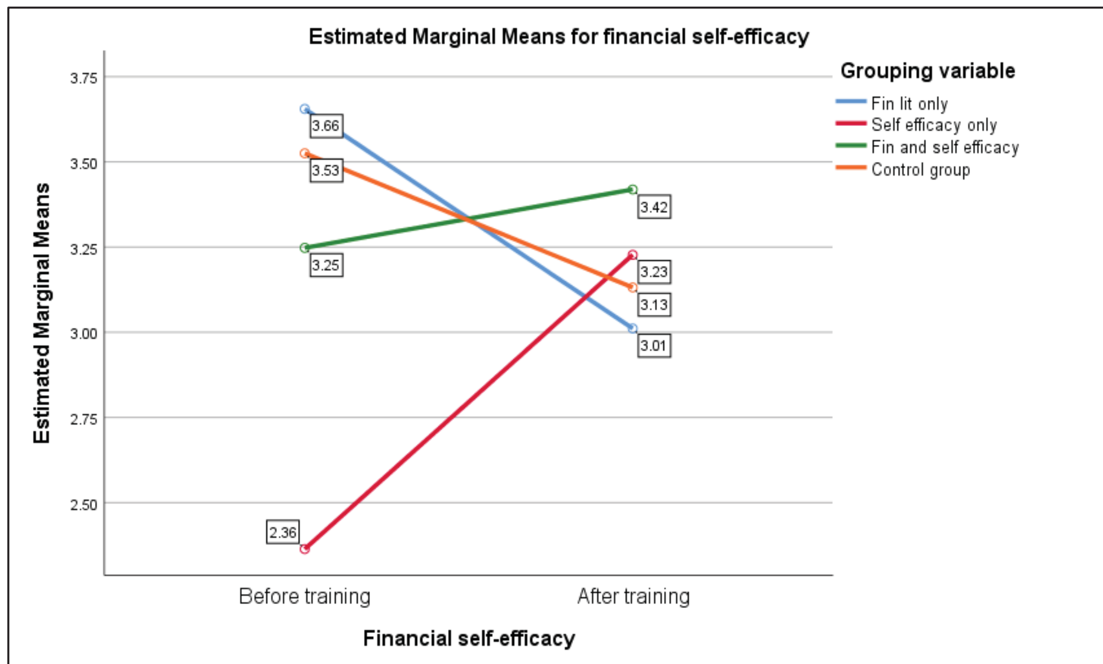


FIGURE 6.1 INTERACTION PLOT FOR FINANCIAL SELF-EFFICACY AND GROUP

Source: Field Survey (2020)

From Figure 6.1 above, it is evident that the group with only self-efficacy training records the highest difference in means comparing the pre-training to the post-training phase. This is followed by the group that had both self-efficacy and financial literacy training. The group that had the financial literacy training alone and the control group saw a decline in the group means. These results indicate that training in self-efficacy is instrumental in improving financial self-efficacy, whereas offering financial literary alone is not only not helpful, but in fact yields worse outcomes than not offering any support irrespective of the perception of participants on the training. This is discussed further in the next chapter. Based on the absolute differences for the training in self-efficacy ‘before’ (2.36) and ‘after’ (3.23), it shows that there is a greater influence on the financial self-efficacy of the participants.

6.11 General linear model to test volume and value of transactions

The mixed-subject analysis of variance was deemed appropriate to investigate whether the different training interventions with respect to the groups had any effect on the volume and value of transactions over the period (T1 – T6) in line with the hypothesis of the research. However, the assumptions governing the use of the mixed-subject analysis of variance could not be tested as generally, across groups, there was no variance in the volume and value of transactions as participants did not use their bank accounts.

Therefore, irrespective of the occurrence of training or otherwise, participants on average over the six months period did not use the bank account. As a result, this study rejects all the hypotheses relating to the usage of the bank account as further discussed in the next chapter (Table 6.16). The data for a further 12 months moreover show the participants still did not use the bank accounts as expected. This is in contrast to the fact that the training yielded different perceptual results between the different groups as has just been demonstrated.

Table 6.11 Summary of test of research hypotheses

Hypotheses		Result
$H2_a$	**Individuals who are given a bank account and self-efficacy intervention will have an increased knowledge to enable them to engage with formal financial institutions.**	Support
$H3_a$	**Individuals who are given a bank account and financial literacy and self-efficacy intervention will see an interaction effect between the two types of interventions so that they will have an increased knowledge to enable them to engage with formal financial institutions.**	Support

Source: Field Survey (2020)

6.12 Post-research banking questions

As part of the post-research questionnaire, data was collected from participants on the usage of the bank accounts. Of the 142 participants, 139 (representing 98%) never used the bank account. Of these, 79 participants (representing 56%) indicated that they did not use the bank account because they did not have enough money to operate it. The second-largest group, 37 participants, stated that they failed to use the bank account because they are uneducated about using bank accounts, with 3.5% indicating that they simply did not want to use it. A further 12.7% provided various other reasons.

The views of the three participants in the entire sample who used the bank account at any point in time over the six-month period of the study are particularly important. They each reported that they received funds for contract work undertaken, for which payment was made through a formal payment channel. Following that, they proceeded to withdraw their funds. Typically, all funds were withdrawn; but in one instance, a participant decided to leave some of the funds in the account to save towards financing

further education. In conversation with a participant in the 24-to-34-year age group, the only female who used the bank account, I asked her what made her use the account. Her response was that she had been hired to be part of a cocoa pollination programme. She had given them her bank account number so that they could pay her through that.

6.12.1 Testing for associations between different groups and account usage

To test for associations between different groups and the reason for not using the bank account, the study employed the Chi-square test since the independent variable (Group) and the dependent data (reason for not using the bank account) are discrete data. The analysis revealed no association between groups and the reason for not using the bank account. Across all groups, as previously mentioned, many participants did not use the bank account because they did not perceive themselves as having enough money to use it (Table 6.17).

Table 6.12 Reason for not using the bank account: descriptive statistics

Response Categories	Overall sample		Group A		Group B		Group C		Group D	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
	142	**100**	**30**	**21.1**	**44**	**31**	**35**	**24.6**	**33**	**23.3**
I did not know how to use it	37	26.1	9	30	15	34.1	6	17.1	7	21.2
I don't have money to use a bank account	79	55.6	12	40	19	43.2	26	74.3	22	66.7
Other	18	12.7	9	30	8	18.2	1	2.9	0	0

Source: Field Survey (2020)

6.12.2 Cross-tabulation of the study variables

The objective was to identify the association between the research interventions and the reasons for not using the bank account. For participants with financial literacy training only, 57.1% who did not use the account reported it was because they did not have enough money, while 42.9% did not use it because they did not know how. In the case

of participants with only self-efficacy training, 55.9% did not use the account for reasons of insufficient funds, while 44.1% claimed not to know how to use it. The breakdown for participants with training in both financial literacy and self-efficacy training was 81.3% stating they did not have enough money to use it, and only 18.8% stating they did not know how to use it. For participants who did not have any training, 75.9% cited insufficient funds while 24.1% cited a lack of knowledge (Table 6.18).

Table 6.13 Grouping variable reason for not using the account: cross-tabulation

Cross-Tabulation		If no, why did you not use the account?		Total
		I did not know how to use it	I don't have money to use a bank account	
Financial literacy only	% within Grouping variable	42.90%	57.10%	100.00%
	% within If no, why did you not use the account?	24.30%	15.20%	18.10%
	% of Total	7.80%	10.30%	18.10%
Self-efficacy only	% within Grouping variable	44.10%	55.90%	100.00%
	% within If no, why did you not use the account?	40.50%	24.10%	29.30%
	% of Total	12.90%	16.40%	29.30%
Financial literacy and self-efficacy	% within Grouping variable	18.80%	81.20%	100.00%
	% within If no, why did you not use the account?	16.20%	32.90%	27.60%
	% of Total	5.20%	22.40%	27.60%
Control group	% within Grouping variable	24.10%	75.90%	100.00%
	% within If no, why did you not use the account?	18.90%	27.80%	25.00%
	% of Total	6.00%	19.00%	25.00%
Total	% within Grouping variable	31.90%	68.10%	100.00%
	% within If no, why did you not use the account?	100.00%	100.00%	100.00%
	% of Total	31.90%	68.10%	100.00%

Source: Field Survey (2020)

However, the Chi-square results in Table 6.19 showed a Chi-square of p=0.077, indicating that there is only a weak association between group and the reason for not using the bank account. Across all groups, most participants did not use the bank account because they believed that they did not have enough money to do so.

Table 6.14 Chi-square test results

Chi-Square Tests	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.849[a]	3	0.077
Likelihood Ratio	6.968	3	0.073
Linear-by-Linear Association	4.322	1	0.038
N of Valid Cases	116		

Source: Field Survey (2020)

The Cramer V effect size test (Table 6.20) for the variation in the association of the responses is related to the reason for the non-usage of the account. Thus, the Cramer V effect is the normalised form of the chi-square test statistic. In addition, Cramer V is a measure for the effect size for the chi-square test statistic. The small effect size of 0.243 again indicates a weak association between group and the reason for not using the bank account. It can, therefore, be concluded that, there is no significant association between groups and the reason for not using the bank account.

Table 6.15 Cramer V effect size

Symmetric Measures		Value	Approximate Significance
Nominal by Nominal	Phi	0.243	0.077
	Cramer's V	0.243	0.077
	Contingency Coefficient	0.236	0.077
N of Valid Cases		116	

Source: Field Survey (2020)

It is true that the participants in the experiments were not people with substantial means. However, they were also not desperately poor. Instead, it is apparent that their responses reflect a specific understanding of a bank, namely as an institution where one stores "excess" funds. This is further discussed in the next chapter.

6.13 Conclusion

The results of the research indicated that neither the training in self-efficacy nor the training in financial literacy had any impact on financial inclusion as measured by the

usage of bank accounts. However, participants reported that they gained knowledge from the financial literacy training. In addition, participants with training in self-efficacy also showed an improvement in financial self-efficacy as indicated from the results. Although almost all the hypotheses of the research were rejected (7 out of 9), there are intriguing findings that are worth interrogating. In the next chapter, attempts are made further to explain why the participants failed to use their bank accounts, and to consider the way forward.

7 Discussion

7.1 Introduction

Financial inclusion focuses on the access and usage of formal financial services to improve lives. Access, availability, eligibility and affordability are the main barriers that have dominated the current discussion on financial inclusion. The discussion on access to formal financial services has thus focused mainly on the supply-side and has considered, among other things, the deployment of new technology and strategies by banks, telecommunications and financial technology firms. However, while access has increased, mainly through technology, usage has been low.

Important though those improvements are, it is evident that usage of formal financial services cannot be improved simply by improving the banking services on offer. There has to be a demand for them. I have argued here that such demand-side factors (e.g., financial literacy and self-efficacy) have not received adequate scholarly attention. This research therefore focused on two demand-side factors that could influence financial inclusion and sought to identify how a person could increase their chances of being financially included.

To achieve this objective, in addition to providing access to a bank account for research participants, training in both financial literacy and self-efficacy was given to participants to identify whether it would influence their usage of financial services. The results, however, were surprising. The research found that despite people being provided with financial literacy and self-efficacy training, they did not use their accounts. To understand these results, it was important to take a step back and examine considerations underlying demand factors. This includes, in the first place, the reasons the state places so much emphasis on financial inclusion, especially its relation to economic growth and development. It was also important to examine how the level of informality in the local economy influences financial inclusion, and finally to revisit the characteristics of the excluded individuals and how that may have influenced their inability or unwillingness to use formal financial services.

In the previous chapter, the results from the rigorous experimental study showed that virtually none of the participants used their bank accounts, although various training

sessions were provided. There was no difference in banking usage between the various groups, irrespective of whether they received any form of training.

This chapter therefore deviates from the typical discussion chapter in that it cannot simply analyse the results against theory or previous research and discuss the findings. Given that the initially developed theory was clearly not appropriate, it is necessary to identify the core levers that could better explain the surprising outcome. This necessitates identifying novel areas that were not initially theorised or tested.

Therefore, following from the results that training in financial literacy and self-efficacy had no significant effect on financial inclusion, the intention in the rest of this chapter is to understand why there was no propensity for participants to use formal banking services whether or not they had been trained. This chapter continues with a background to the research and recent developments in mobile money systems, and then proceeds to discuss the perceived value of financial inclusion for the individual and the state.

7.2 Background

Financial inclusion has been a subject of great interest to both scholars and policy-makers (Chaia et al., 2009). Work on the topic has, in most cases, considered the technical barriers to inclusion, which focus on the supply side, with an emphasis on the barriers of eligibility, affordability, and physical access (Bihari, 2011b; Demirguc-Kunt & Klapper, 2012; Kempson & Whyley, 1999).

Within the literature on social in/exclusion, mainly from Europe, one finds emphasis on the importance of economic and financial inclusion as part of social inclusion (Boitan & Costica, 2015; Carr & Chen, 2004; Wilson, 2012). Discussions on social inclusion highlight the importance of the role of the individual and what can be done to improve their demand for and usage of financial services. This research has focused on the demand-side barriers to financial inclusion.

Thus, this research intended to address the problem of financial exclusion by focusing on a lack of financial literacy and self-efficacy as possible challenges that individuals face when using financial services. However, the results showed that individuals who had been given bank accounts failed to use the accounts irrespective of the training offered in these two areas—financial literacy and self-efficacy—indicating that such

training has no effect on the usage of a bank account. This implied that the excluded individual did not have any drive towards being included in the formal banking environment. Therefore, the drive towards financial inclusion within some economies does not always originate from the excluded individuals.

In this research, the supply-side core barriers to financial inclusion, specifically access to affordable financial services, were solved by providing a bank account for the participants. The account used was one specially designed by the bank, with minimum know-your-customer requirements for customers often excluded from formal financial services due to factors such as availability and accessibility. The bank account was developed to be compatible with a pre-existing mobile money "wallet", and users could "push" funds from the bank account to pay for services electronically if they wished to use mobile money options. Moreover, it offered additional services like the option of applying for loans and debit cards.

In spite of this careful selection of the account, non-trivial challenges such as not having a valid national ID were experienced in getting participants registered with a bank account. This underlines the continuing importance of addressing the supply-side barriers. However, the evidence required was obtained from individuals for whom those technical barriers seemed to have been overcome. Still, there was wide non-use of the bank account.

This result is consistent with extant evidence which suggests that the removal of technical barriers (e.g., the design of banking offerings or the location of banks) is not enough (Kempson & Whyley, 1999; Sachdeva & Gupta, 2014) to induce the use of formal banking. But removing some demand-side barriers did not shift behaviour either. This suggests that the explanation for the (non-)usage of banking products must lie elsewhere.

Based on observations from this research, other potential reasons for the low usage of accounts are here discussed and highlighted for the future attention of scholars and policy-makers on alternative areas for consideration. In particular, after a discussion on mobile money and financial inclusion, two key considerations are highlighted, namely the perceived value of financial inclusion for the individual and the perceived value of financial inclusion for the state.

7.3 Mobile money and financial inclusion

In recent times, mobile money has become an alternative for paying for goods and services in Ghana. According to the Global Findex 2017 survey, only 58% of the total population in Ghana who are 15 years and above have bank and mobile money accounts (Demirguc-Kunt et al., 2018).

The accounts opened for the participants in this research had digital banking services which allowed account holders to access the services via their phone. Account holders could also move money easily between the bank account and any mobile money account. This allowed the participants to use the network of mobile money agents for both deposits and withdrawals. The blend with mobile money was considered as an important innovation considering that it is gaining significant footprint in the financial space in Ghana, growing from GH¢155.84 billion in 2017 to GH¢223.21 billion in 2018 (Bank of Ghana, 2018).

The expectation was that, considering the recent growth in mobile money services in the country, the ability of the new accounts to be linked to mobile money, and hence the network of mobile money agents, would reduce the impact of any supply-side challenges. However, the mobile money-linked bank account provided to the participants had no impact on the usage of the account. The inability of the mobile money component to accelerate an increase in usage was in line with emerging literature on its role in financial inclusion, as discussed below.

El-Zoghbi et al. (2019) suggested that mobile money has the potential of reducing the vulnerability of rural households to negative shocks by acting as a channel via which they received remittances. However, Batista and Vicente (2020) concluded in their study on the adoption of mobile money in rural Africa that spreading the financial inclusion benefits of mobile money requires the design of technology dissemination strategies that go beyond financial literacy and in-person support. This is because their study realised that those who were using mobile money were early adopters of that technology, with the majority already having a bank account. In other words, the authors cast doubt on the extent to which mobile money could be an effective way to bank the previously unbanked.

The ability of mobile money to promote financial inclusion has been limited to specific instances. Thus, it is more likely to be a means of financial inclusion for people with higher education, entrepreneurs, or people whose work situations have improved in the past year, or for certain demographics, notably females living in an urban area (Myeni, Makate & Mahonye, 2020). Kabakova and Plaksenkov (2018) reached similar conclusions, and identified that underdevelopment of socio-demographic and economic spheres undermines the positive potential influence of digital development in financial inclusion. Therefore, the conclusions of the above researchers serve as a reminder of the multi-dimensional factors that act as barriers to financial inclusion when considering the role of mobile money.

Although the bank account provided to participants in this study was designed to integrate with a mobile money platform, and in principle, all the participants had access to mobile money services, the availability of mobile money services was not adequate to influence usage of the bank accounts. With 82.4% of the sample having only basic education, and all of them living in rural areas, this population represents the demographics of the excluded in the country. Clearly, mobile money cannot be considered as a sufficient catalyst to achieving greater financial inclusion levels.

7.4 The perceived value of financial inclusion for the individual

This research raises important questions about the perceived value of financial inclusion for the individual. It provides clear evidence that the respondents did not value having a bank account. It is therefore important to revisit the reason why and how individuals generally use bank accounts.

I suggest that a more systemic understanding of this phenomenon may be useful. This discussion, based on the results of this research, considers the perception of the role of a bank account in the individual's life along the themes of the influence of a cash-based economy, the linkage between financial inclusion and social inclusion, and the lack of surplus income, as discussed in the sections below.

Two important reasons for an individual to use financial services—either in the informal or formal setting—are for transactional purposes and as a store of wealth, i.e., as savings. The value of financial inclusion to individuals is that it should enhance their ability to carry out these functions. A person's perception that owning a bank account will

facilitate either of the above may most likely influence its usage. To understand why participants of this research did not use their bank accounts, this section discusses how the participants' perceived value of financial inclusion influenced the non-usage of the bank accounts provided.

7.4.1 Financial transactions, social inclusion, and the value of financial inclusion in a cash-based economy

Differences in various economic structures are relevant in the financial inclusion discourse. For instance, comparing the United Kingdom (which has very high inclusion rates) and Ghana provides some explanation to the systemic element of financial inclusion. In the United Kingdom, a bank account is one of the things needed to be considered socially included. This is evidenced by the fact that as of 2017, 96% of the population 15 years and older had a bank account, of which 91% had a debit card (Demirguc-Kunt et al., 2018). Here, electronic payments are used for almost all transactions irrespective of the value, and cash payments are very minimal.

The same report (Demirguc-Kunt et al., 2018) indicated that, with respect only to financial institutions, 42% of the population in Ghana who are 15 years and above had accounts, with only 19% owning debit cards. In other words, whereas getting access to formal financial services in the UK is almost a prerequisite for full participation in the British economy, that is not the situation in Ghana. In Ghana, where this research was conducted, the economy is mainly driven by cash. Many people would rather use cash than use electronic means of payment.

In spite of such national differences, there is limited scholarly discussion examining financial inclusion in terms of the systemic dynamics with respect to where it is situated—within how a community operates. In this case, we are dealing with a cash economy. This is a consequential oversight. For example, whereas incomes and salaries are mandated to be paid through a bank account in developed economies, in developing economies paying wages by cash is usually the norm and not an occasional occurrence. For the participants in this research, payment for goods purchased and services rendered were by cash in almost all instances. Having a bank account was irrelevant as a means to receive income or pay creditors.

Given that one of the presumed purposes of banking is for carrying out day-to-day transactions, if people live in a context where they can successfully operate economically without a bank account or mobile money, as in the case of Ghana, then it is less likely that they will adopt a formal financial service—in this case, using a bank account and mobile money accounts. Therefore, one may conclude that, given a cash-based economy, the value of using a bank account is less recognised by the participants in that economy.

For example, during the post-intervention data collection I met one of the participants, a female trader in the 24 to 34 age group from a community near Assin Fosu. She had not used the bank account, but she was of interest to me because I saw her holding an appreciable amount of cash in a handkerchief. She explained that the money was hers, and when I asked her why that particular money was not in her bank account, she explained that she paid for everything using cash and so she does not need the account. She said that when she wanted to use some of the money, she could just take it from her handkerchief or wherever else she had hidden it.

In short, when bank accounts are not needed for transactions, there is no perceived lack arising from their absence. To this end, Imaeva, Lobanova and Tomilova (2014) recognised that financial products used the most are those supplied by third parties such as employers and governments. Similarly, Chattopadhyay, Gulati and Bose (2018), in their study of awareness and participation of small retailers in cashless transactions, came to the conclusion that irrespective of their awareness of cashless transactions, these retailers are not overtly eager to participate in them.

Despite the above, there is still the need to drive the agenda for pursuing the usage of formal financial services for transactional purposes in cash-based economies. The benefits of a cash-lite economy, such as promoting transparency; enhanced security, speed and timeliness; and lower cost of transaction (Better than Cash Alliance, 2015), may be one channel to use in educating individuals in a bid to move them towards adopting the use of bank accounts for their day-to-day financial transactions. Another observation from the results of this research was that the participants did not consider themselves as lacking any significant social service because they failed to use a bank account. This prompts the need to discuss the role of financial inclusion in the social inclusion debate in predominantly cash-based economies such as Ghana.

7.4.2 Financial inclusion and the value of savings

In seeking reasons for which participants failed to use the account, I found that 55.6% attributed it to the fact that they did not have enough money to do so. This suggests that participants conceptualised banking as useful only when it involves savings. Based on this, it is evident that people find financial services useful if, first and foremost, they have some money. This, they perceive, will then allow them to save, borrow, and transact business. Thus, having an income is central to the use of financial services being perceived as valuable. This research noted that the three participants who used their bank accounts found it useful because they needed the accounts to have their incomes deposited into them.

From the data, 94.4% of the participants reported they earned up to GH¢500.00 monthly. Although these participants carried out various financial transactions involving payment for goods and services for which they could have used their bank accounts, many felt that they did not have "enough" money to use a formal financial service. Therefore, one outcome of this research was the response from participants who believed that people need formal financial services only when their wealth increases. For example, one young man (in the 18 to 23 age group) worked as a farm hand and offered his labour to farm owners on daily basis. I asked him why he did not use his bank account and like many of the participants he explained that the money he earned was not enough even to meet his everyday needs, and that he therefore could not save any of it. He explained that he would put some money in the bank account if he got more money, but that he could not yet afford it.

This implies that a significant section of people perceive a bank account to be a place to store excess liquidity, that is, a channel for savings. Therefore, if they do not see themselves having enough money to save, the concept of using a bank account is irrelevant.

Given that the participants were engaged in economic activities where income was low and frequently irregular, one can reasonably conclude that they did not consider the use of a bank account relevant in their current circumstances. Engaging them further on this issue, I encountered the argument that they never have enough money to save a portion at the bank.

This phenomenon cuts across all participants irrespective of the training received. This outcome was considered significant in this research considering that 82.4% of the participants had education of only up to basic level. This is integral to the financial inclusion debate, considering that on the national level, 53.7% of the population have received only basic education, which may have implications on the types of jobs they might get and their earning capacity.

Thus, if having a formal financial service is linked to excess liquidity (that is, as a channel for savings) by a significant proportion of individuals, then promoting financial inclusion faces severe structural barriers which have little to do with the products on offer, but are rather associated with the circumstances of the financially excluded, including employment type and educational level. This is crucial for Ghana as the participants for this research are largely representative of the Ghanaian population dynamics, with agriculture as the dominant economic activity (49.1% of the population is rural), 53.7% with education up to basic level, and the private sector being the largest employer (93% of all jobs, of which 86.1% are in the informal sector) (Ghana Statistical Service, 2012).

From the above, the view that financial inclusion is set to provide the catalyst for formal savings, especially among the excluded, has limited validity. Having a savings product designed for those at the bottom of the pyramid is necessary, but not enough for them to use the account. As this research has confirmed, there is a nexus between financial inclusion and low-paying jobs, and there is the need for financial inclusion to evolve alongside other developmental policies.

Financial inclusion policies need to go hand in hand with labour laws and employment. This is because, if unemployment is high or there is underemployment, promoting financial inclusion is likely to be difficult. Therefore, the boundaries of financial inclusion need to be broadened to include measures to promote economic empowerment and general education of the excluded. In addition, there is the need to develop strategies that may take cognisance of, but develop, the mind-set of the excluded in this category to recognise, for example, that savings of even small amounts may be a wise financial strategy.

Irrespective of the above, there is an active drive promoting financial inclusion, especially in developing economies. This raises the argument on the objectives underlying why

governments strongly advocate greater financial inclusion and consider financial inclusion advocacy as a policy priority, especially in cash-based economies and countries where inclusion is low. The perceived linkage between financial inclusion and economic growth and development is highly relevant in this respect.

7.5 The perceived value of financial inclusion for the state

The issue of financial inclusion has become a concern for governments and supranational organisations alike. One of the significant reasons underlying the governmental push for greater financial inclusion is often seen in the discussions on the relationship between financial inclusion and economic growth and development, as discussed below.

7.5.1 Financial inclusion and economic growth and development thus far

The literature provides no clear-cut agreement on the question of whether financial inclusion leads to economic growth and development or the other way round. Storchi et al. (2020), in studying how financial services help specific groups of poor people build resilience and capture opportunities, came to a conclusion that there was mixed evidence on the impact of financial services on outcomes such as employment, entrepreneurship and income. The argument in favour of financial inclusion leading to economic growth has been that in order to achieve economic development and growth, financial inclusion is needed as a catalyst that reduces poverty and income inequality, as well as increasing the income of the poor and marginalised communities, leading to an increase in economic growth (Lenka & Sharma, 2017). According to Lenka and Sharma (2017), financial inclusion is a priority for policy-makers as it is a tool for promoting financial sector development and ensuring sustainable long-run economic growth. In India, Lenka and Sharma (2017) concluded that financial inclusion in the long as well as the short run positively influenced economic growth. The argument is that there is a positive correlation between financial inclusion and economic growth (Yang & Yi, 2008; Calderón & Liu, 2003; Sarma & Pais, 2011).

Sharma (2016) extended this argument and suggested that the various dimensions of financial inclusion, specifically banking penetration, availability of banking services, and usage of banking services in terms of deposits, have a positive association with

economic growth. In more detailed terms, Van and Linh (2019) concluded that the number of bank branches per 100,000 adults, the number of ATMs per 100,000 adults, and domestic credit to the private sector are related to economic development. This is because being unable to access formal financial products and services may result in a loss of development opportunities, further poverty, and higher costs in accessing financial services.

One thing that runs common to the above arguments is that the positive relationship between financial inclusion and economic growth and development has been studied primarily using existing information such as the number of ATMs, levels of domestic credit, and bank branches. This is explained by Kim (2016), who suggested that financial inclusion allows financial services to be extended to the unbanked to enable them to improve their living standards, leading to general economic development and growth.

On the contrary, from the results of this research, participants did not view being financially included as a means of improving their economic situation. Although they had bank accounts, they did not use them at all. This challenges the positive correlation that has been perceived between financial inclusion and economic growth and development, especially considering that the research did not use existing indicators of the financially included but rather granted an opportunity for the excluded to be included. Thus, it is difficult to view financial inclusion as a means of triggering economic growth and development. This research therefore suggests that the positive relationship between financial inclusion and economic growth and development is not a simple linear relationship. It also implies that the causality needs to be interrogated.

From the discussions above, historically, as countries developed and people became richer, the demand for formal financial services increased. Financial service providers provided more and more complex products to meet the growing demand resulting in financial inclusion levels of over 90%.

In less developed countries, there is the hope that, given the largely informal system and lower levels of development, having access to formal financial services may accelerate economic growth, which is the other way round from what has happened in the past in other countries.

However, what this research has shown is that in promoting formal financial services to accelerate growth, government and policy-makers have not critically examined the existing social and economic conditions that might make that acceleration work. Instead, the attention has been on the fact that financial inclusion offers governments means to monitor the financial activities of their economies, which leads to a better gauge of economic growth and development.

In so doing, pursuing greater financial inclusion gives governments a better handle on and record of the economic activity in a country, as formalised financial transactions are usually carried out with respect to commitments for goods and services. The result of this is the accumulation of data which can provide a more accurate prediction of economic growth and development, but not necessarily create growth per se.

Consequently, one of the main advantages of increased financial inclusion for an economy is the formalisation of financial services, which arguably contributes significantly to the formalisation of the entire economy. This enables governments to track the development and growth of their economies more accurately. This view is built on the assumption that the formalisation process is set to result in an increase in both financial inclusion and economic development. Through this, the positive relationship between financial inclusion and economic growth and development is established.

However, in developing economies, as this research has shown, governments need to note that there are other key determinants that should equally guide financial inclusion models. This research was focused on the readiness of people to use financial services (e.g., potentially build up a credit record to access a loan service) and the results indicated that there was a lack of alacrity towards formal financial services and products. Therefore, in addition to developing the supply-side conditions to increase the usage of financial services, there is the need to also develop alongside them other demand-side related conditions, including the educational level of people, digital skills, and general understanding of the formal financial system. These need to be carefully structured in the models designed to increase financial inclusion within a holistic understanding of the economy, as discussed in earlier sections.

The structure of an economy cannot be overlooked by governments in formulating financial inclusion initiatives to achieve desired results. Whether an economy is

predominantly formal or informal must be taken into account in the design of financial inclusion models. In this research, all the participants were engaged in the informal sector of the Ghanaian economy. This has prompted the need to discuss the influence of the informal economy in the drive towards usage of formal financial services. The next section provides a detailed discussion on financial inclusion and the informal economy.

7.5.2 Financial inclusion within the informal economy

About 2 billion of the world's workers, representing 61% of the its workforce, are in the informal sector (OECD/ILO, 2019). There is, however, a wide disparity with the informal sector, representing 70% of employment in developing economies and 18% in developed economies (OECD/ILO, 2019). Consequently, the influence of the informal economy on financial inclusion, especially within countries where it is prevalent, cannot be overlooked in any policy discourse.

The results from this research indicate that there is the need to pay attention to the concept of financial inclusion within the economic dynamics of a group of individuals. In this instance, the dynamics between the informal economy and how it affects the promotion of financial inclusion are consequential. This is because introducing a formalised financial service into an informal economic setting raises questions of mismatches between attitudes and systems.

The discussion on the existence of both the formal and informal economy has long received attention from scholars. Lewis (1954) suggested a dual economy model in which these two economic sectors operate together. He described the formal sector as comprising economic activity largely in urban areas with capital-intensive firms and wage labour. The informal economy, on the other hand, is found mainly in rural areas with labour-intensive firms and low wages.

According to Godfrey (2011), the informal economy is huge in terms of both its practical impact on economic activity and the intellectual disciplines that touch on this form of production and exchange. He continues to point out that those at the bottom of the economic pyramid or in emerging markets operate in systems where informal activities predominate. In sub-Saharan Africa, the OECD/ILO (2019) notes that 89.2% of the economic workforce operates within the informal economy.

In the case of Ghana, where this research was conducted, a large segment of the unbanked is within the informal sector. The informal sector in Ghana contributes about 80% of the workforce of the country (Osei-Assibey, 2009; Ghana Statistical Service, 2012). This research presented an opportunity to study the concept of financial inclusion in a typical developing economy. All the participants were engaged in the informal sector of the Ghanaian economy and conducted various day-to-day financial transactions using cash rather than their bank accounts. Considering that 139 out of 142 of the participants in this research did not use their bank accounts at all, it is important to focus on the role of the structure of an economy (in this case, the informal economy) in shaping policies leading to improved financial inclusion.

While the primary objective of the research did not consider the influence of the informal economy in the drive towards promoting greater financial inclusion, the results triggered a reflection and an observation that in terms of the working population, the informal economy predominates in Ghana, and has peculiar features that must be carefully considered in any attempt to introduce participants in such economic systems to financial inclusion. This follows from the results of the research demonstrating the fact that the informal economic system, with its underlying prevalence of cash-based transactions, poses a challenge to financial inclusion and does not enhance its growth.

All three participants who used their account at a point in time during the six-month research period were forced to do so as a result of engagement in an activity which required payment to be received via a bank account. Although the initial theme of this research was to consider financial inclusion within the social inclusion/exclusion debate, the results drew attention to the fact that there is an informal economic system that exists parallel to the formal economy with its own peculiar systems. Within this informal economic system, having a bank account or being financially included may not be a priority of its participants and participants can categorise themselves as socially included without formal financial services. On the contrary, it may rather be difficult to adopt the ways of these services, as structures at present may make it cumbersome to use a bank account.

In economies where the informal system thrives, cash is typically a preferred means for paying for goods and services. For instance, grocery shopping takes place predominantly in open-air markets with traders who want ready cash to transact with

other businesses, and transportation is also paid for in cash. Farmers are usually small-scale farmers who are looking for immediate cash for onward spending. A lot of people are involved in daily activities and are paid in cash. The use of cash is considered fast, simple, and acceptable to them. Paying cash for social amenities such as rent, education, transportation, and clothing, to mention a few, is often preferred to using formal financial payment systems. Although the introduction of mobile money has sought to formalise some of these cash-based transactions, the results of this research indicate that there is still much ground to cover in the formalisation of financial services, even with the growing acceptance of mobile money.

The effect of training on the 142 participants of this research was tested by providing them with both a bank account and training in financial literacy, self-efficacy, both or neither. The participant feedback from the training on financial literacy indicated that there were some useful lessons from the training. For example, while interacting with a respondent during the post-intervention survey, I found she was enthusiastic about having learnt some basics on budgeting; however, the same person had significant cash on her and did not see the need to deposit it in her bank account. In addition, many of the participants were eager to share the knowledge with people who had not attended the training and were willing to invite such people whenever training of that nature was to occur again. Irrespective of this, after so much effort to introduce participants to the banking system and increase its uptake, there was no difference between the groups in the usage of the bank accounts.

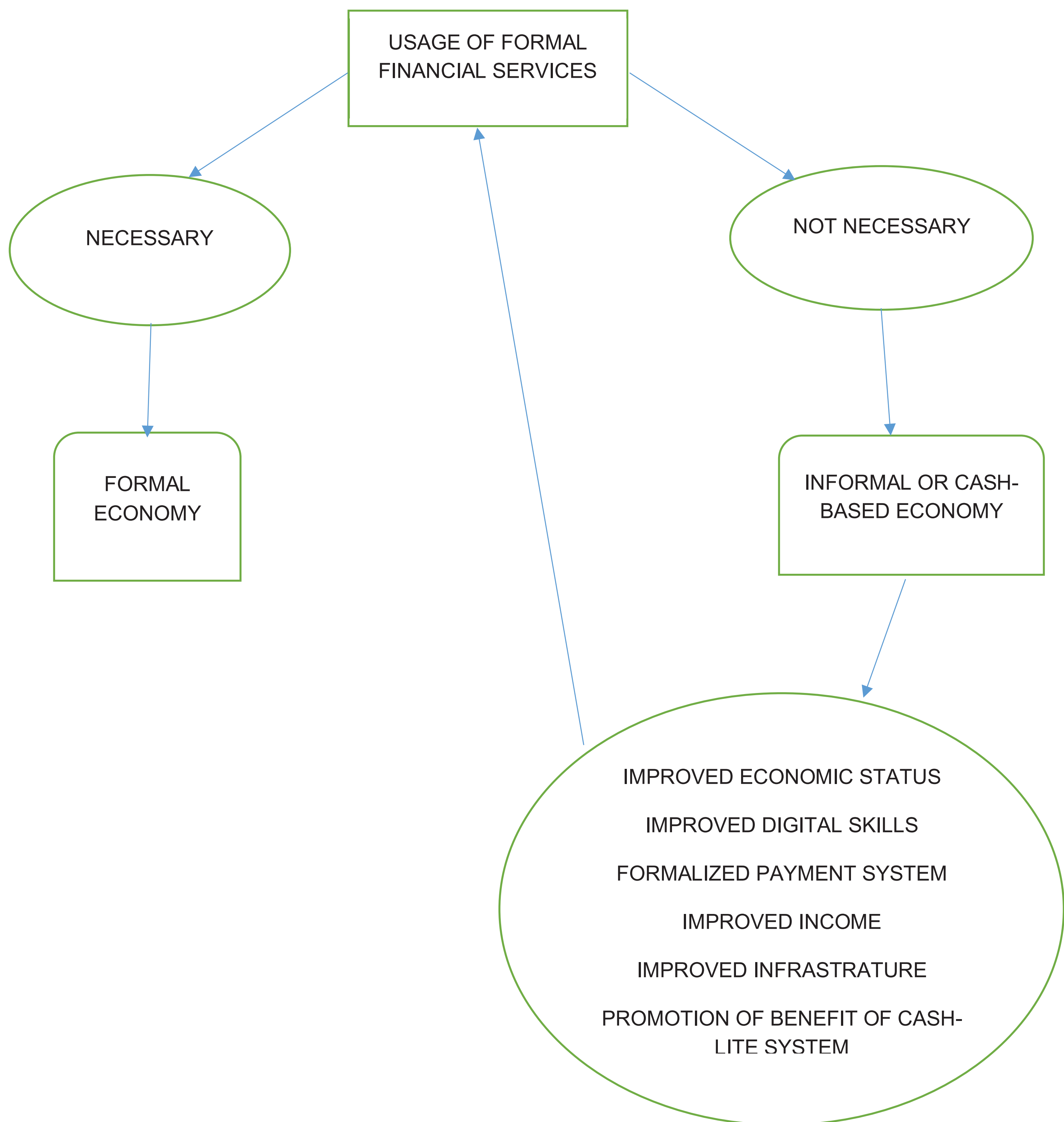
Moreover, engagements with the participants did not reflect any concern that they were unable to carry out their day-to-day financial transactions effectively outside financial institutions. The general acceptance of cash for all transactions in their communities, and in some cases, the preference for it, undermines the importance of formal financial services. As a result, the excluded individuals did not consider themselves to be losing out on financial service.

Specifically, in an informal economy, this research has proven that removing the traditional barriers to financial inclusion as is often discussed by stakeholders is not sufficient to promote it. This is because, until individuals acknowledge the value of using a formal banking system, whether or not it is an easy system to use and whether or not they feel competent in using it, they are unlikely to use it. Moreover, the value of the

formal banking system is intertwined with the nature of the economic system more generally.

The dominant role of the informal economy, especially in Africa, cannot be underestimated and therefore discussing financial inclusion within this economic system is critical, timely, and crucial. There is a challenge as the excluded, per their lifestyle, do not consider formal financial services as a vital component of their financial behaviour. Hence, formalised banking will not automatically lead to a formalised economy. This research has shown that although there are financial products and services developed for those in the informal sector, even when there are polices designed for their uptake, a challenge remains when it comes to people using these formal financial services. Financial inclusion within an economy that is predominantly informal therefore must be based on a strategy that accommodates this economic structure to achieve the desired results. It is very important for stakeholders to recognise this and critically consider it in policy formulation. The summary of the discussions above is presented in Figure 7.1.

Figure 7.1 Outcome of research on demand-side factors for financial inclusion



7.6 Concluding Comments

This study proceeded from the view of financial inclusion being one of the factors that a socially excluded individual needs to move towards social inclusion. Following from this, the study theorised that financial literacy as a skill and self-efficacy as an attitude were two demand-side factors that would facilitate the usage of banking services by an individual previously unbanked. However, the results showed otherwise, and the research hypotheses were not supported. This clear non-usage of the bank account suggested the need for further interrogation. The discussions in this chapter propose two key elements.

I first considered the value of financial inclusion to the unbanked individual. The discussion noted that financial inclusion strategies must take into account whether an excluded individual operates in a cash-based economy, where their ability to carry out day-to-day transactions with cash makes the value of a formal financial service negligible. Another point raised was the fact that within certain economic structures, such as the Ghanaian economy, to be financially excluded does not mean the individual is socially excluded and, therefore, the individual does not consider the usage of a bank account as a means to improve their social standing. Finally, for the individual in a certain income bracket, a formal financial service is considered primarily as a means to store excess funds. Hence, the absence of substantial surplus funds makes the bank account irrelevant to them. Therefore, in developing financial inclusion strategies, it is equally necessary to develop strategies that seek to improve the economic status of the excluded.

The second element in this discussion considered the value of financial inclusion for the state. The result challenged the notion that financial inclusion has a positive correlation with economic growth and development with the conclusion that it is not a linear relationship. It was previously argued that because financial inclusion leads to an increase in the formalisation of the economy, the positive relationship arises. However, in developing economies, as this research has shown, governments need to develop other important demand-side-related conditions such as improving the educational level of people, digital skills, and general understanding of the formal financial system to lead to an increase in the usage of formal financial services. In addition, the significance of the structure of an economy was also identified as integral to the discussion of financial inclusion. The dominance of the informal economy in a country must be critically

considered in any financial inclusion initiative. The discussions also led to the need for rethinking the delivery of financial inclusion strategies for developing economies with a large informal sector, cash-based economy, and significant population within rural settings with low income and wages, as shown in Figure 7.1.

Although this discussion is still largely speculative, it suggests important areas of future research and a shifted emphasis in policy-making. The final chapter of this research concludes with policy implications arising out of these discussions, the theoretical contributions of this research, and the limitations of the research.

8 Conclusion

8.1 Introduction

Financial inclusion is a subject that has engaged both government and policy-makers in decision-making over the years (Bruntha & Indirapriyadharshini, 2015; Demirguc-Kunt et al., 2018; Lenka & Sharma, 2017). Irrespective of significant efforts made at improving financial inclusion, especially in developing economies, a large number of people remain unbanked (Demirguc-Kunt et al., 2018). This research, although recognising financial inclusion to include banking, insurance, and remittance, concentrated on banking services only.

Bank account ownership was defined as having an individual or jointly owned account at a financial institution. According to the Global Findex Survey 2017, the share of bank accounts owned by adults worldwide has progressed from 51% in 2011 to 62% in 2014, and further to 69% in 2017 (Demirguc-Kunt et al., 2018). However, there is a wide disparity between developed countries and developing countries, with developed countries recording an average of 94% bank account ownership and developing countries an average of 63% bank account ownership (Demirguc-Kunt et al., 2018).

Stakeholders have invested much effort in developing supply-side strategies to boost financial inclusion. The barriers of availability, accessibility, eligibility, and affordability have received a lot of attention—both in identifying them as barriers, and also developing solutions to address them (Bihari, 2011b; Diniz et al. 2012 Kempson & Whyley, 1999; Zins & Weill, 2016). However, the demand side of financial inclusion, which focuses on the individual and the usage of financial services, has received limited attention. The definition of financial inclusion concludes with individuals improving their economic well-being through the use of their accounts. Therefore, this implies that account ownership is not enough to conclude that an individual is financially included, as the active use of such an account is equally important.

It is against this backdrop that I sought to propose the necessity of certain personal characteristics as a prerequisite for wanting to be banked, as well as of working towards developing these characteristics with the aim of driving the usage of bank accounts in order to make the individuals financially included. The basis of the hypotheses for this

research was the perceived causal relationship between financial literacy and self-efficacy and financial inclusion. The hypotheses were developed to test the following:

1. Financial literacy increases the knowledge of the individual to enable him/her to increase the usage of financial services as measured by the volume and value of transactions.
2. Self-efficacy improves the capabilities of the individual to enable him/her to increase the rate of usage of financial services as measured by the volume and value of financial services.
3. Financial literacy and self-efficacy interact to increase the knowledge and capabilities of the individual to enable him/her to increase the rate of usage of financial services as measured by the volume and value of financial services.

8.2 Research design and methodology

The main hypothesis of this research was that the independent variables of financial literacy and self-efficacy have a significant influence on financial inclusion. To test this hypothesis, the study adopted a causal design to identify the effect of the treatment as well as test its significance (Yamamoto, 2013). The research allowed experimentation for the manipulation of the various independent variables. It used a pre-intervention/post-intervention quasi-experimental design with a control group.

Data collected were from four communities, with three of them each representing a particular treatment group, and the fourth representing the control group. For the treatment groups, Group A had training in financial literacy only, Group B had training in self-efficacy only, and Group C had training in both financial literacy and self-efficacy. Each group came from a defined community. The study embarked on the selection of communities such that although they were very similar, the groups were geographically far apart enough to avoid any contamination that might have influenced the actions of the participants in the research.

Although I recruited a total of 239 at the initial stage of the research, 142 participants were found to have successfully completed all the required stages of qualification for the research and as such their results were the only responses analysed for this research. The individuals were monitored for six months on how they used their accounts. The use of a field experimentation design mitigated the effects of external validity. Also, the use

of a pre-intervention/post-intervention design was to ensure a balance between internal and external validity.

8.3 Findings

The results from this this study presented an unexpected relationship between financial literacy, self-efficacy, and financial inclusion, contrary to expectation. Firstly, in relation to the bank accounts opened for the participants, the study reported that only three participants used these accounts. Also, for the three persons who used the accounts, the only pattern of usage was that they had earned income from the formal sector.

These results present a contrary expectation to the assertion that addressing the supply-side barriers of availability, accessibility, eligibility, and affordability will lead to increase in financial inclusion (Bihari, 2011b; Kempson & Whyley, 1999; Zins & Weill, 2016). In addition, the results rejected the hypothesis of this research which alluded to the proposal that in addition to addressing the supply-side barriers to financial inclusion, demand-side barriers of financial literacy and self-efficacy are equally important.

This is in spite of the fact that the results of the post-intervention survey on financial literacy report that the participants recognised that learning had taken place. However, this did not lead to the usage of the bank accounts opened for them.

In contrast to the school of thought positing that financial literacy promotes financial inclusion (Birochi & Pozzebon, 2014; Cohen & Nelson, 2011; Cole et al., 2011), this research found the opposite. Not only did the behaviour of respondents who had received financial literacy training not change, but their sense of financial self-efficacy was the lowest of all respondents, including those who did not receive any financial-inclusion-related intervention. The conclusion thus presented is that financial literacy training may improve the financial knowledge of individuals; however, it does not necessarily lead to either confidence in engaging in financial transactions or financial inclusion. In contrast, although the self-efficacy training (both on its own and together with financial literacy) did not translate into financial inclusion, it impacted on financial-decision making.

Although the results indicate that financial literacy and self-efficacy may not necessarily promote the financial inclusion of an individual, individual-related factors nevertheless

exist that are key to the success of financial inclusion. These go beyond the skills and knowledge of the individual and rather lie in the economic structure within which the individual is embedded, the level of economic engagement of the individual, and the objectives of those promoting financial inclusion. As a result, financial inclusion, as embedded in social inclusion, requires that it is promoted not on a silo basis but rather holistically addressed.

8.4 Discussion

The research hypothesised that demand-side factors, namely financial literacy as a skill and self-efficacy as an attitude, were important to get the unbanked banked. The outcome of this research did not support the hypotheses. In fact, in the instances comprising this study, these two attributes had no significant effect on financial inclusion. From the results of this research, I argue that the main reasons for this are the following:

1. In a cash-based economy, the value of using a bank account is not recognised since it is not required for carrying out day-to-day financial transactions. Thus, the relevance of being financially included is not a priority for the excluded. Being financially excluded does not always imply that the individual is socially excluded. The ability to carry out financial transactions with minimum limitation outside the formal financial system eliminated the notion of financial inclusion being a way of promoting social inclusion.
2. There is the perception among a significant group of people that a bank account is only important for savings. As a result, the value of the bank account is judged only by how well it allows for the management of “surplus” income, and the absence of such renders the bank account pointless.
3. The often-discussed relationship by which financial inclusion leads to an increase in economic growth and development may not always be the case. This is because the causality is often measured using the relationship between formalised financial transactions against indicators of economic growth and development. However, this research has shown that for developing economies there is a complex causality, with a tendency for financial services to become relevant to the excluded when there are improvements in livelihoods, which then require them to employ formal financial transactions to complement the improved standard of living.

This unexpected result and the reasons suggested above indicated that there are other factors that are equally relevant in promoting financial inclusion. The economic structure and the economic system as well as the characteristics of communities with significant unbanked populations are essential to consider when developing financial inclusion initiatives.

8.5 Contribution of the Research

8.5.1 Theoretical contribution

The findings of this research are significant in the field of financial inclusion. The research placed emphasis on the usage of financial services from the demand-side perspective, which has, for a long time, received limited attention in the literature. Considering the perceived belief that financial literacy is positively related to financial inclusion (Astuti & Trinugroho, 2016; Murendo & Mutsonziwa, 2016) and self-efficacy has the ability to propel an individual towards an identified action (Bandura, 1977; Combs & Luthans, 2007; Phan & Ngu, 2016), this research did not seek to confirm whether or not this holds from existing data. It rather sought answers by directly providing these two interventions to a group of participants with newly provided bank accounts, and observed their impact on the usage of bank accounts. The first theoretical contribution from the results was that their deviation from the hypotheses showed that promoting financial literacy as a skill and self-efficacy as an attitude does not necessarily lead to usage of financial services by newly banked individuals. Rather, self-efficacy training improves the perception of financial self-efficacy of the individuals either on its own or in addition to financial literacy training. On the other hand, financial literacy training alone does not translate into an increase in the individual’s perception of financial self-efficacy.

Secondly, this research extends the boundaries of the debate of financial inclusion by drawing attention to the need to discuss it in concurrence with policies and programmes designed to address the broad array of economic factors confronting the excluded. In addition, the structure of an economy—whether informal or formal—is critical to the design of products and services to stimulate financial inclusion.

8.5.2 Methodological contribution

This study extends the research on financial inclusion beyond the analysis of existing data. Previous studies have been skewed towards using existing data resources. However, this research was conducted by observing the banking behaviour of the participants as the various training interventions were provided. This real-life scenario provided an insight on the relationship between the financially excluded and efforts aimed at driving them towards financial inclusion. The research also contributed to the limited studies conducted on the demand-side requirements for financial inclusion.

8.5.3 Practical contribution

This research highlights the question of who is pushing for greater financial inclusion and the reasons for that. The results have indicated that individuals may not consider being financially included as an achievement to work towards. On the other hand, governments are very much interested in seeing their economic participants conduct their financial transactions within the formal space. The practical contribution of this research lies in its implications for rethinking the delivery of financial inclusion strategies. As a result, the following policy directions are proposed.

First, policies and strategies that focus only on access to bank accounts and monitor the number of accounts opened are unlikely to achieve greater financial inclusion. Financial inclusion should necessarily imply the usage of these accounts and this must, as a matter of certainty, be part of the measurement of its success. In addition, giving someone a bank account does not automatically ensure usage, thus efforts targeted towards opening bank accounts for the unbanked may better be channelled towards developing strategies that will promote the value of owing a bank account and lead to self-driven account-opening initiatives.

Secondly, the notion that an increase in financial inclusion leads to an increase in economic growth and development was challenged in this research. Rather, there is a more complex relationship between financial inclusion and low-paying jobs, especially in situations where bank accounts are viewed as a channel for savings. As a result, policies and strategies for financial inclusion ought to work in concert with other developmental policies, including employment generation, supporting livelihood, building resilience and general economic well-being (Lahaye, Abell & Hoover, 2017), and adherence to labour laws. In addition, strategies to boost economic empowerment and general educational

levels in financially excluded areas are vital and urgent, especially for the youth, who are regarded as the future. This cannot be overemphasised in Africa, which, overall, has one of the largest percentages of youth in the population demographics.
Thirdly, in this research, the participants had the bank accounts opened for them, which is sometimes the mode for financial inclusion initiatives, rather than opening them on their own initiative. This account-opening exercise comes at a cost and thus with non-usage the question arises as to the worth of the initiative. There is therefore the need for NGOs as well as other stakeholders to increase attention, resources and effort on pursuing programmes related to skills development and income-generating activities in the attempt to increase financial inclusion. It is important that this is done alongside the improvement of infrastructure especially in rural communities, which have the highest proportion of the financially excluded. This will then lead to economic growth and development. Once these are in place, then financial literacy and self-efficacy training as well as other demand-side solutions have a better chance of impacting financial inclusion.

Finally, overlooking the structure of an economy in policy formulation for financial inclusion may not deliver the desired results. Financial inclusion in a predominantly informal economy presents peculiar challenges. The prevailing presence of the informal economy in Africa, especially sub-Saharan Africa, points to the fact that it is important to formulate and implement financial inclusion strategies, products, and services that recognise the dominance of the informal economy to attract its participants to embrace formal financial services.

8.6 Future Research

The significant number of the financially excluded continues to make the dialogue about financial inclusion relevant and of dominant interest to various governmental and supranational institutions.

Many of the recommendations of this study were developed to make sense of the counterintuitive findings of a robust experimental design. However, those recommendations, some of them with far-reaching implications, have not been empirically tested. It is critically important to test those assertions.

In addition, the methodology of this research was purely quantitative. The role of qualitative methodology was highlighted following the results of the study. A mixed methodology would have provided additional information from the participants. This could have also led to the identification and discussion of any social norms that may be influencing the non-usage of the bank accounts. Future research can therefore carry the enquiry into further studies using qualitative methodology to interrogate further the reasons for the non- or partial usage of bank accounts, as well as provide a better understanding of the relationship between social norms and financial inclusion in Ghana.

Although the bank account opened for the participants had mobile money features, participants did not use the accounts. The rise of mobile money has served as an alternative channel for financial inclusion (Zetterli, 2015), even though in my research it did not make any impact. Future research may want to use a similar methodology to test the impact of only mobile money accounts.

The data for this research were gathered over a six-month period. Future research may want to extend the period to identify whether time may provide a catalyst for the usage of bank accounts.

8.7 Limitations

This study was limited to considering only two attributes of the excluded individual, being financial literacy as a skill and self-efficacy as an attitude required for financial inclusion. There may be other skills and attributes equally worth examining; however, these were not considered.

Secondly, the methodology of this research was limited to quantitative methods, specifically, a quasi-experimental methodology. Although this was sufficient to test the hypothesis, using a mixed method by incorporating some qualitative methods such as case studies might have provided additional information, especially given the unexpected findings.

Thirdly, the sample selected for the research was primarily engaged in agricultural and agricultural support activities. This was representative of the dynamics of economic activities in Ghana. However, other economic activities could have also been considered. Farmers are particularly likely to operate efficiently without access to formal

banking. A study that considers sectors with a greater level of (potential) integration into the formal economy would help test some of the assertions made in the discussion.

The research did not interrogate the role of social norms in financial inclusion with respect to the participants. This might also have provided additional information on why they failed to use their bank accounts.

Lastly, the cost of conducting the research was such that the researcher was not able to observe the training sessions of the participants. While this was beneficial in ensuring that there was no contamination on the part of the researcher, it also meant that the researcher lost out on witnessing the nuances associated with the training sessions with respect to questions and contributions from the participants.

8.8 Conclusion

Financial inclusion continues to receive active discussion, especially in developing economies. Supply-side barriers to financial inclusion have dominated literature and various solutions to those barriers have been proposed.

However, serious engagement with demand-side factors has been lagging with respect to attention from scholars. This research sought to propose that financial literacy (as a skill) and self-efficacy (as an attitude) are two attributes of the individual that can drive financial literacy.

However, the results from the research indicated that the financially excluded may not always perceive financial inclusion as a necessary aspect of their social existence, especially where they are in a cash-based economy and are engaged in economic activities that do not provide them with surplus income for savings. Meanwhile, other stakeholders, such as governments, perceive financial inclusion as one of the means to for driving economic growth and development, and hence are eager to drive that agenda.

Therefore, the research concludes that stakeholders in designing financial inclusion policies ought to pay particular attention to developing the economic well-being of the excluded and address underemployment concerns, as well as factor in the peculiar dynamics of the informal economy.

List of references

Abosedra, S., Shahbaz, M. & Nawaz, K. (2016). Modeling causality between financial deepening and poverty reduction in Egypt. *Social Indicators Research.* Vol. 126, 995-969. https://doi.org/10.1007/s11205-015-0929-2.

Aduda, J. & Kalunda. E. (2012). Financial inclusion and financial sector stability with reference to Kenya: A review of literature. *Journal of Applied Finance & Banking,* 2(6), 95-120.

Allen, P., Bennett, K. & Heritage, B. (2014). *SPSS Statistics Version 22*. A practical Guide, 3rd Edition, Centage Learning Australia.

Allen, F., Demirguc-Kunt, A., Klapper, L, Soledad, M. & Peria, M.S.M. (2016). The foundations of financial inclusion: understanding ownership and use of formal accounts. *Journal of Financial Intermediation*. Vol. 27, 1-30. http://dx.doi.org/10.1016/j.jfi.2015.12.003.

Allen, F., Demirguc-Kunt, A., Klapper, L. & Peria, M.S.M. (2012). The foundations of financial inclusion: understanding ownership and use of formal accounts. Policy Research Paper 6290, The World Bank, Development Research Group.

Astuti, P. & Trinugroho, I. (2016). Financial literacy and engagement in banking. *Journal of Economics and Economic Education Research*. Vol. 17(1), 1-6.

Asiedu-Mante, E. (2011). *Rural banking in Ghana* (1st ed). Combert Impressions Ltd: Ghana.

Atkinson, A. & Messy, F. (2012). Measuring financial literacy: Results of the OECD/ International Network on Financial Education (INFE) Pilot Study, OECD Working Papers on Finance, Insurance and Private Pensions. No. 15, OECD Publishing. https://doi.org/10.1787/5k9csfs90fr4-en.

Barry, B. (2001). Social exclusion, social isolation and the distribution of income. In: Hills, J., Le Grand, J., & Piachaud, D. (eds). *Understanding Social Exclusion*, Oxford University Press.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review.* Vol. 84(2), 191-215.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist.* Vol. 37(2), 122-147.

Bank of Ghana (2019). Annual Report, 2019

Bank of Ghana (2018). Payment Systems Oversight Annual Report, 2018.

Batista, C. & Vincente, P. (2020). Adopting mobile money: Evidence from an experiment in rural Africa. *AEA Papers and Proceedings 2020,* 110:594-598, https://doi.org/10.1257/pandp.20201086.

Bawumia, M. (2017, March 22). Unlocking Ghana's economic potential with mobile money and payment systems. Retrieved from http://ghanaweb.com/GhanaHomepage/business/full-speech-Bawumia-speaks-at-5th-Economic-Outlook-and-Business-Strategy-Conference-521296.

Better Than Cash Alliance (2015). The journey toward 'cash lite'. Addressing poverty, saving money and increasing transparency by accelerating the shift to electronic payment.

Bihari, S. C. (2011a). Growth through financial inclusion in India. *Journal of International Business Ethics,* Vol. 4 (1), 28-41.

Bihari, S. C. (2011b). Financial inclusion for Indian Scene. *SCMS Journal of Indian Management*, 5-16.

Birochi, R. & Pozzebon, M. (2014). Improving financial inclusion: Towards a critical financial education framework. *Revista de Administracao de Empresas.* Vol. 56(3), 266-287.

Boitan, I. A. & Costica, I. (2015). Social inclusion developments: A European Cross-Country Perspective. *Financial Studies*. Vol. 19 (4), 32-42.

Boone, H. N. & Boone, D. A. (2012). Analyzing Likert data. *Journal of Extension*. Vol. 50 (2), Article 2TOT2, Available at http://www.joe.org.

Bongomin, G. O. C., Ntayi, J. M., Munene, J. C. & Nabeta, I. N. N. (2015). Financial inclusion in rural Uganda: Testing interaction effect of financial literacy and networks. *Journal of African Business*. Vol. 17(1), 106-128. https://doi.org/10.1080.15228916.2016.1117382.

Bruntha, P. & Indirapriyadharshini, B. (2015). An enquiry into financial inclusion with special reference to street hawkers of Pollachi, Tamil Nadu. *The IUP Journal of Marketing Management,* Vol. XIV (4), 56-68.

Burchardt, T., Le Grand, J. & Piachaud, D. (2001a). Introduction In: Hills, J., Le Grand, J., & Piachaud, D. (eds). *Understanding Social Exclusion*, Oxford University Press.

Burchardt, T., Le Grand, J. & Piachaud, D. (2001b). Degrees of Exclusion: Developing a dynamic multidimensional measure. In: Hills, J., Le Grand, J., & Piachaud, D. (eds). *Understanding Social Exclusion*, Oxford University Press.

Burjorjee, D. M., El-Zoghbi, M., Meyers, L. & Heilman, B. (2017). Social norms change for women in financial inclusion. Brief, CGAP.

Campos, F., Frese, M., Goldstein, M., Iacovone, L., Johnson, H. G., McKenzie, D. & Mensumann, M. (2017). Teaching personal initiative beats traditional training in boosting small business in West Africa. *Science,* Vol. 357, 1287-1290. doi.org.10.1126/science.aan 5329.

Carr, M. & Chen, M. (2004). Globalization, social exclusion and gender. *International Labour Review,* Vol. 143, 129-160.

Chaia, A., Dalal, A., Goland, T., Gonzalez, M. J., Morduch, J.& Schiff, R.L. (2009). Half the world is unbanked. Financial Access Initiative Framing Note. Retrieved from http://www.financialaccess.org.

Chakravarty, S. R. & Pal, R. (2013). Measuring financial inclusion: an axiomatic approach. *Journal of Policy Modelling*. Vol. 135, 813-817.

Chattopadhyay, S., Gulati, P., Bose, I. (2018). Awareness and participation of small retail business in cashless transaction: an empirical study. *Management Dynamics in the Knowledge Economy*. Vol. 6(2), 209-225. https://doi.org/10.25019/MDKE/6.2.02.

Chibba, M. (2009). Financial inclusion, poverty reduction and the millennium development goals. *European Journal of Development Research.* Vol. 21(2), 213-230.

Calderon, C. & Liu, L. (2003). The direction of causality between financial development and economic growth. *Journal of Development Economics.* Vol. 72(2003), 321-334.

Chatterji, A. K., Findley, M., Jensen, N. M., Meier, S. & Nielson, D. (2016). Field experiments in strategy research. *Strategic Management Journal.* Vol. 37. 116-132. https://doi.org/10.1002/smj.

Chawla, D. & Sondhi, N. (2011) *Research methodology, concepts and cases*. Vikas Publishing House PVT LTD.

Cialdini, R. B., Kallgren, C.A. & Reno, R. R. (1991). A focus theory on normative conduct: A theoretical refinement and revaluation of the role of norms in human behaviour. *Advances in Experiment. Social Psychology*. Vol. 24, 201-234.

Cohen, M. & Nelson, C. (2011). Financial literacy: A step for clients towards financial inclusion. 2011 Global Microcredit Summit.

Cole, S., Sampson, T. & Zia, B. (2011). Prices or knowledge? What drives demand for financial services in emerging markets? *The Journal of Finance.* Vol. LXVI (6), 1933-1967.

Combs, G. & Luthans, F. (2007). Diversity training: Analysis of the impact of self-efficacy. *Human Resource Development Quarterly.* Vol. 18 (1), 91-120.

Croasmun, J. T. & Ostrom, L. (2011). Using Likert-type scales in the social sciences. *Journal of Adult Education.* Vol. 40 (1), 19-22.

Cull, R., Ehrbeck, T. & Holle, N (2014). Financial inclusion and development. Recent impact evidence. Focus Note. CGAP.

Curran, P. J., West, S.G. & Finch, J. K. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *America Psychological Association.* Vol. 1(1), 16-29.

Dannon, C., Buchs, C. & Desbar, D. (2012). The jigsaw technique and self-efficacy of vocational training students: A Practice Report. *European Journal of Psychology of Education*. Vol. 27, 439-449. https://doi.org/10.1007/s/0212-011-0091-4.

Datwani, L. (2017). India's push for financial inclusion: The story two years on. Brief. Washington D.C. CGAP.

Demirguc-Kunt, A. (2008). Finance for all? Policies, pitfalls in expanding access. World Bank Policy Research Report.

Demirguc-Kunt, A. & Klapper, L. (2012). Measuring financial Inclusion. The Global Findex Database. Working Paper 6025. http://econ.worldbank.org.

Demirguc-Kunt, A., Klapper, L., Singer, D., Ansar, S. & Hess, J. (2018). The Global Findex Database 2017: Measuring financial inclusion and the Fintech Revolution. Washington, DC: World Bank. https://doi.org:10.1596/978-1-4648-1259-0.

Devlin, J. F. (2005). A detailed study of financial exclusion in the UK. *Journal of Consumer Policy,* Vol. 35,197-213.

Devlin, J. F. (2009). An analysis of influences on total exclusion. *The Service Industries Journal.* Vol. 29(8), 1021-1036.

Diniz, E., Birochi, R. & Pozzebon, M. (2012). Triggers and barriers to financial inclusion: The use of ICT-based branchless banking in an Amazon country. *Electronic Commerce Research and Applications*. Vol. 11, 484-494.

Durand R. & Vaara, E. (2009). Causation, counterfactuals, and competitive advantage. *Strategic Management Journal.* Vol. 30, 1245-1264.

Ellis, T.J. and Levy, Y. (2009). Towards a guide for novice researchers on research methodology: Review and Proposed Methods. *Issues in Informing Science and Information Technology*. Vol. 6, 323-337.

El-Zoghbi, M., Holle, N. and Soursourian, M. (2019). Emerging evidence on financial inclusion: Moving from black and white to color. Focus Note. Washington DC: CGAP.

European Commission Employment and Social Affairs (2004). Joint report on social inclusion. *Social Security and Social Inclusion*.

Field, A. (2013). Discovering statistics using IBM SPSS. 4th Edition. Sage Publications Limited.

Fraçzek, B., Hintosová, A.B., Bacová, M. & Sivicek, T. (2017). Simultaneous use of the financial literacy level and the financial inclusion degree as a result of financial education efficiency in Visegrad Group Countries. *Journal of Economics and Management.* Vol. 27(1), 5-25.

Fungacova, Z. & Weill, L. (2015). Understanding financial inclusion in China. *China Economic Review.* Vol. 34, 196-206. https://dx.doi.og/10/10/16/j. chieco.2014.12.004.

Gattoo, M. H., & Akhtar, S. M. J. (2015). The development of India's financial inclusion agenda—Some lessons for Pakistan. *The Pakistan Development Review.* Vol. 54 (4), 569-584.

Gecas, V. (1989). The social psychology of self-efficacy. *Annual Review of Psychology.* Vol. 15, 291-316.

Ghana Statistical Service (2012). 2010 Population and Housing Census. A summary report of final results. Sakoa Press Limited.

Ghana Statistical Service (2019). Ghana Living Standards Survey Round Seven (GLSS 7)

Giambona, F. & Vassalo, E. (2013). Composite indicator of social inclusion for European countries. *Social Indicators Research (2014)* 116: 269-293. https://doi.org/10.1007/s11205-013-0274-2.

Godfrey, P. C. (2011). Toward a theory of the informal economy. *The Academy of Management Annals*. Vol. 5(1), 231-277.

Hair, J. F., Bush, R. P. & Ortinau, D.J. (2009). *Marketing Research in a Digital Information Environment.* 4th Edition. McGraw-Hill Irwin.

Holden, M. T. & Lynch, P. (2004). Choosing the appropriate methodology: Understanding research philosophy. *The Marketing Review*. Vol. 4, 397-409.

Honohan, P. (2008). Cross-country variation in household access to financial services. *Journal of Banking & Finance.* Vol. 32, 2493-2500.

Hung, A.A., Parker A. M. & Yoong J. K. (2009). Defining and measuring financial literacy. Working Paper. Rand Labor and Population.

Imaeva, G., Lobanova, I. & Tomilova, O. (2014). Financial inclusion in Russia: The demand-side perspective. *Working Paper.* CGAP.

Imai, K., Tingley, D. & Yamamoto, T. (2013). Experimental designs for identifying causal mechanisms. *Journal of the Royal Statistical Society.* Vol. 176 Part 1, 5-55.

Johnson, S. and Nino-Zarazua, M. (2011). Financial access and exclusion in Kenya and Uganda. *Journal of Development Studies.* Vol. 47(3), 475-496.

Kabakova, O. & Plaksenkov, E. (2018). Analysis of factors affecting financial inclusion: Ecosystem view. *Journal of Business Research.* Vol. 89, 198-205.

Kata, R. & Walenia, A. (2015). Financial exclusion of farmers and rural entrepreneurs. *Journal of Agribusiness and Rural Development.* Vol. 2(36), 225-235. https://doi.org/10:17306/JARD.2015.24.

Kempson, E. & Whyley, C. (1999*). Kept out or opted out? Understanding and combating financial inclusion*: Hobbs the Printers Limited, Southampton.

Kim, J. (2016). A study on the effect of financial inclusion on the relationship between income inequality and economic growth. *Emerging Markets Finance and Trade.* Vol. 52, 498-512. https://doi.org/10.1080/1540396x.2016.1110467.

Klapper, L., El-Zoghbi, M. & Hess, J. (2016). Achieving the sustainable development goals. The role of financial inclusion. CGAP.

Komarraju, M. & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals and effort regulation matter? *Learning and Individual Preferences.* Vol. 25, 67-72.

Kumar, N. (2013). Financial inclusion and its determinants: Evidence from India. *Journal of Financial Economic Policy*, Vol. 5(1), 4-19.

Lahaye, E., Abell, T. E. & Hoover, J. K. (2017). Vision of the future: Financial inclusion 2025.

Lalrinmawia, M. & Gupta, H. (2015). Literacy and knowledge: Farmers' financial inclusion feasibility. *SCMS. Journal of Indian Management.* July to September 2015, 17-24.

Lenka, S. K. & Sharma, R. (2017). Does financial inclusion spur economic growth in India? *The Journal of Developing Areas*. Vol. 51(3), 215-228.

Levitas, R., Pantazis, C., Fahmy, E., Gordon, D., Lloyd, E. & Patsios, D. (2007). The multidimensional analysis of social exclusion. Department of Sociology and School for Social Policy, Townsend Centre for the International Study of Poverty and Bristol Institute for Public Affairs, University of Bristol.

Lewis, W. A. (1954). Economic development with unlimited supply of labour. *The Manchester School.* Vol. 22(2), 139-191.

Leyshon, A. & Thrift, N. (1995). Geographies of financial exclusion: Financial abandonment in Britain and the United States. *Transactions of the Institute of British Geographies, New Series.* Vol. 20(3), 312-341.

Leyshon, A., French, S. & Signoretta, P. (2008). Financial exclusion and the geography of bank and building society branch closure in Britain. *Royal Geographical Society.* Vol. 33, 447-465.

Lown, J. M. (2011). Development and validation of a financial self-efficacy scale. *Journal of Financial Counselling and Planning.* Vol. 22(2), 54-63.

MacPhee, D., Farro, S. & Canetto, S. S. (2013). Academic self-efficacy and performance of underrepresented STEM Majors: Gender, ethnic and social class patterns. *Analysis of Social Issues and Public Policy.* Vol. 13(1), 347-369.

Malhotra, N. K. (2010). *Marketing Research: An Applied Orientation*. Fifth Edition, Pearson International Edition, Prentice Hall.

Markel, E., Gettliffe, E., Jones, L. Miller, E., Kim, L. (2016). The social norms factor: How gendered norms influence how we empower women in market systems development. The BEAM Exchange. Accessed from www.beamexchange.org

Marron, D. (2013). Governing poverty in a neoliberal age: New labour and the case of financial exclusion. *New Political Economy.* Vol. 18(6), 785-810. http://dx.doi.org/10.1080/13563467.2012.753043.

Mindra, R. & Moya, M. (2017). Financial self-efficacy: A mediator in advancing financial inclusion. *Equality, diversity and inclusion: An International Journal.* Vol. 36(2), 128-149. https://doi.org/10.1108/EDI-05-2016-0040.

Mohan, R. E. (2006). Economic growth, financial deepening and financial inclusion. *Reserve Bank of India Bulletin 1305, November 2006.*

Morgan, P. & Pontines, V. (2014). Financial stability and financial inclusion. *Asian Development Bank Institute Working Paper 488.*

Mosley, P. & Steel, L. (2004). Microfinance, the labour market and social inclusion: A Tale of Three Cities. *Social Policy Administration.* Vol. 38(7), 721-743.

Murendo, C. & Mutsonziwa, K. (2016). Financial literacy and savings decisions by adult consumers in Zimbabwe. *International Journal of Consumer Studies.* Vol. 41(1), 95-103. Accessed at http://onlinelibrary.wiley.com/doi/10.1111/ijcs.12318/full.

Myeni, S., Makate, M. & Mahonye, N. (2020). Does mobile money promote financial inclusion in Eswati?. *International Journal of Social Economics.* Vol. 47(6), 693-709. https://doi.org/10.1108/IJSE-O5-2019-0310.

Narh, M. (2017, June 9). Launch of Ghana Digital Financial Service Programme. Retrieved from http://ghananewsagency.org/print/104657.

Nelson, J. K., Poms, L. W. & Wolf, P.P. (2012). Developing efficacy beliefs for ethics and diversity management. *Academy of Management Learning and Education.* Vol. 11(1), 49-68.

OECD/ILO (2019). *Tackling Vulnerability in the Informal Economy.* Development Centre Studies, OECD Publishing Paris. http://doi.org/10.1787939b7939b7bcd-en.

Osei-Assibey, E. (2009). Financial Exclusion: What drives supply and demand for basic financial services in Ghana? *Savings and Development.* Vol. 3, 207-238.

Pallant, J. (2016). SPSS Survival Manual—A step by step guide to data analysis using IBM statistics, 6th Edition. McGraw Hill Education.

Peace, R. (2001). Social exclusion: A concept in need of definition? *Social Policy Journal of New Zealand*, 17-36.

Phan, H. P & Ngu, B. H. (2016). Sources of Self-Efficacy in Academic Contexts: A Longitudinal Perspective. *School Psychology Quarterly.* http://dx.doi.org/10.1037/spg0000151.

Pradhan, R. P., Mukhopadhyah, B., Gunasheikar, A., Samedhan, B & Pandey, S. (2013). Financial development, social development and economic growth: The causal nexus in Asia. *Indian Institute of Management.* Vol. 4(1-2), 69-83.

Prina, S. (2015). Banking the poor via savings accounts. Evidence from a field experiment. *Journal of Development Economics.* Vol. 115, 16-31.

Queralt, J., Fu, J. & Romano, M. (2017). Financial inclusion and the 2030 agenda for sustainable development: A missed opportunity. *Enterprise Development and Microfinance.* Vol. 28(3), 200-211. http://dx.doi.org/10.3362/1755-1986.16-00037.

Rastogi, S. and Ragabiruntha, E. (2018). Financial inclusion and socioeconomic development: gaps and solutions. International Journal of Social Economics. Vol. 45(7), 1122-1140. http://doi.org/10.1108/IJSE-08-2017-0324.

Rangarajan Committee on Financial Inclusion (2008).

Ranjani K. S. & Bapat, V. (2015). Deepening financial inclusion beyond account opening: Road ahead for banks. *Business Perspectives and Research.* Vol. 3(1), 52-65.

Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *The Journal of Consumer Affairs*. Vol. 44(2), 276-295.

Republic of Ghana: National Financial Inclusion and Development Strategy (NFIDS).

Richards, H. M. & Schwartz, L. J. (2002). Ethics of a qualitative research: are there special issues for health services research? *Family Practice*. Vol. 19, 135-139.

Roe, B. E. & Just, D. R. (2009). Internal and external validity in economics research: Trade-offs between experiments, field experiments and field data. *American Journal of Agricultural Economics.* Vol. 91(5), 1266-1271.

Room, C. J. (1999). Social exclusion, solidarity and the challenge of globalization. *International Journal of Social Welfare.* Vol. 8(3), 166-174.

Rubin, D. B. (2005). Causal inference using potential outcomes. *Journal of the American Statistical Association.* Vol. 100 (469), 322-321. https://doi.org/ 10.1198/016214504000001880.

Sachdeva, T. & Gupta, S. (2014). Financial inclusion: Triggers and barriers in rural India. *International Journal of Multidisciplinary Approach*. Vol. 1(6), 477-483.

Saith, R. (2001). Social exclusion: The concept and application to developing countries. *Queen Elizabeth House Working Paper Series. Working Paper 72.*

Sarma, M. (2008). Index of financial inclusion. *ICRIER Working Paper 215.* June 2008.

Sarma, M. & Pais, J. (2011). Financial inclusion and development. *Journal of International Development*, 23, 613-628.

Saunders, P. (2008). Social exclusion: Challenges for research implications for policy. *The Economic and Labour Relations Review.* Vol. 19(1), 73-92.

Shamika, R. (2019). Accelerating financial inclusion in India. *Brookings India Report*. March 2019.

Sharma, D. (2016). Nexus between financial inclusion and economic growth, evidence from the emerging Indian economy. *Journal of Financial Economic Policy.* Vol. 8(1), 13-36. doi:10.1108/JFEP-01-2015-0004.

Solo, T. M. (2008). Financial exclusion in Latin America—or the social costs of not banking the poor. *International Institute for Environment and Development.* Vol. 20(1), 47-66.

Sparks, J. & Glennerster, R. (2001). Preventing Social Exclusion: Education's Contribution. Hills, J., Le Grand, J., & Piachaud, D. (eds). *Understanding Social Exclusion*, Oxford University Press.

Staykovic, A. D. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychology Bulletin.* Vol. 24 (2), 240-261.

Stevens J. P. (2009). Applied Multivariate Statistics for the Social Sciences. 5th Edition. Routledge Taylor and Francis Group, New York.

Storchi, S., Hernandez, E. & McGuinness, E. (2020). A research and learning agenda for the impact of financial inclusion. Focus Note. Washington D.C. CGAP.

Swamy, V. (2014). Financial inclusion, gender dimension and economic impact on poor households. *World Development*. Vol. 56, 1-15.

Tita, A. F. & Aziakpono, M. J. (2017). The effect of financial inclusion on welfare in Sub-Saharan Africa: Evidence from disaggregated data. *Economic Research Southern Africa (ERSA) Working Paper 679.*

United Nations Economic and Social Affairs (2016). Leaving no one behind: The imperative of inclusive development. Report on the World Social Situation, 2016. New York.

United Nations Population Division. World Population Prospectus 2019 Revision.

Van, D. T. T. & Linh, N. (2019). The impacts of financial inclusion on economic development: Cases in Asian-Pacific Countries. *Comparative Economic Research, Central and Eastern Europe.* Vol. 22(1). https://doi.org//10.2478/cer-2019-0001.

Varghese, G. & Viswanathan, L. (2018). Normative perspectives on financial inclusion: Facts beyond statistics. *Journal of Public Affairs.* Vol. 18(4), 1829. https://doi.org/10.1002/pa.829.

World Bank (2019). 4th Ghana Economic Update. Enhancing financial inclusion. Africa Region. June 2019. Washington D. C. World Bank Group.

Wilson, T. A. (2012). Supporting social enterprises to support vulnerable consumers: the example of community development finance institutions and financial exclusion. *Journal of Consumer Policy*, 35, 197-213.

Yang, Y. Y. & Yi, M. H. (2008). Does financial development cause economic growth? Implication for policy in Korea. *Journal of Policy Modelling.* Vol. 30(5), 827-840.

Yoshino, N. & Morgan, P. (2016). Overview of financial inclusion, regulation and education. *ADBI Working Paper Series 591.* Tokyo: Asian Development Bank Institute. http://www.abd.ory/publications/overview-financial-inclusion-regulation-and-education.

Zetterli, P. (2015). Financial inclusion in Ghana 2015: The state of financial inclusion and mobile money in Ghana. www.cgap.org.

Zins, A. & Weill, L. (2016). The determinants of financial inclusion in Africa. *Review of Development Finance.* Vol. 6, 46-57.

Appendix I

The financial self-efficacy scale

5=Strongly Agree; **4**=Agree; **3**=I don't Know; **2**=Disagree; **1**=Strongly Disagree

1. It is hard to stick to my spending plan when unexpected expenses arise.
2. It is challenging to make progress toward my financial goals.
3. When unexpected expenses occur, I usually have to use credit.
4. When faced with a financial challenge, I have a hard time figuring out a solution.
5. I lack confidence in my ability to manage my finances.
6. I worry about having enough money. *

*The original question is 'I worry about running out of money in retirement". Lown (2011) advises that it is replaced when the research participants are young.

Appendix 2

Post research survey of participants

Date of Survey:

Place of Survey:

Age: (30 -34); (35 – 39); (40 – 44); (45 – 49); (> 50)

Gender: F M

Profession:

5=Strongly Agree; **4**=Agree; **3**=I don't Know; **2**=Disagree; **1**=Strongly Disagree

1. It is hard to stick to my spending plan when unexpected expenses arise.
2. It is challenging to make progress toward my financial goals.
3. When unexpected expenses occur, I usually have to use credit.
4. When faced with a financial challenge, I have a hard time figuring out a solution.
5. I lack confidence in my ability to manage my finances.
6. I worry about having enough money. *
7. I have learnt a lot from this training programme.
8. I have understood banking from this training programme.
9. I will use some of the knowledge from this training in my everyday life.
10. I will recommend this training to at least one person.

*The original question is 'I worry about running out of money in retirement". Lown (2011) advises that it is replaced when the research participants are young. The first six questions are Lown's questionnaire on financial self-efficacy.

Questions 7 to 10 were applicable to only participants who had financial literacy training

1. Have you used your bank account since it was opened? Yes No

2. If no, why did you not use the account?
   a) I did not know how to use it
   b) I did not want to use it
   c) I don't have money to use a bank account
   d) I don't trust bank services
   e) Other (Please specify)

3. If yes, how often did you use the bank account in a week?
   a) Once a week
   b) More than once a week
   c) Once a month
   d) More than once a month
   e) Other (Please specify)

4. What type of transactions did you use the bank account for?
   a) Savings
   b) Payments to other people
   c) To receive money
   d) Other (Please specify)

5. How has the bank account helped you?
   a) To save my money
   b) To plan my finances
   c) To make safe payments
   d) To receive money from people
   e) Other (Please specify)